Pakistan – Climate Public Expenditure and Institutional Review (CPEIR)

Working towards a more efficient and effective allocation and use of climate change-related finance

October 2017

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United Nations Development Programme Pakistan
4th Floor, Serena Business Complex,
Khayaban-e-Suharwardy,
Sector G-5/1, P. O. Box 1051,
Islamabad, Pakistan.

UNDP Bangkok Regional Hub
United Nations Development Programme
3rd Floor United Nations Service Building
Rajdamnern Nok Avenue
Bangkok 10200, Thailand

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LIST OF ACRONYMS AND ABBREVIATIONS

A/M	Adaptation/Mitigation
AAGR	Average Annual Growth Rate
ADB	Asian Development Bank
ADP	Annual Development Plan
AEC	Atomic Energy Commission
AEDB	Alternative Energy Development Board
AGP	Accountant General of Pakistan
AJK	Azad Jammu and Kashmir
APCC	Annual Plan Coordination Committee
ARE	Alternative and Renewable Energy (Policy)
BE	Budget Estimates
CC	Climate Change
CCD	Climate Change Division
CCI	Council of Common Interests
CDM	Clean Development Mechanism (of the UNFCCC)
CDWP	Central Development Working Party
CCFF	Climate Change Financing Framework
CGA	Controller General of Accounts
CM	Chief Minister
CO2	Carbon Dioxide
DDWP	Departmental Development Working Party
DRR	Disaster Risk Reduction
ECNEC	Executive Committee of the National Economic Council
EIA	Environmental impact assessment
EPA	Environmental Protection Agency
ERRA	Earthquake Reconstruction and Rehabilitation Authority
FATA	Federally Administered Tribal Area
FEG	Framework for Economic Growth
GB	Gilgit-Baltistan
GCF	Green Climate Fund
GCISC	Global Change Impact Studies Centre
GDP	Gross Domestic Product
GEF	Global Environment Facility
GGI	Green Growth Initiative
GHG	Greenhouse Gas
GLOF	Glacial Lake Outburst Flood
GoP	Government of Pakistan
HEC	Higher Education Commission
IEE	Initial Environmental Examination
ILO	International Labour Organization
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contributions
IPC	Inter-Provincial Coordination

IPCC	Intergovernmental Panel on Climate Change
KANA	(Ministry of) Kashmir Affairs and Gilgit-Baltistan (formerly Ministry of Kashmir Affairs and Northern Areas)
KP	Khyber Pakhtunkhwa
KPI	Key Performance Indicator
M&E	Monitoring and Evaluation
MAF	Million Acre Feet
MCC	Ministry of Climate Change
MDG	Millennium Development Goal
MoF	Ministry of Finance
MoWP	Ministry of Water and Power
MPDR	Ministry of Planning, Development and Reforms
MTBF	Medium-Term Budgetary Framework
MW	Megawatt
NAM	New Accounting Model
NAMA	Nationally-Appropriate Mitigation Action
NAP	National Adaptation Plan
NCCP	National Climate Change Policy
NDC	Nationally Determined Contributions
NDMA	National Disaster Management Authority
NDRRP	National Disaster Risk Reduction Policy
NEC	National Economic Council
NEEDS	National Economy and Environment Development Study
NFC	National Finance Commission
NPP	National Power Policy
NSDS	National Sustainable Development Strategy
P&DD	Planning and Development Department
PAC	Public Accounts Committee
PARC	Pakistan Agriculture Research Council
PDMA	Provincial Disaster Management Authority
PDWP	Provincial Development Working Party
PEPA	Pakistan Environment Protection Act
PER	Public Expenditure Review (World Bank)
PFM	Public Financial Management
PIFRA	Project for Improvement of Fiscal Reporting and Auditing
PRSP	Poverty Reduction Strategy Paper
PSDP	Public Sector Development Programme
SAFRON	(Ministry of) States and Frontier Regions
SEA	Strategic Environmental Assessment
SUPARCO	Pakistan Space and Upper Atmosphere Research Commission
TFCC	Task Force on Climate Change
TMA	Tehsil municipal administration
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WAPDA	Water and Power Development Authority

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The project was led by Mr Hammad Raza and Mr Hassan Akhter Rizvi. The Technical Team was led by Dr Qamar uz Zaman Chaudry (Team leader) including a team of experts i.e. Dr Sajjad Akhter, Dr Lubna Shehnaz, Mr Umer Khalid, Ms Dina Khan, Ms Masooma Hassan and Mr Waqas-ul Hassan. The report was peer reviewed by Mr Jeremy Hills.

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EXECUTIVE SUMMARY

Pakistan is assessed to be one of the most vulnerable countries in the world to climate change (CC). Pakistan's extreme vulnerability from CC is understandable owing to its geographic, demographic and diverse climatic conditions. Of particular concern are the CC threats to water, energy and food security due to the inherent arid climate coupled with the high degree of reliance on water from glacial snowmelt. CC future projections include increasing intensity and frequency of extreme climatic disastrous events, as well as incremental changes in rainfall patterns, air temperature variability etc. CC is already affecting many parts of government activity and the population of Pakistan. Globally, the impacts of CC are expected to constrain economic growth and gross domestic product (GDP). Adaptation concerns are profound than mitigation concerns in accounting for Pakistan vulnerability to CC- this means that CC adaptation costs are likely to be relatively high in Pakistan compared to the rest of South Asia where impacts on vulnerable sectors are already predicted to be enormous. Some assessments suggest that Pakistan already faces significant economic losses due to CC[1].

In response to these challenges, the Government of Pakistan (GoP) developed and adopted the National Climate Change Policy (NCCP) in 2012, which aims to ensure that CC is mainstreamed in the economically and socially vulnerable sectors of the economy, and to steer Pakistan towards climate-resilient development. In 2012, the Ministry of Climate Change (MCC) expressed an interest in undertaking a Climate Public Expenditure and Institutional Review (CPEIR) to assess the level at which the GoP has so far been able to respond to the challenges of CC, and to identify opportunities for further strengthening its response.

1 Ahmed, M. and S. Suphachalasai. 2014. Assessing the costs of climate change and adaptation in South Asia. ADB

Box 1: CPEIR approach and methodology

The CPEIR **approach**, developed during first phase, determines a CC budget that is aggregated from budget expenditure lines across all relevant Government institutions. The focus of this Pakistan CPEIR was on the federal (including three federally administered regions) and all provincial government budgets. The budget data was selected from 2011-12 to 2014 - 15. The analysis has revealed much needed climate-related resource allocation and expenditure patterns.

The **methodology** followed a three-phase process of identifying climate-related expenditure, classifying climate response and assessing the climate relevance of expenditure. The data was collected by budget line within key line ministries and based on expert judgment combined with consultations with various involved ministries, the total investments in CC projects was yielded as a ratio of the total PSDP.

During the Phase I, the selected expenditures items related to CC were identified as having either an adaptation, mitigation or supporting component. The phase II then classified those line items using a typology of themes, and associated tasks, which was specifically designed to cater to the country-specific development needs and demands. The typology themes and tasks therefore were directly determined from the NCCP policy objectives. The adaptation theme, for example, included water resources, agriculture & livestock, forest, health & social services, biodiversity, vulnerable ecosystems, and disaster preparedness. The mitigation theme, likewise, comprised of energy, town planning, transport, industries, agriculture & livestock, carbon sequestration & forestry task areas, and lastly, the supporting areas theme addressed capacity building & institutional strengthening, awareness raising & education, international & regional cooperation, finance and technology transfer task areas. The Phase III assessed the relevance of expenditures as a percentage of the total expenditure attributed to CC. The categories related to expenditure were ranked from highly-relevant (75- 100%) - where one or more primary CC objectives of the project aims to directly improve climate resilience and deliver mitigation specific CC results- to marginal relevance (1 – 24%) with very indirect or theoretical links.

The CPEIR aims to equip Government policy-makers with an evidence base, an assessment of the allocation of public resources (domestic and international) and the institutional setup in place to respond to CC at the country level.

This section summarizes the CPEIR's findings and recommendations and gives an overview of the policy, institutional, and financial aspects of climate actions. Finally, it gives recommendations for the CC reform agenda in Pakistan. The study includes an assessment at the federal and provincial level, as well as three federally administered regions.

A CC response in Pakistan requires major investment

CC has been recognized in Pakistan as a core component of the economic growth model which is required for growth, poverty reduction and wellbeing of the population. This is embedded in national economic policies such as the Framework for Economic Growth (FEG), 2011, Vision 2025 and the accompanying Medium-Term Development Plan (2010–2015). The pressing need for more energy and the mitigation of growing greenhouse gas (GHG) emissions in Pakistan both require a substantial investment of over 5 percent of GDP. Ongoing significant national energy shortages have been estimated to require a $ 5 billion initial investment and annual variable costs of $ 2.9 billion based on the use of a traditional energy mix (2010 figures). Filling this energy gap with renewable energy has been estimated to cost $ 10 billion upfront, but with lower annual costs. Investment requirements for mitigation to de-link economic growth from the corresponding GHG emissions increase have been estimated to be the order of $ 8 billion, annually for a 15 percent GHG reduction, to US 17 billion for a 40 percent reduction[2].

There are significant mitigation possibilities on both the supply- and demand-side with energy conservation measures being most cost-efficient. National adaptation requirements have been estimated to be between 1.5 and 3.0 percent of GDP and there is presently a substantial global shortfall. Although estimates are difficult, the average costs for annual adaptation to CC for Pakistan were estimated to range annually from $ 6 billion to $ 14 billion to 2050, or an average of $ 10.7 billion per annum (2010 figures). A comparison of the global adaptation cost to the current level of adaptation funding indicates that projected global adaptation needs are significantly greater than current investment levels, particularly in vulnerable developing countries like Pakistan.

Importantly, in addition to investment mentioned above the threat of CC requires a 'whole-of-government' approach by including systemic and process reforms relating to CC in all public financial management entities (most notably the Ministry of Finance [MoF] and the Ministry of Planning, Development and Reforms [MPDR]), key delivery sectors (e.g., health and social services, education, agriculture, transport, energy, infrastructure) and all levels of government (e.g., federal, provincial, district). However, with such wide involvement, there is a risk of fragmentation in the CC response. Thus, it is necessary to assess the degree of harmonization and alignment in CC response processes to ensure efficient and effective use of CC resources.

How much is Pakistan investing currently?

a. Consolidated National Budget and GDP

The national budget comprising of federal, four provinces and 3 regions budgets increased from PKR 4959 billion in 2011-12 to PKR 6771 billion in 2014-15 at an annual average growth rate of 10.9 percent. In the corresponding period, Pakistan's GDP at market prices increased from PKR 20,046 billion to PKR 27,493 billion at annual average growth rate of 11.1 percent. If the annual average inflation rate of 8.1 percent during the period is accounted for, the real growth in budgetary expenditures and GDP represent a very modest increase.

b. CC Expenditures and National Budget/GDP

The aggregate CC related development and current expenditures of Federal Government plus four provinces and 3 regions increased from Rs 330.4 billion to 572.5 billion during 2012-15, at an annual average growth rate (AAGR) of 20.1 percent during the period, higher than the 11.1 percent AAGR of GDP (fc)3 at market prices. As a ratio of the GDP, the share of CC related expenditures during the four year period are between 1.52-2.08 percent.

2 http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Pakistan/1/Pak-INDC.pdf

3 The GDP at factor cost is also called "net value added" method. Net Value added=Gross Value Added- Value of intermediate Consumption. The sum of net value added in various economic activities is known as GDP at factor cost. This plus indirect taxes less subsidies on products is GDP at market price.

Pakistan maintains the paradigm of fiscal federalism in its distribution of revenues and expenditures. Periodically, National Finance Awards are announced that establish the mechanism to collect and distribute the revenue resource base of the country among the federal government and the provinces/ regions. Similarly expenditure heads are allocated among the federal government and the provinces/ regions. Provinces formulate their own budgets and supplement their share in the Divisible Pool with their own revenue base; they also have the flexibility to spend on their own projects/programs up to a given limit. The table below gives a summary of CC related expenditure (both current and development) aggregated as well broken down by federal and sub-national governments during four years period. The four years average CC relevant expenditure at national level is worked out to be around 7 percent of country's total aggregated budget and this share during 2014-15 at national level is 8.5 percent.

Table S-1: Country's Climate Relevant Expenditure Details

	2011-12	2012-13	2013-14	2014-15	2015-16*
Federal	6.5%	5.8%	6.2%	8.1%	6.5
Khyber Pakhtunkhawa	7.2%	5.3%	7.1%	9.7%	8.9
Balochistan	7.3%	10.4%	11.1%	11.3%	11.9
Punjab	6.2%	7.1%	8.2%	9.3%	13.7
Sindh	5.7%	4.2%	4.3%	6.9%	7.2%
FATA	13.1%	12.5%	11.6%	11.9%	10.2%
Gilgit Baltistan	16%	19%	20%	28%	25.6%
Azad Jammu & Kashmir.	9.2%	14.0%	12.5%	16.9%	14.3%
National	**6.7%**	**6.1%**	**6.7%**	**8.5%**	**8.4%**

* The results of federal government for FY 15-16 are generated from Expenditure Coding and Tracking System. The provincial government results have been generated partially using the system and partially the CPEIR methodology.

c. The federal climate budget

The total federal climate-related expenditure (development + current budget) was estimated to be between 5.8 and 8.1 percent of total federal expenditures in the four studied years. The relative proportion of the climate-relevant budget spent on adaptation and mitigation varied significantly across studied years; with adaptation 36 and mitigation 57 percent during 2014/15. While the fiscal headroom for climate-related development expenditures is tight, it is nonetheless growing.

The CPEIR illustrated that the number of climate-relevant development projects and the proportion of climate-relevant projects *within* each government institution vary widely across the studied years, suggesting rather erratic resource allocation and policy delivery. The highest percentage of climate-relevant projects tended to be in the MCC, the Water and Power Division and the Kashmir Affairs and Gilgit-Baltistan Division. In terms of absolute expenditure, between 60 and 80 percent of the total climate-related actual investment expenditure during the four years is split between two ministries; the Ministry of Water and Power (MoWP) (including the Water and Power Development Authority [WAPDA]) and the Cabinet Division (including the Atomic Energy Commission [AEC]). These erratic patterns of CC-related expenditures highlight the need for an overarching CC financing framework which can help streamline budget allocations and ensure a holistic response to CC challenges in the country.

A majority of the CC related expenditure was within the energy sector for mitigation purposes (57 percent, 2014/15 data). Further significant contributions were from the health and social services (16 percent, adaptation), water resources (11 percent, adaptation), transport category (10 percent, predominantly mitigation) and disaster preparedness (5 percent, adaptation). Further detail of the climate budget in the federally administered regions is provided in Box 2.

Box 2: Climate budget and response in the federally administered regions

The three federal administered regions fall under the responsibility of two federal institutions: the Ministry of Kashmir Affairs and GB—responsible for Azad Jammu and Kashmir (AJK) and Gilgit-Baltistan (GB)—and the Ministry of States and Frontier Regions (SAFRON) (responsible for the Federally Administered Tribal Areas [FATA]). Combined, the regions receive 2–3 percent of the federal budget. The region with the highest climate-related budget was GB with 28 percent of the total budget. In FATA, the climate budget was 12 percent and in AJK it was 17 percent of the total budget during 2014/15. All regions generally had a greater proportion of climate-related budget than the four provinces and the Federal Government.

GB, with the highest regional climate-related budget, was dominated by the Water and Power Department (70–95 percent of total CC expenditure). In AJK, the Transport and Power Departments consistently had the highest absolute climate-related expenditures. In FATA, 70–90 percent of the climate budget was delivered by five departments: Education, Works Department, Services and Administration Department, Health and Planning Departments. The GB and AJK climate budgets are dominated by infrastructure development, whereas in FATA, the climate budget was more widely spread across a range of sectors.

d. Provincial climate budgets

i. Khyber Pakhtunkhwa

Expenditures witnessed a substantial jump of 21.1 percent in 2011-12, the second year of the 18th Amendment, tapering off in the remaining three years to a range of 14–16 percent. The development budget (Annual Development Plan [ADP]) represents 30–34 percent of the total budget (2011–2015). The fiscal space in the development budget is greater than in the Federal budget, although there is increasing dependence on external resources, mainly through grants (80–91 percent).

Total climate-related spending has increased 105 percent over the last four years (from 2011 to 2015, PKR 18.8 billion to PKR 38.6 billion) which is greater than the increase in total revenues. Climate-related expenditures represent between 10 and 14 percent of the KP development budget and 5.3 and 9.7 percent of the total provincial budget. CC expenditure is common, widely spread and stable across departments in KP. The ADP covers a wide range of sectors and climate-related projects that make up 75–82 percent of development expenditure lines (compared to 47–63 percent at the Federal level). On average more than half of the projects in each provincial department are climate relevant though most of them falls in low or marginal relevance category. The Irrigation and Power Department, Environment and Forestry Department and Population Welfare Department have the highest departmental proportion of CC expenditure (55–60 percent), whereas the Irrigation and Power and Works and Services Departments have the greatest absolute climate spending.

Nearly three-quarters of the climate activities in KP had an adaptation component. Adaptation is the main KP climate expenditure theme (44 percent climate budget), followed by joint adaptation/mitigation (A/M) (28 percent), supporting activities (18 percent) and mitigation (10 percent). This is quite different from the Federal situation where over half of the climate budget is pure mitigation. Transport (28 percent of climate budget of ADP), water (20 percent) and awareness raising and education (18 percent) make up about two-thirds of the KP climate budget. The majority of adaption expenditures were mainly in the water, disaster, and health sectors; water resources (45 percent of adaptation budget), disaster preparedness (26 percent), health and social services (19 percent), forestry, vulnerable ecosystems and biodiversity tasks (less than 2 percent, each). Mitigation tasks were dominated by energy (75 percent of mitigation budget), supporting activities were mainly awareness raising (96 percent of supporting budget) and joint adaptation and mitigation tasks were exclusively transport.

ii. Balochistan

The budget of Balochistan increased at an average annual growth rate of 16.1 percent. The annual growth in expenditure was in the range of 12-20 percent during the last four years, peaking during the initial year of the 18th Amendment and tapering off to a range of 13–17 percent in the following three years. During the last four years, the share of provincial current expenditure out of the total provincial expenditures was in the range of 64–70 percent indicating more fiscal space available to the Government of Balochistan relative to the Federal Government and other three provinces, to spend on development activities. However, AAGR of development expenditures was 10.2 percent, slightly more than half of the corresponding rate of current expenditure increase of 19.1 percent during the last four years. The province's dependence on federal transfers and federal grants ranged from 95 to 97 percent of its total revenue receipts. During the last four years, the ADP of Balochistan has ranged from 68-83 percent of available resources (after accounting for current expenditures). In the last two years it has increased to 78 and 83 percent respectively. The surplus resources are used to build cash balances. This trend signifies that the capacity to identify and spend on large development programs is limited, reflected by the substantive carry forward of previous uncompleted projects and programs.

Total climate-relevant spending in Balochistan increased 141 percent over the last four years. Climate-relevant expenditure represents between 7.3 and 11.3 percent of the total provincial expenditures. Between 6 and 15 percent of Balochistan's development budget is climate-related. During 2012-15, the rate of annual increase in climate-related development investment was much higher than that of the overall development budget (48.3 percent compared to 10.2 percent). Climate-related projects make up 76–82 percent of development expenditure lines, with over half the projects at several government institutions deemed climate-relevant. The ADP climate expenditure across studied years is relatively stable in terms of average climate relevance of each department and the proportion of climate-related investment per department. In most of the studied years, Irrigation and Power, and Communication and Works (C&W) spent 41–59 percent of their budgets on climate-relevant investments.

iii. Punjab

The size of the Punjab budget increased at an average annual growth rate (AAGR) of 11.5 percent during the period 2012-2015, slightly higher than the average national inflation rate. The annual growth in expenditures was in the range of 8.6-15.1 percent during the last three years. The share of provincial current expenditure out of the total provincial expenditures was in the range of 76–83 percent similar to the percentage spent by the federal government. Punjab also faces tight a fiscal space to spend on development activities similar to the federal government. However, the average annual growth rate (AAGR) of development expenditures, was 20.6 percent, more than double of the corresponding rate of current expenditure increase of 9.2 percent during the last four years. The province's dependence on federal transfers ranged from 77 to 80 percent of its total revenue receipts, lower than the corresponding figures in Balochistan and KP. In case of Punjab, unlike in KP and Balochistan, no federal transfers are made under non-tax revenue and grants.

Total climate-relevant spending in Punjab increased from PKR 54.4 billion in 2011/12 to PKR 112.7 billion in 2014/15, an increase of nearly 107 percent. Climate-relevant expenditure represents between 6.2 and 9.3 percent of the total provincial budget. Between 13 and 15 percent of Punjab's development budget is climate-related. Over the studied years, the rate of annual increase in climate-related development investment was marginally higher than that of the overall development budget (24.5 percent compared to 20.6 percent).

Climate-relevant projects make up 66–73 percent of development expenditure lines (compared to 47–63 percent at the Federal level), with over half the projects at several government institutions deemed climate-relevant. Climate-relevant projects and investments are common and widely spread across the provincial government's portfolio

The ADP climate expenditure across studied years is relatively stable in terms of average climate relevance of each department. However, the proportion of climate-related investment per department fluctuates in most of the departments. In most of the studied years, Forestry, Health and Irrigation and Power, spent 24–57 percent of their budgets on climate-relevant investments

iv. Sindh

The size of Sindh's budget increased at an average annual growth rate (AAGR) of 7.1 percent, much below the corresponding growth in Punjab. The annual growth in expenditures was in the range of 4.4-25.2 percent during the last three years. During the last four years, the share of provincial current expenditure out of the total provincial expenditures was in the range of 72–77 percent slightly lower than the percentage spent by the federal government. The province of Sindh has slightly more fiscal space to spend on development activities as compared to the federal government or Punjab province. In contrast, the AAGR of Annual Development Programme (ADP) was -0.3 percent, almost stagnant in the last four years as compared to the corresponding rate of current expenditure increase of 9.8 percent during the last four years. The province's dependence on federal transfers ranged from 73 to 76 percent of its total revenue receipts, higher than the corresponding figures of Punjab. Similar to KP and Balochistan, federal transfers are made to Sindh under non-tax revenue and grants, the former in the form of Natural Gas and Petroleum charges. The share of provincial revenues in overall receipts has remained stagnant at 20-23 percent during the four years under study similar to Punjab.

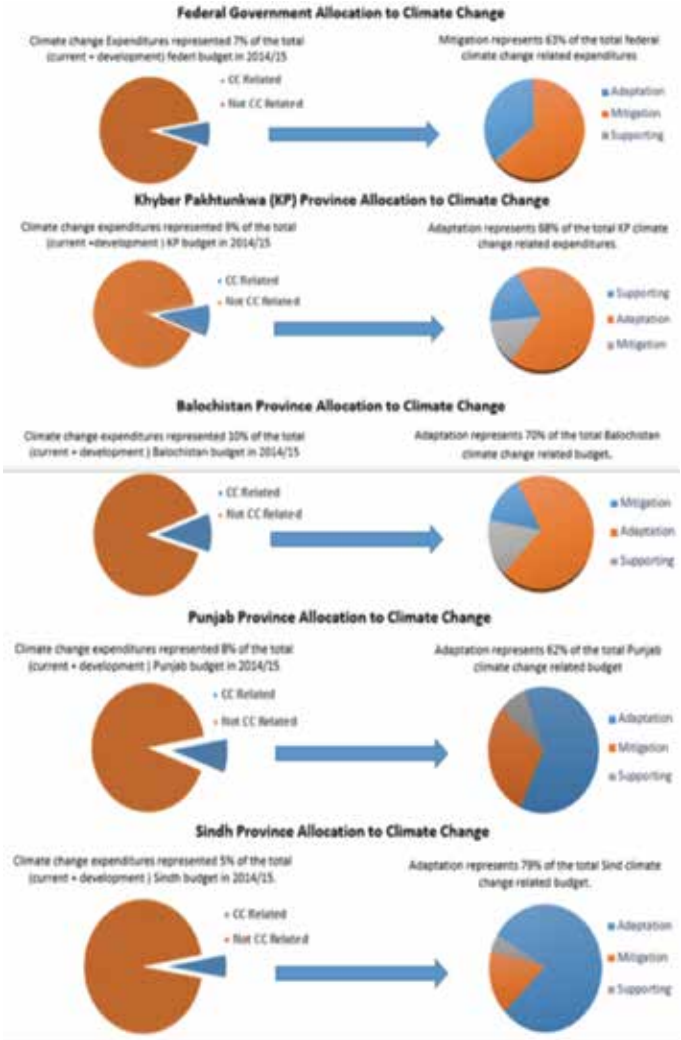
Total climate-relevant spending in Sindh increased marginally by 2.1 percent during the four year period. Climate-relevant expenditure represents between 4.1 and 6.9 percent of the total provincial budget. Between 5.6 and 10.0 percent of Sindh's development budget is climate-related. Over the studied years, the rate of annual increase in climate-related development investment was higher than that of the overall development budget (3.8 percent compared to -0.3 percent). Climate-relevant projects make up 82-86 percent of development expenditure lines with over half the projects at several government institutions deemed climate-relevant.

The ADP climate expenditure across studied years is relatively stable in terms of average climate relevance of each department. However, the proportion of climate-related investment per department fluctuates in most of the departments. In most of the four years, Forestry, Irrigation and Social Welfare, spent 16–86 percent of their budgets on climate-relevant investments.

Summary of CC allocations

The following diagrams summarize the federal and provincial CC budgets. The first diagram Figure S-1 shows the total budget allocation to CC and distribution between adaptation and mitigation. The second diagram (Figure S-2) illustrates the distribution of average CC expenditure across the various NCCP tasks during four years period.

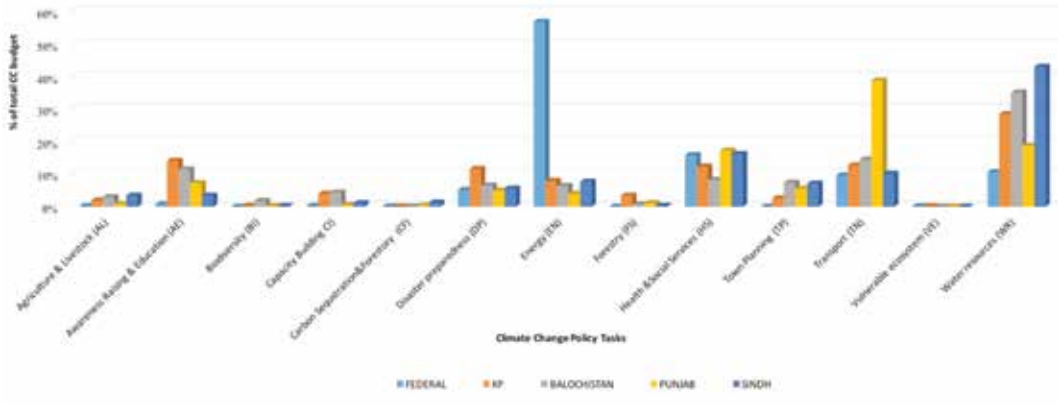
Figure S-1: Federal and provincial budget allocation to climate change tasks



What is the context in which the CC response takes place?

Pakistan's NCCP, which was approved in 2012, provides an overarching framework for addressing the challenges that Pakistan faces or will face in future due to CC. The policy goal is to ensure that CC is mainstreamed in the economically and socially vulnerable sectors of the economy and to steer Pakistan towards climate-resilient development. The NCCP identifies a number of policy objectives, including the pursuit of sustainable economic growth, pro-poor and gender-sensitive adaptation, economic incentives for adaptation responses and improved inter-ministerial coordination. More specific actions are provided for sectoral approaches to both adaptation and mitigation. The follow-up to the NCCP was the Framework for the Implementation of the Climate Change Policy (of 2013), which outlines the vulnerabilities of various sectors to CC and identifies appropriate adaptation and mitigation actions. This framework document was developed to serve as a catalyst for mainstreaming CC concerns into decision-making at the Federal and provincial levels and to create enabling conditions for integrated climate-compatible development processes. The framework document promotes the preparation of a National Adaptation Plan (NAP), nationally appropriate mitigation actions (NAMAs), a Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), as well as detailed provincial and local adaptation action plans.

Figure S-2: Allocation of CC budget during 2011/12–2014/15 to CC policy objectives



The mainstreaming of CC into sectoral policies has remained weak and uptake of the recent NCCP will take time to be fully cycled through the various sectoral policy reviews. In planning terms, CC is firmly positioned within the 'environmental' sector, both in central and devolved administrations, and invariably allied with the well-known Pakistan Environment Protection Act (PEPA), 1997 and the recently enacted PEPAs by the provinces, rather than the NCCP. The linkage between CC and the development sectors is mentioned in higher-level government documents, but has limited traction lower down the Government where it is not prioritized in relation to other competing agendas. At the institutional level Pakistan remains one of the few countries to have a dedicated ministry for CC; in 2015 the MCC was reinstated (changing from the Climate Change Division [CCD] as part of the Cabinet Secretariat), suggesting a renewed importance being placed on CC at the highest levels of Government.

At the provincial level, after the 18th Amendment Provincial Environment Departments taking lead in dealing with CC challenge provincial level. In AJK, KP have established special CC centre or cell in their developments to integrate CC concerns into development projects. KP, Punjab have already drafted their provincial CC polices and GB has drafted a GB CC Strategy and Action Plan.

Coupled with substantially devolving CC responsibilities to the provinces, the seventh National Finance Commission (NFC) Award increased the magnitude of financial resources flowing to the provinces, as well as provincial discretion in expenditure. After 2010, provinces were not only expected to be able to set policy objectives and assess CC-related expenditure priorities, but also target interventions with the most cost-effective outcomes. The lack of a coherent institutional setup, policy leadership and capacity in provinces could undermine some of the locally-specific benefits of devolution.

Recognising the need for harmonisation between Federal and provincial undertakings, and ensuring clarity of institutional roles post-devolution, the Council of Common Interests (CCI) was reinvigorated and the Inter-Provincial Coordination Division was established. As CC has not been specifically allocated to the Federation or provinces, and there is an additional need for CC to be harmonized across sectors (e.g. with the National Disaster Management Authority [NDMA]), ensuring progressive clarity in institutional roles and responsibilities remains vital. Planning and budgeting are still two disparate domains because the institutional arrangement remains divided in different agencies that needs to be streamlined particularly for integrating CC into different sectors of the economy. This weak linkage is further fragmented when it comes to crosscutting issues like CC. Mainstreaming CC across sectors is somewhat limited and may well remain so until there is a clear and agreed mandate on post-18th Amendment roles and responsibilities across the MCC, MoF, MPDR and federal line ministries. Federal-provincial and cross-sectoral clarity in institutional roles and responsibilities in CC is important to move the agenda forward..

What is the role of climate-sensitive budgeting?

CC is not routinely considered in the selection of development expenditures and allocations in Pakistan. There are thus opportunities to increase climate-sensitive budgeting. Financial planning by the sectors for the Medium-Term Budgetary Framework (MTBF) tends to concentrate on their own sector policies and priorities as the main driver for the derivation of planned expenditures. CC is not routinely considered to help development expenditure decision-making by the various budget committees, including the Priorities Committee. The consequence of this is that there is no coherent financial driver for climate-sensitive budgeting in the development budgets of sectors or provinces within the MPDR or MoF.

At the Federal level, with the leadership of the MoF, the medium-term budget process can be strengthened and utilized to work towards CC-sensitive budgeting. The CPEIR study - in its first phase of assessment of the budgetary and planning processes for climate relevant expenditure in the country- identified the importance of MTBF in mainstreaming of CC in sectoral policies, plans and strategies, and recommended the formulation and implementation of Climate Change Financing Framework (CCFF). The CFF, therefore in this context, represents a dynamic and systematic instrument to successfully integrate CC into the planning and budgetary process such as MTBF. The framework is conceptualized to use the current public finance management system as an entry point to incorporate CC consideration into Fiscal Policy framework. This includes several actions such as inclusion of cc dimension in the budget call circular 2016-17, and revision of PC1 y MoF and MoPDR.

Ongoing uptake of the CCFF through MTBF mechanism is even though slow at the Federal and provincial levels but it offers a rich the possibility for linking CC-sensitive financial planning with budgetary allocations . However, the development of technical criteria to support CC-positive budgeting is necessary to support CC-sensitive prioritization and selection processes and output/outcome monitoring. As such, climate-sensitive MTBF process would reflect the strength of the political message for the need for a substantive CC response. This requires a cross-government approach supported by MoF oversight and technical capacity to determine criteria and indicators. It also requires increased climate awareness in the selection committees and associated political cadres.

Line ministries will need to prioritize and plan for CC-sensitive development projects. For CC to gain traction and be mainstreamed through the government budget process, selection towards CC-positive projects will be required and should be supported by the MoF and MPDR. Line ministries will need to clearly appreciate the climate challenges within their sectors, determine a level of priority of CC among competing interests and plan investment submissions appropriately. This can be done within a suitably strengthened MTBF process as the MTBF process sets budget limits from the top-down, but supports bottom-up planning to deliver specified outputs/outcomes.

The MCC has a pivotal position in technical and capacity development to promote climate-sensitive budgeting. It can play a significant role in supporting the MoF and MPDR in enhancing the climate-sensitive budget process within the MTBF. It has the technical expertise to screen the CC sensitivity of proposed development expenditures submitted by the line ministries (in PC-I documents of the MPDR) prior to consideration by the selection committees. It can also help build CC awareness and capacity in the selection committees, such as the Priorities Committee and the Executive Committee of the National Economic Council (ECNEC).

At the provincial level, financial tools such as the MTBF and increased oversight and harmonization could help strengthen the dispersed nature of the provincial CC response. The broad allocation of CC-related funds, coupled with competing priorities, means that some oversight and coordination are required to drive climate-sensitive budgeting forward. In financial terms, the adoption of output-based budgeting under the MTBF can facilitate climate-sensitive budgeting with support from the Planning and Development Department (P&DD) and Finance Department. These financial and oversight roles would be further strengthened by increased clarity of post-devolution CC mandates across the Government Federation.

Transition from CPEIR to System Based Analysis

One of the recommendation that came from CPEIR in 2015 was to have an integrated solution for mainstreaming climate change. Accordingly, the government with assistance of UNDP has also developed a Climate Change Financing Framework to provide a menu of reforms for:

- Incorporating CC lens in the planning cycle;
- Mainstreaming climate change in budgeting, including MTBF and other budgetary processes and instruments;
- Monitoring system for climate change expenditure tracking;
- Oversight and Accountability

In order to achieve the last two objectives the MoCC and MoF with technical support of the UNDP developed a Coding and Tracking system for CC expenditure information and reporting. Further, the MoCC has finalised with the office of the Controller General of Accounts (CGA) an IT-based climate-responsive expenditure tracking and reporting system for the national and sub-national governments that draws expenditure data maintained by the CGA. The CGA team has "configured" the system using SAP Business Planning Consolidation (BCP) module for this purpose. The system design is placed at Annex…The system uses the same typology and classification as the CPEIR for the time being but the system does have the option of realigning or fine tuning the classification. This system will be extremely useful in:

- Providing transparent and reliable database
- Live and current analysis against post dated analysis of CPEIR
- Informed decision making on basis of updated database and analysis
- Structured reporting on climate change related projects and expenditures

The climate-relevant expenditure data for 2014-15 and 15-16 for the federal government is already uploaded to the system. Thus whereas the analysis of the federal government upto FY 2014-15 and has been done on the CPEIR methodology but the 15-16 analysis is system based and is thus a successful transition from the CPEIR to system based assessment. This will enable the government to have a live analysis of the CC expenditures. A separate chapter for the FY 15-16 for the federal government, four provinces and the three federal regions has been added towards the end[4].

Gender and poverty linkage to CC expenditure

A preliminary analysis of the nexus between public expenditures on climate change, poverty and gender, using data of the Federal Government for FY 2014-15 and employing UNDP methodology, was also undertaken. This analysis indicates that the seven ministries with most climate relevant expenditure, only three have high poverty-centric expenditure; that includes Ministry of National Health, Regulation and Coordination, Ministry of Food and Research, Ministry of Defence and SUPARCO. Similarly, three ministries out of the seven ministries with most climate relevant expenditure have high gender relevant expenditure share. They are Ministry of Water and Power, Ministry of National Health, Regulation and Coordination, and Ministry of Communication including NHA. Of the total 17 ministries that have incurred climate related expenditures and may have some positive poverty co-benefits, only four ministries provide climate related services with maximum poverty co-benefits of above 17.8 percent. The analysis further indicates that none of the ministries considered in the data analysis provide climate related services with gender co-benefits with absolute certainty. In view of the data availability constraints and methodological limitations, results of the poverty and gender analysis of climate public expenditures need to be interpreted with care.

4 Allusions to 15-16 analysis will not be found elsewhere in the CPEIR report because the analysis was conducted on recommendation of MoCC after the analysis upto FY 14-15 had been completed. As sated earlier the federal analysis for 15-16 is system based and that of provinces and the three regions a hybrid of system and CPEIR methodology.

Recommendations for strengthening climate response

A number of recommendations for strengthening the CC response have been identified, including planning and budgeting, strengthening the institutional framework and capacity, monitoring and evaluation (M&E) and increasing sensitization to CC. There are myriad possible modes in which to enhance the CC response. However, the CPEIR focuses on those, which in combination, can provide a more efficient and effective allocation to CC and help create an overall coherent CC fiscal framework between the MoF, MPDR, MCC and other involved government bodies. In doing so, the recommendations aim to complement existing governance reforms in the country, such as the introduction and roll-out of output-based budgeting principles in the public financial management (PFM) system. In particular, the recommendations below will enrich the application of output-based budgeting in the CC area by combining policy, institutional, capacity and budgeting-related developments into a single package

a. Integrating CC into budgetary and planning processes

1. *Continued support to MoF, MPDR and provincial P&DDs for CC integration in the planning and budgetary process.*
2. *Develop a detailed guidebook for planning wings.* Such a document that could be used to train officials in filling-out and appraising CC components in the PC-I–PC-V formats.

b. Strengthening the climate institutional framework

1. ***Tracking NGOs and Donor Financed CC Expenditure*:** Beside public expenditure on climate change relevant tasks in the country, a significant amount is being spent by NGOs or through them by the donors on CC response in the country that needs to be tracked accounted and acknowledged. Further, such tracking would help in better utilization of resources by avoiding duplication and focusing on priority challenges.

c. Strengthening the climate institutional framework:

The institutional setup for CC requires a higher degree of coherence and clarity, especially after the recent devolution process. This could be achieved through (a) the establishment of a provincial commission, (b) the creation an enabling legal environment for CC, and (c) considering the inclusion of CC criteria in the NFC fiscal transfer formula besides the following interventions:

1. ***Strengthening the technical capacity of MCC.*** This may be done by enhancing the professional base of the Ministry and by providing support in translating into action the Framework for the Implementation of the Climate Change Policy.
2. ***Provide technical support to the provinces in the development of detailed action plans for NCCP implementation.*** All four provinces and federally administrative regions which are at different stages of institutional development should be provided institutional support in the form of legal and regulatory instruments, given their interest in CC. The action plans should be further linked with the MTBF.
3. ***Provide support to CC-relevant ministries for the incorporation of climate-responsive budgeting.***
4. ***Support to NCCP implementation committee and MCC CC Think Tank.*** Provide support to NCCP implementation committee and Ministry's CC Think Tank for facilitating the implementation of policy and decision-making process.
5. ***Support Parliament by increasing awareness in tracking climate investments through domestic and international sources to strengthen its oversight role.*** There are standing Committees on Climate Change in Senate as well as in the National Assembly. Parliamentarians in general and members of these Committees in particular, should be provided support through information sessions, workshops and debates on CC concepts and effective CC finance pathways.

d. Monitoring and evaluating CC-relevant work

1. ***Identify, prioritize and synthesize key adaptation and mitigation activities with budgets and MTBF frameworks of selected relevant ministries.*** The Framework for the Implementation of the Climate Change Policy (in light of the NCCP) can be a good starting point to integrate CC into sector priorities, identify activities for adaptation and mitigation, cost of the activities, and formally synthesize them into budgetary systems through coding and tracking of CC expenditure. This system is being developed with the support of UNDP. It will help in having reliable data, mainstreaming CC in budgeting and planning and help the policy makers to make informed decisions

e. Sensitizing policy-makers and increasing public awareness on the need for CC investment

- ***Sensitize policy-makers and stakeholders to the importance of CC investment.*** Establishing parliamentary/ provincial caucuses that focus on integrating CC in national budgetary systems;
- Developing a communications strategy for informing stakeholders and the public of CC issues;
- Identify a CC ambassador to stress the importance of CC investments.

1. ***Develop a media strategy for CC awareness.*** A media engagement strategy could be put in place to disseminate information on the importance of CC investments. This could include documentaries and print and electronic media information.
2. ***Recommend that key officials and stakeholders engage with CC institutions in other countries.*** Officials from relevant ministries and departments could be provided trainings and exposure visits to other countries to understand and observe current trends in mitigation and adaptation systems.
3. ***Develop a knowledge bank.***. The government should:
   - Develop a hub that serves as an information repository of knowledge sources.
   - Develop a database of local and international CC programmes and activities to help determine possible funding options.
   - Develop a database/information network of ongoing CC seminars and conferences.
4. ***Commission CC studies for informed policy decisions.*** The Government should commission studies in different subject areas of the sector.
5. ***CC Authority's support to CCFF:*** Establishment of proposed CC Authority and National Climate Change Fund under 'Climate Change Act 2016' needs to push forward the UNDP CCFF initiative as its top priority.

f. Strengthening linkages between CC, poverty reduction and gender empowerment.

1. There is a need to formalize and mainstream PRSP's pro-poor expenditure tracking program into federal and provincial budgets. Furthermore, development of a system for gender based reporting of budgetary expenditures both at the federal and provincial levels of government would permit regular reporting on gender related expenditures.

A system of classification of poverty relevant and gender relevant expenditures at the project level, for the development budgetary expenditures, of both the federal and provincial governments needs to be developed. Once developed, this classification would allow each development project to be classified and quantified in terms of its CC, poverty and gender relevance.

CHAPTER 1 – INTRODUCTION

"Action on climate change is urgent. The more we delay, the more we will pay in lives and in money." [5]
— Ban Ki-moon, Secretary-General of the United Nations

1.1 The response to climate change

The most authoritative intergovernmental scientific body on CC, the Intergovernmental Panel on Climate Change (IPCC), declared in its 2014 assessment report that the warming of the climate system was unequivocal. In Pakistan, CC is now a reality and no more a distant-future threat. Its impacts are being felt through the increasing intensity and frequency of disastrous extreme climatic events as well as small, but incremental changes insidiously affecting many sectors of government activity. As noted in the Secretary-General's statement, CC has widespread consequences, affecting livelihoods, security, health and economies, among others.

As such, an effective response to CC must deliver across all sectors including health, social services, education, transport, energy and infrastructure; this requires a "whole-of-government" approach, involving most government sectors, from the lowest levels to the highest. However, given that CC is a cross-sectoral issue, there is a risk of fragmentation in the response, and subsequently, a difficulty arises in assessing the effectiveness of the totality of response. As financial resources are globally, nationally and provincially becoming more targeted CC-related activities, it is becoming increasingly useful to assess overall CC response and to review the processes and protocols that steer CC-related budgeting and investment. These processes can relate to policy convergence and harmonization across sectors, strengthened prioritization of climate-proofed investments, increased alignment and clarity of roles of key delivery institutions and agencies and enhanced feedback and assessment of the overall CC response.

An analysis of budget processes, institutions and policy can aid an understanding and identification of key areas in which alignment of these processes can be achieved. It can also support progression to reduce fragmentation and create a cycle of feedback and progressive improvement. This also strengthens the platform for moving forward to further expanding, targeting and focusing CC investment portfolios, which can help build social, economic and environmental resilience for the future, as well as support climate-resilient economic development, pro-poor and sector-specific goals, such as energy supply and security.

1.2 The CPEIR process

An approach called the Climate Public Expenditure and Institutional Review (CPEIR) has been developed to assess national climate response. This approach has been championed by the United Nations Development Programme (UNDP) through the Bangkok Regional Hub (UNDP-BRH). The CPEIR approach, which builds on the World Bank Public Expenditure Reviews (PERs), aims to equip policymakers with a tool to analyse the allocation of public resources, both domestic and international. It also allows an analysis of

5 Fiona Harvey, "Ban Ki-moon to join climate change march", *The Guardian*, 17 September 2014. Available from http://www.theguardian.com/environment/2014/sep/17/ban-ki-moon-climate-change-march.

country-level institutional setups to respond to CC. CPEIRs have been conducted in a number of countries in the Asia-Pacific region.[6] These analyses have enabled the identification of areas where CC responses can be strengthened.

Analysis using CPEIR methodology identifies and elaborates on a number of areas in which CC responses may be strengthened such as: (i) supporting the mainstreaming of climate finance by raising awareness of strategies and policy issues, (ii) promoting the efficient and effective use of financial resources, and (iii) assessing policy formulation and implementation, thereby practically contributing to greater cooperation between diverse stakeholders.

These efforts all come under the umbrella of a Climate Fiscal Framework (CFF) which is a comprehensive, cross-government approach that delivers a coherent and well-managed response to climate finance, involving both the public and private sectors, where practical. CFFs are being developed following CPEIRs in a number of countries in the Asia-Pacific region. They target national resources more effectively and have the potential to attract, and more effectively absorb international climate funds.

The CPEIR involves a review and analysis of three main areas with regard to CC:

1. **Policy:** The scope and comprehensiveness of CC policy at the national and sub-national level, within the sectors, and the degree to which policies are prioritized, costed or sequenced.
2. **Institutions:** The institutional nexus related to CC policy delivery, including the MoF and MPDR, and the modes of cross-government synchronization, accountability and decentralization.
3. **Finances:** The proportion of public expenditure relevant to CC and the distribution of it across sectors, the national/sub-national split, and, in some cases, the proportion that is domestically/externally funded.

Using information from these three areas allows a number of recommendations for improvement which include CC policy development and implementation, mainstreaming CC across sectors, focusing on the budget cycle, reducing fragmentation and increasing the strategic focus across the Government, more effective selection and prioritization of climate-proof investments, and enhanced monitoring and evaluation (M&E) of CC response. Different countries have accrued different benefits from the CPEIR process. Indeed, while some countries[7] are now moving towards budget tagging/tracking of CC-related expenditures to obtain dynamic and up-to-date information to furnish their CFF, others[8] are further extending this by defining CC response costs and benefits to move towards a more outcome-orientated, cost-effective response.

1.3 CPEIR in Pakistan

A comprehensive and coherent CC response is necessary, given Pakistan's vulnerability to CC. The initial request to undertake a CPEIR was expressed by the Government of Pakistan (GoP) in 2012, having heard the experiences of other countries that had undertaken similar processes.

The approach was developed through country missions in 2012 and 2013 and then further refined through workshops and discussions in 2014. Based on their linkages to CC challenges, the key sectors identified to be included in the CPEIR were disaster risk management, agriculture, social sector interventions and water resources management. In the first phase, the CPEIR designed for Pakistan considered federal level CC-related expenditures including in the three federally administered areas[9] as well as provincial expenditures in one province, Khyber Pakhtunkhwa (KP). In the second phase the scope

6 These include Bangladesh, Cambodia, Indonesia, Nepal, Samoa, Thailand and Viet Nam.

7 e.g. the Philippines, Indonesia and Nepal.

8 e.g. Cambodia and Thailand.

9 Areas with a federally-derived and administered budget rather than a devolved budget like the provinces. They include FATA, GB and AJK.

was extended to the remaining provinces of Balochistan, Punjab and Sindh and the phase one exercise was updated by undertaking 2014/15 budget analysis at federal and KP levels.

In the analysis CC-related expenditures are identified in both the development (investment) and the recurrent budget of 2011/12 to 2014/15. To ensure that the CPEIR exercise contributes directly to Pakistan's needs, is guided under the direction of the GoP, and addresses real concerns and challenges in the country, the CPEIR team worked under the guidance of an steering committee chaired by MoF and other members included the MPDR, the Ministry of Agriculture, the Ministry of Inter-Provincial Coordination (IPC), the Ministry of Climate Change (MCC), the provincial departments of Finance, Environment and Planning and Development, and a representative from UNDP Pakistan. Similar to other participating countries in the region, this CPEIR has the potential to become a benchmark reference that will allow policymakers to assess the present status of the national and provincial response to CC. This can then inform preparation for the scaling-up of access and delivery of climate finance.

More specifically, the aims of the CPEIR are to:

- Assess current policy priorities and strategies as they relate to CC;
- Review institutional arrangements for promoting the integration of CC policy priorities into budgeting and expenditure management;
- Review the integration of CC objectives within the budgeting process, including budget planning, implementation, expenditure management and financing.
- Recommend opportunities for strengthening the CC response in terms of policy harmonization and development, financial/investment planning and budgeting and institutional synchronization and performance.
- Identify practical opportunities for climate investment tracking and creating a streamlined, focused and effective CFF.

Undertaking a CPEIR at this point in time will be valuable to Pakistan, allowing it to grasp these opportunities and secure a comprehensive, cross-government approach that delivers a coherent and well-managed CC response.

1.4 CPEIR report structure

The report is targeted at middle- to senior-level policymakers across all related ministries, but with a particular focus on the MoF, MPDR, and MCC, as well as the provincial governments, particularly the CC delivery agencies in the provinces. The report aims to be concise and focused, with the main conclusions and recommendations clearly and transparently identified. The main body of the report is supported by a number of appendices that provide additional or more in-depth detail on particular subject areas.

Table 1.1 shows the structure of the report and identifies representative questions that each section addresses.

Table 1.1: Report structure and representative questions

Chapter	Chapter title and indicative questions
2	**Threats and cost of CC** • Where are the main threats of CC? • What are the likely impacts of CC? • How will this create more vulnerable communities, economies and environments? • What will be the economic cost of CC?
3	**CC policy** • What has been the national policy process for CC? • What has been the effect of the 18th Amendment on the climate response? • What are the policy objectives and implementation framework of the National Climate Change Policy (NCCP)? • How is CC addressed in sectoral policy?
4	**CC and the budget process** • How does the public financial management (PFM) system include CC? • How is the allocation of funds determined for the Public Sector Development Programme (PSDP)? • What are the key stages in the PSDP process that can support a strengthened CC response?
5	**Methodology for determining a climate budget** • How can a climate budget be determined? • How are CC-related expenditures identified? • How can CC-related investments be categorized?
6	**CC budgeting and institutional assessment – federal level** • What is the federal expenditure on CC? • What is the distribution of this allocation across ministries and sectors? • Are the main expenditure areas linked to climate-related vulnerabilities?
7 to 10	**CC budgeting and institutional assessment – provincial level** • What is the provincial expenditure on CC? • What is the distribution of this allocation across provincial departments and sectors? • Are the main expenditure areas linked to climate-related vulnerabilities?
11	**CC budgeting and institutional assessment – federally administered regions** • What is the regional expenditure on CC? • What is the distribution of this allocation across regions and sectors? • Are the main expenditure areas linked to climate-related vulnerabilities?
12	**CPEIR with gender and poverty perspective** • CC policy and related institutional setup helping gender and poverty concerns • How CC-related expenditure is contributing to gender equity • How CC-related expenditure helping in poverty reduction
13	**Conclusions and recommendations** • What are the main points of access for strengthening the CC response? • What short- and medium-term actions could enhance response effectiveness? • What steps are necessary to move towards a comprehensive CFF?

CHAPTER 2 - THE THREATS AND COSTS OF CLIMATE CHANGE

2.1 Introduction

Under the auspices of the United Nations, the IPCC is the most authoritative intergovernmental scientific body on CC. Its job is to review and assess recent scientific, technical and socioeconomic information and form a clear scientific assessment on the current state of knowledge in CC and its potential impacts.[10] Its fifth assessment report (2014) declared that the warming of the climate system was unequivocal; land and ocean average surface temperature data show a warming of 0.85°C from 1880 to 2012. The report identifies significant and globally widespread changes in environmental processes, extreme events and natural resources that have already affected social and economic development.

Experts have formed a consensus behind the manmade nature of CC and the significance of the threat it poses. The IPCC's fifth assessment report stated, for the first time, that CC, combined with poverty and climate-induced economic shocks, could lead to wars and mass migration.

2.2 Climate change vulnerability

CC is now a reality for Pakistan. Its impacts are being felt in the shape of increasing intensity and frequency of disastrous extreme climatic events. In addition, small but incremental changes are affecting sectors such as water, agriculture, biodiversity, human health and forestry and vulnerable ecosystems. Accurately defining the extent of Pakistan's CC vulnerability is difficult as there is currently little detailed knowledge on the exact nature and possible extent of the impacts, due to the absence of comprehensive vulnerability assessments in Pakistan.[11]

Most international CC vulnerability indices (e.g. Maplecroft and Germanwatch) have categorized Pakistan among the countries facing extreme risk from CC impacts. For instance, Pakistan was ranked number three in the 2012 assessment and eighth among the ten most vulnerable countries on a long term basis (1995–2014) on the Global Climate Risk Index, 2016,[12] with over $9.6 billion losses in 2010 due to CC. These vulnerability indices are based on an assessment of the country's exposure to climate-related natural disasters, population sensitivity and exposure and adaptive capacity to combat CC-both in terms of fatalities and economic losses. Pakistan's extreme vulnerability to CC is understandable, owing to its geographic, demographic and diverse climatic conditions. It lies in a geographic region where the temperature increase is projected to be higher than the global average. The NCCP[13] identified the following major CC threats:

- Considerable increases in the frequency and intensity of extreme weather events coupled with erratic monsoon rains, causing frequent and intense floods and droughts;

10 Core Writing Team, Rajendra K. Pachauri and Leo Meyer, eds., *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate* Change (Geneva, Intergovernmental Panel on Climate Change [IPCC], 2014).

11 Jo-Ellen Parry, Marius Keller and Deborah Murphy, *Identifying Priority Adaptation Actions in Pakistan: A Situational Analysis.* (Manitoba, International Institute for Sustainable Development [IISD], 2013).

12 Sönke Kreft and David Eckstein, *Global Climate Risk Index 2016: Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2012 and 1995 to 2014.* (Bonn, Germanwatch e.V. German Watch, 2016). https://germanwatch.org/fr/download/13503.pdf

13 NCCP, 2012.

- Projected recession of the Hindu Kush, Karakoram and Himalayan glaciers due to global warming and carbon soot deposits from trans-boundary pollution sources, threatening water inflows into the Indus River System;
- Increased siltation of major dams caused by more frequent and intense floods;
- Rising temperatures resulting in enhanced heat and water-stressed conditions, particularly in arid and semi-arid regions, leading to reduced agricultural productivity;
- Further decreases in the already scanty forest cover from rapid change in climatic conditions to allow natural migration of adversely-affected plant species;
- Increased intrusion of saline water in the Indus delta, adversely affecting coastal agriculture, mangroves and the fish breeding grounds;
- Threat to coastal areas due to projected sea level rise and increased cyclonic activity due to higher sea surface temperatures;
- Increased stress between upper and lower river catchments in relation to water resource sharing;
- Increased health risks and CC-induced migration.

Of particular concern is the CC threat to the water sector due to the country's arid climate and its reliance on water from glaciers and snowmelt. Pakistan receives around 50 million acre feet (MAF) of water from annual rainfall, whereas the Indus River System receives around 141 MAF largely from glaciers and snowmelt. The country's rainfall is generally low and irregular with an annual average of 278 mm, varying from around 440 mm in wet years (e.g., 1994) to 160 mm in dry years (e.g., 2002). The country's rainfall is also very spatially variable, ranging from around 1,500 mm annually in upper parts to 100 mm in southern parts of the country. It is expected that monsoon and winter rainfall variability will increase further because of CC, and consequently increase present water-stressed conditions in the country.

Glacial melt in the Himalayas is expected to increase the flooding of the Indus River and its tributaries over the next decades, which will be followed by decreased river flows as the glaciers recede[14] (IPCC 2007). The increased flow, in combination with predicted flashy rainfall, will result in frequent floods unless reservoir capacity is increased. River flows are expected to decrease after a few decades due to reduced glacier mass to a level that would be determined by precipitation input at the time.[15]

According to the World Bank report (2006), "Pakistan's Water Economy: Running Dry", the western Himalayan glaciers will retreat for the next 50 years, causing an increase in Indus River flows. This will result in decreases of 30–40 percent in river flows in the Indus Basin.[16] A study by the Global Change Impact Studies Centre (GCISC) shows that if the average temperature in the Indus watershed were to rise by 3°C and the Himalayan shrink to half their present size, the overall annual flow would decrease by about 15 percent and the monthly flow pattern would change considerably, with more water coming in spring and early summer, and less water in the later part of summer.[17] Furthermore, elevated temperatures can cause higher evaporation and increased irrigation water demand. Such scenarios can have very serious consequences for Pakistan's water resources and associated industries and livelihoods. This includes cotton, which is grown mainly along the Indus valley and is susceptible to flooding and drought.[18]

14 Core Writing Team, Rajendra K. Pachauri and A. Reisinger, eds., *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Geneva, Intergovernmental Panel on Climate Change [IPCC], 2007).

15 Pakistan, Ministry of Planning, Development and Reforms, *Final Report of the Task Force on Climate Change* (Islamabad, 2010).

16 John Brisco and Usman Qamar, *Pakistan's Water Economy: Running Dry.* (Karachi, Oxford University Press, 2006).

17 Ghazanfar Ali, Shabeh ul Hasson and Arshad M Khan, *Climate Change: Implications and Adaptation of Water Resources in Pakistan.* (Islamabad, Global Change Impact Studies Centre [GCISC], 2009).

18 Duncan Burnett, *Final Report: Stage 2 - Supporting Climate-resilience Value Chains.* London, DFID, 2013).

Under the influence of these projected CC threats, water, energy and food security are to become increasingly stressed, and in some areas, can even lead to existential concerns over livelihoods, and even survival. CC threats are likely to cause environmental, social and/or economic impacts in most sectors. This is especially the case in the agricultural and livestock sectors which contribute 19.8 percent of GDP (Economic Survey 2015/16). Box 3 shows a case study that exemplifies the increasing environmental, social and economic pressures on these vulnerable sectors.[19]

Box 3: CC and cotton production: Environmental effects, socioeconomic consequences and institutional reform

Pakistan is the world's fourth-largest cotton producer and the sector employs approximately 15 million people. Punjab accounts for 79 percent of total production, followed by Sindh at 20 percent.

The Indus River is very important to cotton agriculture; cotton production already takes place in suboptimal conditions (high temperatures). Further increases in temperature and changes in rainfall will increase net irrigation water requirements, resulting in greater reliance on poor-quality groundwater. This in turn would induce secondary salination.

The present climate and projections all suggest increasing challenges for the sector. These include heat stress and reduced soil moisture, leading to reduced yields and quality (boll size). Pest/disease incidence and soil salination are also very real concerns.

The consequences of these challenges are likely to lead to the commercial non-viability of cotton in certain areas (especially away from the Indus River and in some tributaries) and the loss of the livelihoods for large numbers of agricultural workers.

Some 24 percent of Pakistan's land area is cultivated of which 80 percent is irrigated by water flowing predominantly through glacier-fed rivers; it possesses the world's largest contiguous irrigation system. The staple wheat and rice crops are sensitive to changes in temperature, rainfall, irrigation water availability, and atmospheric carbon dioxide (CO_2) levels. Pakistan's climate can vary from sub-zero temperatures in the north to around 50°C in the south. CC will thus be manifested through varied impacts on crops. The Global Change Impact Studies Centre (the research arm of the Ministry of Climate Change) examined the impact of changing climatic parameters on wheat, indicating a 6 percent decrease in production by 2085. A similar study on rice predicted a 6 percent production decline for each degree Celsius increase in temperature. Being an agriculture-based economy, these scenarios will have serious consequences for Pakistan's food security and the livelihoods of agricultural workers.

2.3 Contributions to GHG emissions

Pakistan is among the lowest GHG emitters globally, as per the US Department of Energy's Carbon Information Analysis.[20] Pakistan's contribution to total global GHG emissions is around 0.8 percent, which corresponds to 1.9 tonnes on a per-capita basis (ranked 135th in a global list of countries). This represents one-third of the world average.

Pakistan's total GHG emissions in 2012 amounted to 342 $MtCO_2e$.[21] The largest contributor is the energy sector (46 percent share), followed by the agricultural sector (41 percent share), land use changes and forestry (2 percent share) and industrial processes (5 percent share). In 1994, Pakistan's total GHG

19 Ibid.

20 Carbon Dioxide Information Analysis Center, "Carbon dioxide information analysis center", 8 May 2015. Available from http://cdiac.ornl.gov/.

21 USAID, Greenhouse Gas Emissions in Pakistan. USAID Factsheet, 2016.

emissions were 182 million tonnes of CO_2 equivalent and rose around 3 percent annually.[22] Pakistan's projected GHG emissions by 2030 under a business-as-usual scenario suggest that total emissions will increase more than 300 percent by 2030 compared to 2015 emissions. This projection is based on assumptions that the elasticity of GHG emissions relative to GDP will remain essentially the same as during 1994–2008[23] (Task Force on Climate Change [TFCC], page 8), and will be in line with projected economic growth. Projections of the energy mix suggest that the share of renewable and nuclear energy will rise by 2030, moving away from oil and gas. However, the share of carbon-intensive coal will rise rapidly by 2030 to 19 percent, or in absolute terms, a 16-fold rise from 2005.

2.4 Economic impact of climate change

CC and natural resource degradation are forecast to result in significant economic costs. The IPCC's fifth assessment report suggests that GDP growth will be 0.2 to 2.0 percent lower once global temperatures have risen by 2°C.[24] However, these estimates need to be used cautiously as they are dependent on assumptions about discount rates and equity, etc. However, the broader literature on the economics of mitigation suggests that reducing GHG emissions to acceptable levels can be achieved without significantly undermining growth objectives. According to a World Bank study, the degradation of natural resources may also have a significant impact on future growth. The study suggested water quality would suffer, leading to a reduction of 0.8 percent of GDP, pollution 3 percent of GDP, and farmland 1.8 percent of GDP.[25]

Findings of a 2014 Asian Development Bank (ADB) study[26] on the economics of CC in South Asia indicate that the total cost of CC will increase over time, and in the long term, be prohibitively high. It states that "…even under optimistic climate change scenarios, huge impacts are likely on vulnerable sectors across South Asia, resulting in significant losses in gross domestic product (GDP) and, hence, in economic growth and poverty reduction". The key sectors, which according to the report are expected to suffer economic losses, include water, agriculture, energy, health, transport, water and coastal and marine resources.

As far as Pakistan is concerned, these sectors are important both socially and economically, and CC impacts are increasingly observable. With a business-as-usual scenario, South Asia could suffer an economic loss equivalent to 1.8 percent of its GDP by 2050, and this will increase progressively to 8.8 percent of annual GDP by 2100.[27] However, if suitable mitigation actions are taken by the global community along the lines of the Copenhagen-Cancun agreements to limit the global mean temperature increase to below 2°C, South Asia would suffer an average loss of 1.3 percent of GDP by 2050 and around 2.5 percent by 2100.

The ADB study suggests that investment in adaptation in South Asia will need to be 0.46 percent of GDP by 2050 and 0.86 percent by 2100 to offset CC impacts (assuming no mitigation). With mitigation, the costs of adaptation decrease broadly in line with the reduction in CC impacts caused by mitigation of GHG emissions, though with regional variations.

22 Pakistan, Ministry of Planning, Development and Reforms, *Final Report of the Task Force on Climate Change* (Islamabad, 2010) & Pakistan's INDCs Report 2016.

23 Ibid.

24 Core Writing Team, Rajendra K. Pachauri and Leo Meyer, eds., *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate* Change (Geneva, Intergovernmental Panel on Climate Change [IPCC], 2014).

25 World Bank, 2013.

26 Mahfuz Ahmed and Suphachol Suphachalasai, *Assessing the Costs of Climate Change and Adaptation in South Asia.* (Manila, Asian Development Bank [ADB], 2014).

27 Ibid.

2.5 Costs of responding to climate change

There is presently no standard, internationally well-accepted methodology to estimate CC adaptation and mitigation costs. To overcome these limitations, the UNDP National Economy and Environment Development Study (NEEDS), 2011,[28] used different methods to calculate the average cost of adaptation and mitigation in Pakistan.

2.5.1 Mitigation costs

The options for mitigating CC are vast in the energy sector, on both the demand and supply sides. The demand side options focus on the transport, residential and industrial sectors and the supply side options focus on shifts in the fuel mix — renewable energy promotion — and efficiency enhancements.

Pakistan has one of the highest rates of transmission and distribution losses in the world. The non-productive domestic/residential sector (42.15 percent) is responsible for more electricity consumption than either the industrial (23.92 percent) or agricultural sector (14.03 percent). There is also considerable potential for energy conservation in Pakistan as a mitigation option. Promoting energy saving and energy efficiency may be the cheapest option, being in the order of $1–3 per unit electricity saved compared to small hydropower schemes ($5–7 per unit electricity generated), wind ($12) and solar ($21).[29] However, mitigation in the energy sector should include energy saving and efficiency, as well as improving grid robustness, transmission efficiency and increased low-carbon electricity generation.

Based on a business-as-usual scenario, GDP growth between 4.7 percent (2011–2015) and 7.1 percent (2041–2050), annual energy growth between 3.7 percent and 5.7 percent, and a shift towards coal in line with projections, GHG emissions will rise from 347 million to 4,621 million tonnes of CO_2 during the period 2011–2050.

The NEEDS study[30] estimated the country's mitigation investment requirements for delinking its economic growth from the corresponding emissions increase (i.e. predicating further growth on a lower amount of GHG emissions than the present). From now until 2050, the annual mitigation investment costs would range from around $8 billion (undiscounted 2010 $) for a 15 percent reduction in GHG emissions to $17 billion for a 40 percent reduction.

More pressing needs relate to filling the significant energy gap that cost the country $6 billion in 2008 and 2 percent of GDP in 2009/10. The energy gap is estimated to be in the region of 2,500–5,000 megawatts (MW). To fill this gap with coal would cost $5 billion (2010 estimate) in initial investments and then annual variable costs of $2.9 billion. However, filling this gap with renewable energy would cost an estimated $10 billion in initial fixed costs, though with far lower annual variable costs. The licensing of renewable energy through private investment into a more deregulated and accessible energy market would offset the high initial costs; a model used by many developing and developed countries. However, ensuring substantial inward investment requires the creation of a legal and policy framework, fiscal instruments and tariffs to pay the energy generators for their electricity (e.g. "feed-in-tariffs" per unit electrify supplied to the grid).

28 Malik Amin Aslam Khan, Pervaiz Amir, Shakeel Ahmad Ramay, Zuhair Munawar and Vaqar Ahmad, "National economic and environmental development study (NEEDS)", Report (Islamabad, Ministry of Environment, 2011). Available from https://unfccc.int/files/adaptation/application/pdf/pakistanneeds.pdf.

29 Arif Alauddin, "Energy efficiency and renewable energy: The key to sustainable development" (Islamabad, Alternative Energy Development Board [AEDB]).

30 Aslam Khan, Pervaiz Amir, Shakeel Ahmad Ramay, Zuhair Munawar and Vaqar Ahmad, "National economic and environmental development study (NEEDS)", Report (Islamabad, Ministry of Environment, 2011). Available from https://unfccc.int/files/adaptation/application/pdf/pakistanneeds.pdf.

2.5.2 Adaptation costs

The NEEDS (study) used three different criteria for deriving reasonable adaptation cost estimates for Pakistan[31]. These were based on overall projected GDP, derivations on a per-capita basis based on existing research and estimates from the cost of historical climatic disaster events. Average annual adaptation costs were estimated to range from 3 percent of GDP by 2015 to 1.5 percent of GDP by 2050. That represents, from now to 2050, around $6–14 billion, or an average of $10.70 billion per annum over the next 40 years.

For global adaptation, cost estimates are substantially greater than current adaptation funding and investment, particularly in developing countries. This suggests a funding gap and a growing adaptation deficit. The most recent global adaptation cost estimates suggest a range from $70 billion to $100 billion per year, globally by 2050.[32] Comparison of the global cost estimates with the current level of adaptation funding indicates that global funding needs to be orders of magnitude greater than what it is today, especially in vulnerable developing countries like Pakistan.

2.5.3 Directing climate response expenditure

Following a lower GHG emissions route may costs approximately $8–17 billion annually, and undertaking adequate adaptation actions in the order of $6–14 billion. This suggests that the climate response would cost in the region of $14–$31 billion annually, or 6–13 percent of GDP, annually (based on 2013 GDP of $237 billion). For Pakistan, with its significant vulnerabilities, an existing energy gap and growing energy demand, there remains a vital debate on the formulation and extent of the CC response. Government commitment, through its budget setting and policy objectives, will be the prime mover in the CC response; private sector involvement will be required at a later stage. However, there are a number of key questions to answer in order to formulate the response, which the CPEIR can help address.

How much should be spent on the climate response? Present spending on the climate response across the Government is unknown. The timeline and targets to achieve reductions in vulnerability, increasing resilience for adaptation and reductions in GHG emissions for mitigation are not clear. No substantive and comprehensive outcomes-monitoring for mitigation and adaptation interventions is carried out to help determine the extent of CC policy delivery. It is clear that there are significant climate-related vulnerabilities which are having social, economic and environmental effects. However, it is not clear what the scale of the adaptation deficit is in social and economic terms.

What should be the investment balance between adaptation and mitigation? It would be possible to focus the CC response on securing vulnerable livelihoods and assets which are under direct CC threat through adaptation and building resilience. However, to move toward a low-carbon path through mitigation actions and develop the green economy is likely to strengthen economic growth and help absorb CC response costs; although the GHG reductions achieved will be small on a global scale due to Pakistan's low GHG contribution. Deciding on the balance between adaptation and mitigation affects the allocation of government expenditure across institutions and activities; the CPEIR addresses this question and provides an overview of the balance between adaptation and mitigation expenditures.

Are government investments causing increased CC pressures? To what extent are positive climate investments being counteracted by negative climate expenditures, especially through counter-mitigation policies and financial instruments? Reforming environmentally harmful subsidies, and specifically inefficient fossil fuel subsidies, is necessary to establish policy frameworks that "get the prices right" to

31 Ibid.

32 Muyeye Chambwera, Geoffrey Heal and Others, "Economics of adaptation", in Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, C.B. Field and Others. (Cambridge, Cambridge University Press, 2014).

reduce GHG emissions.[33] Phasing out subsidies is politically challenging, and can in some cases have negative impacts on low-income households and thus must be implemented carefully to ensure that any negative impacts on household affordability are mitigated through appropriate measures.

How does the CC response link to the overall development path of the country? Both adaptation and mitigation responses need to be coherent and in-line with the development agenda, nationally and provincially. How can the national climate response be best formulated to support the development agenda and key documents such as the FEG, 2013, which emphasizes the need for steady and sustained growth through competitiveness, productivity and innovation? Ensuring that national efforts towards a climate response are concomitant and supportive of the outlined trajectories for sustainable economic growth and societal wellbeing, requires a review of the constituent parts of the CC response, as well as an overall strategic positioning of the response alongside the development agenda. The CPEIR can help to establish the positioning of CC within this socioeconomic development trajectory and recommend further harmonization and integration.

2.6 Findings and conclusions

- Pakistan is already experiencing CC effects with an estimated $9.6 billion in losses in 2010. Evidence suggests that CC will have a significant and increasing effect on national GDP if no action is taken. Combating these effects requires action on both mitigation (reduction of GHG emissions) and adaptation (building resilience in natural and human systems).
- Economic studies have assessed the costs of mitigation to decouple economic growth from GHG emission increases, and for building adequate resilience though adaptation. In Pakistan, these estimates are in the region of 5.5 percent of GDP, annually for mitigation and 1.5–3.0 percent of GDP, annually for adaptation.
- With significant financial resources required for a CC response, there is a need to link expenditures to the overall development path of the country, to determine the balance in spending between adaptation and mitigation, and to determine the prioritization and selection of adaptation and mitigation activities.

33 Organisation for Economic Co-operation and Development (OECD), "Financing climate change action", Undated. Available from http://www.oecd.org/env/cc/49096643.pdf.

CHAPTER 3 - CLIMATE CHANGE POLICY AND INSTITUTIONAL SETUP

3.1 Introduction to climate change policy and institutions

Institutions, rules and policies are the building blocks of national action on climate change. The policy and institutional architecture for climate governance has been gradually shaping up over recent decades in Pakistan, spurred by escalating global momentum and support. Building on the existing base of environmental institutional structures, new policy and institutional arrangements continue to slowly evolve at national and sub-national levels to deal with the emergent needs of climate change mitigation, adaptation and financing. Pakistan has put in place some of the essential parts of this system, including a National Climate Change Policy (NCCP) issued in 2012 (as well as provincial climate change policies currently being drafted), and a dedicated Ministry of Climate Change (MCC) set up in 2015. A recent development is the formulation of a Pakistan Climate Change Act in 2017, which has been approved by the parliament after its approval by the Federal Cabinet. This Act envisages a high-powered Climate Change Authority responsible for monitoring climate change in all development sectors. It also envisages a Pakistan Climate Change Council headed by the Prime Minister of Pakistan, and a Pakistan Climate Change Fund to mobilize resources for delivering mitigation and adaptation goals in the country. Further, the Government of Pakistan has adopted a national statement of ambition, in the form of an Intended Nationally Determined Contribution (INDC), setting national targets for reducing GHG emissions and improving climate resilience with international support over the period leading up to 2030.

But, given the cross-cutting and encompassing nature of the climate challenge, more complex arrangements are needed to deliver holistic solutions which are beyond the influence of a single ministry or policy instrument. Climate-proofing wider economic growth and society requires enhanced mechanisms capable of configuring existing development systems and embedding climate change as an integral and cross cutting feature. This requires leadership and multi-stakeholder coordination, a role currently assumed by the MCC (and Environment Departments at provincial level), as well as institutional mainstreaming through line departments. In addition, the way in which public resources are prioritized and allocated through the MoF and the MPDR has also an important role in embedding CC across government.

With regards to mainstreaming CC in public policy, we see some evidence of climate change featuring, even if superficially, in certain sectoral and central development planning of the government. For instance, Vision 2025, the long term development framework of the country finalized in 2014, recognizes climate change as an emerging challenge to economic growth in Pakistan. It acknowledges climate change and its impact on food and water security as looming concerns; and therefore sets "protecting natural resources and addressing climate change" as one of the priority action areas. Similarly, CC and environmental protection have also been recognized in certain national long-term plans, budgets and associated Public Sector Development Programmes (PSDP).

However, the mainstreaming and integration objective remains elusive, especially at sub-national level. CC remains a peripheral policy issue for the most part, its linkages and effects on society, sectors and the economy are not well understood or recognized beyond the MCC. Efforts are underway in some of the provinces to make CC a criterion in public sector development projects as a way of promoting integration, however the prevailing lack of understanding around CC issues, linkages and implications is a barrier to

effectively fulfilling this criterion in project planning and budgeting.

This chapter starts by providing an overview of the main CC policy and implementation framework at the national level, and goes on to discuss the sectoral linkages and strengths and weaknesses of the present guidelines. The second half of the chapter examines the institutional setup for CC, starting with a discussion of the devolution process through the 18th Amendment and then a consideration of the emerging setup at the federal and provincial level. Finally, some of the strengths and challenges of the institutional setup are identified. This chapter focuses on policy and institutions whereas the resourcing and budget implications of CC are considered subsequently in Chapter 4.

3.2 National Climate Change Policy Framework

3.2.1 National Climate Change Policy

The NCCP was formally launched by the MCC in February 2013 following approval from the Cabinet. Its main policy objectives are shown in box 4.

Box 4: NCCP policy objectives

1. Pursue sustained economic growth by appropriately addressing the challenges of CC;
2. Integrate CC policy with other interrelated national policies;
3. Focus on pro-poor, gender-sensitive adaptation while also promoting mitigation to the extent possible in a cost-effective manner;
4. Ensure water, food and energy security in the face of challenges posed by CC;
5. Minimize the risks arising from expected increases in frequency and intensity of extreme weather events such as floods, droughts and tropical storms;
6. Strengthen inter-ministerial decision-making and coordination mechanisms on CC;
7. Facilitate effective use of opportunities, particularly financial, available both nationally and internationally;
8. Foster the development of appropriate economic incentives to encourage public and private sector investment in adaptation measures;
9. Enhance the awareness, skill and institutional capacity of relevant stakeholders;
10. Promote conservation of natural resources and long-term sustainability.

The NCCP focuses predominately on adaptation needs in view of Pakistan's high vulnerability to the adverse impacts of CC, particularly extreme climate events. The policy highlights various sectors' vulnerabilities to CC and indicates a range of adaptation measures required to tackle the problem. These sectors include water, agriculture, coastal areas, forestry, biodiversity and other vulnerable ecosystems. The NCCP also recognizes that CC poses a serious risk to poverty reduction efforts and threatens development gains achieved over many decades. The NCCP also fully acknowledges the gender-related aspects of CC vulnerability and proposes a number of gender-sensitive policy measures.

Though Pakistan's contribution to GHG emissions is very small, the NCCP gives due attention to mitigation by emphasizing contributions to global mitigation efforts in sectors such as energy, transport, town planning, forestry, agriculture and livestock. Furthermore, appropriate measures relating to disaster preparedness, capacity building, institutional strengthening, technology transfer and international cooperation for raising Pakistan's stance regarding CC at various international forums, have also been incorporated into the policy.

A particularly relevant aspect of the NCCP is its recommendation for the development of plans of action by the federal and provincial governments, and by the GB and AJK regions. It recommends separate

implementation committees for the federal and provincial governments, representing different sectors. These committees would have the potential to be conduits of cross-sectoral dialogue, as well as between the federal and provincial levels.

The MCC and the Climate Change Standing Committees of National Assembly and Senate now give CC a good entry point. However, it is important to recognize that CC is not the task of a single ministry; subsequent sections and chapters show that considerable efforts are being made by entities outside the MCC. Indeed, in time, it will be important to have a more overarching committee set up by the Speakers of the Houses at the national and provincial level.

3.2.2 Framework for climate change policy implementation

The Framework for the Implementation of the Climate Change Policy[34] is a follow-up of the NCCP. This framework document was developed as a catalyst for mainstreaming CC concerns into decision-making at both federal and provincial levels, thereby creating enabling conditions for integrated, climate-compatible development planning. It is therefore not a standalone document, but rather an integral and synergistic complement to future planning in the country. Furthermore, it was designed as a "living document". The framework highlights vulnerabilities to CC and appropriate adaptation and mitigation actions spelled out for various sectors,[35] and identifies actions associated with capacity building, institutional strengthening and promoting CC awareness in relevant sectors. However, specific sector policies remain the reference point for action rather than the NCCP or the framework. Likewise, it was expected at the time of development that the framework document would be used to prepare detailed provincial and local adaptation action plans, although this has not been the case so far. In fact, the framework and a follow-up work programme for CC have not been used as guiding documents by decision-makers, particularly those in specific sectors.

Meanwhile, a National Climate Change Policy Implementation Committee was activated in 2015 to spur implementation of NCCP recommendations at federal and provincial levels. Subsequently, the governments of KP, Punjab and Sindh are drafting customized climate change policies and/or action plans for their provinces, based ostensibly on the NCCP recommendations although the connection between the two in terms of design and implementation is not clear.

More recent initiatives to strengthen the institutional arrangements for NCCP delivery include:

- The proposal of a Pakistan National Climate Change Council and a Pakistan Climate Change Authority as envisaged under the provisions of a Pakistan Climate Change Bill approved by the Federal Cabinet and National Assembly and currently under discussion in Senate;
- Approval of a approved MCC-proposed Reducing Emissions from Degradation (REDD) Plus national strategy to stop deforestation and enhance forest cover by Pakistan's Council of Common Interest (CCI);
- Establishment of Pakistan Fund for Disaster Risk Management with the help of ADB;
- NDMA, in collaboration with the Climate & Development Knowledge Network (CDKN) and LEAD Pakistan has developed a Disaster Risk Insurance Framework (DRIF) for Pakistan to guide protection of vulnerable, low income populations in the aftermath of extreme weather events;
- The recent launch of an ambitious Prime Minister Green Pakistan programme.

34 Framework for the Implementation of the Climate Change Policy, 2013.

35 Sectors include water, agriculture, forestry, coastal areas, biodiversity, health, vulnerable ecosystems, energy, transport, town planning, forestry, industry, agriculture and livestock.

3.2.3 Pakistan's Nationally Determined Contribution

In compliance with international policy obligation, Pakistan submitted its Intended Nationally Determined Contribution (INDC) to the UNFCCC and ratified the Paris Agreement on Climate Change in November 2016. The adoption of the INDC as a Nationally Determined Contribution (NDC) reflects Pakistan's ambition to reduce domestic GHG emissions, taking into account national circumstance and capacities. It also addresses how the country will adapt to CC impacts and the level of support needed from developed countries to adopt low-carbon pathways and to build climate resilience. Pakistan's NDC outlines a broad range of potential adaptation and mitigation measures, as well as the challenges associated with the realization of these measures in both current and future scenarios.

According to the document put forward by Government, Pakistan's NDC is rooted in the country's strategic plan Vision 2025 and takes into account the potential impacts of key development plans and projects, such as measures to address current energy shortages and contributions to economic growth arising partly from the infrastructure-intensive China-Pakistan Economic Corridor (CPEC) partnership that is underway.

The NDC presents an overall GHG emissions profile of the country coupled with future emission projections, based on present and estimated future socioeconomic parameters, changes in the demographic dynamics and emerging energy needs. It also describes mitigation and adaptation measures already being implemented in Pakistan and discusses the challenges and difficulties being faced and those likely to be confronted in coming years

Pakistan's NDC references findings from Pakistan's latest GHG inventory (2014/15). It shows an approximate 123 per cent growth in the country's emissions profile over last 20 years (1994–2015), with energy and agriculture sectors being the main contributors. Envisaged economic growth and an improving macro-economic environment are expected to amplify future emissions. However, the INDC statement acknowledges a huge potential for mitigation across most sectors in a rapidly growing emissions scenario.

The NDC estimates an investment requirement of approximately $40 billion for a 20 per cent reduction in projected GHG emissions growth by 2030. Similarly, an emissions reduction of 15 percent is expected to require $15.6 billion in financial support; whereas a 10 per cent reduction is calculated to have a cost of $5.5 billion. The NDC indicates Pakistan's willingness to work towards the stated mitigation potential on the back of international support. The document makes clear that these indicators of potential reduction in GHG emissions and adaptation activities should not be considered as an international obligation of the country unless the resource provisioning (whether in the form of finances, technology, and technical assistance) is ensured. Furthermore, it makes clear that the projected costs of emissions abatement and adaptation requirement are based on the present government's plans and actions, which may be adjusted and reviewed, as necessary.

While the NDC sets tangible mitigation targets for the country to pursue over coming period, the mechanisms and strategies needed for achieving these targets are not specified. It is also not clear how implementation and budgeting will be coordinated with existing policies and plans of various sectors and provincial governments, including integration with CC policies at national and provincial levels.

3.2.4 Climate change linkages to key sectors' policies

Sector policies rather than the NCCP continue to drive public expenditure on CC. There is, however, limited evidence to suggest that CC has been adequately mainstreamed into relevant sectors' policy instruments, although some key sectors (e.g. water, agriculture) are increasingly highlighting CC risks in their policy narratives. For example, within the National Environmental Policy (2005) there is recognition of CC as an environmental issue and recommendations for a national CC policy and clean energy investments are put

forward. However, a deeper assessment of climate vulnerability within the environmental sectors (e.g., agriculture, waste management and forestry) is not made, suggesting that CC is presented in this policy as an additional subject rather embedded as a central pillar.

Similarly, the National Disaster Risk Reduction Policy (NDRRP) 2013 draws out the increased disaster risks posed by climate change, and its vision statement emphasizes the urgency of strengthening adaptive and coping capacity within the wider context of a changing climate. But a deeper discussion of the linkages between disaster risk reduction (DRR) and climate resilience building is lacking. In fact both the NDRRP and NCCP, despite their clear thematic link and institutional interface, have failed to find pathways for effective integration and coordination in areas where adaptation and DRR planning overlaps.

A draft Agriculture and Food Security Policy, pending approval since 2013, presents a stronger consideration of climate change impacts, calling for climate-smart agriculture strategies and national flagship programmes in areas at high risk of desertification and climate impact. But, as with the NDRRP, an integrated approach with NCCP is lacking. Power generation is a high priority for the Government and has direct links to the growth model of Vision 2025. The policy principles of the National Power Policy (NPP), 2013, are efficiency, competition and sustainability. "Sustainability" is not used in the environmental sense and instead relates to low-cost energy, a fair and level playing field and demand management (related to policy, pricing and regulatory instruments). The NPP is focused on filling the energy supply-demand gap in a cost-effective way, and suggests that this "could be eradicated by 2017".

However, there is another policy within the power sector that could have potential climate-relevant outcomes. The Alternative and Renewable Energy (ARE) Policy of 2011 promotes the development of renewable energy from a wide variety of sources (e.g., hydropower, solar power, biogas) by providing subsidies and incentives, and optimizing its impact by focusing on underdeveloped areas. ARE also tries to resolve policy conflicts, address stakeholder concerns and proposes the establishment of the Alternative Energy Development Fund to promote the sector. However, the connection between ARE and National Power Policy (NPP) is not clear; the latter makes no mention of renewable energy technology, and it would be implicitly excluded on a cost-basis, anyway. There is compatibility with hydropower which is promoted by both the NPP and ARE on the basis of cost and its renewable nature.

A draft water policy, with some level of reference to CC impacts, was developed in 2005, but has been unable to gain approval because of the competing interests of stakeholders. The situation has been further complicated in the wake of the 18th Amendment under which water became a provincial subject. Increasing population and CC-induced water shortages have also made water a highly contentious issue, particularly between the provinces. This has made it very difficult to draft an acceptable water policy.

3.2.5 Strengths and challenges of the climate change policy

It is necessary for all climate-relevant sectors to be involved in the climate response to enable a holistic and effective approach to addressing CC challenges. A strong point in the current national policy scenario is that we see high-level endorsement emerging for the need to mainstream CC into economic and sectoral planning. Even if insufficiently discussed and integrated, the acknowledgement of CC risks in high-level strategies of the government provides impetus for deeper mainstreaming of a climate-compatible development agenda. CC finds mention in Vision 2025 and is taken up in Medium-Term Development Programme that operationalizes the Vision 2025. Moreover, frontline sectors such as agriculture, DRR and water are increasingly opening up to the need for embedding CC considerations in core planning, and are contributing to an evolving national discourse on building climate resilience.

The weaknesses of the current policy arrangements include:

- Sector policy is not always consistent in its inclusion of CC. For example, within the power sector, the National Power Policy does not consider CC mitigation issues but focuses on power generation at least/reasonable cost. However, within the same sector, the Alternative and Renewable Energy Policy promotes renewable energy and mitigation benefits, without a primary focus on per unit costs, in contrast to main interest of the NPP. The low-carbon development interest is not clearly and uniformly understood and accepted across the power generation sector.
- Some sectors lack policy or have outdated or unratified policy. For example, there is a lack of policy guidance for water management and conservation, a vital area for building Pakistan's resilience to future water shortages induced by climate change. The same is the case with other important areas including urban development and industrial growth, which lack adequate policy attention. Similarly a National Agriculture Policy is pending endorsement since 2013, while a National Vision for Health was announced in 2016, 15 years after the last health policy was issued. The National Sustainable Development Strategy was never ratified and this, perhaps, reflects the need for collaborative working to develop policies that transcend sectors. The policy cycle will increasingly renew various policy documents, and if the processes are comprehensive, mainstream CC into these various sectors undergoing policy review.
- There is no defined process for comprehensive inclusion of CC in developing sector policy at the federal or provincial level. Embedding CC within policy is a technical and complex process due to the intricacies and uncertainties of involved. Setting appropriate policy objectives with robust indicators for monitoring can be a technical undertaking, for example, setting mitigation targets within the power sector. The capacity required to do this is high and likely to sit within both the MCC and the relevant line ministry; institutionalization of such collaboration would help to ensure the most focused sector-level mainstreaming.

3.3 Institutionalizing climate change

3.3.1 Devolution through the 18th Amendment

The 18th Amendment to the Constitution of Pakistan, which was passed in 2010, mandated the devolution of 47 federal subjects to the provincial level, including "environmental pollution and ecology". CC has traditionally been considered within the ambit of environmental governance and was thus also devolved. In view of the Federal Government's role in coordinating national response to climate change and reporting on the implementation of international agreements, the MCC was subsequently notified to carry out centralized CC responsibilities.

Over the last few years, three of the four provinces have initiated work on development of their respective climate change policies, within the broader ambit of the NCCP 2012. Detailed discussion of these developments is presented in chapters 6–10. With the institutional infrastructure forming up at the sub-national level, the national climate change policy and action plan are being redefined with sub-national governments taking on dominant roles and responsibilities. It is expected that with the consolidation of legal and institutional infrastructure, the overall climate governance structure will strengthen and allow the MCC to better assist policy and operational activities of sub-national entities.

3.3.2 Ministry of Climate Change

The re-establishment of the MCC early in 2015 has once again brought the subject of climate change to institutional prominence at the federal level, although the issue is still insufficiently prioritized in mainstream development planning. The MCC underwent numerous transformations over the last decade,

including a move from being a ministry to becoming a division under the Prime Minister's Office. This was reversed in 2015 when the MCC was once again established as a full-fledged ministry. This suggests renewed attention to CC at the highest levels of Government, though it remains to be seen how it translates into financial and political support for concrete programmatic interventions on the ground. The MCC remains one of the weakest among federal ministries in terms of resources and influence, receiving less than 1 percent of federal Public Sector Development Programme (PSDP) funding.

The MCC's main mandate is policy and planning in a range of environment related sectors. Core to the MCC are tasks and commitments resulting from participation in the UNFCCC, including national policy development, building readiness for climate finance and administering resources from the Green Climate Fund, evolving national adaptation and mitigation strategies, and facilitating the delivery of Pakistan's INDC. The MCC is also responsible for other environment-related policies and tasks, including drinking water and sanitation, forests, and resettlement and Environmental Protection Act (PEPA).

As part of CC mainstreaming, the MCC is increasingly engaging in activities aimed at building the scope for public climate finance. This is in collaboration with the MoF and currently involves developing a coding system for tracking and reporting climate-relevant expenditures in national budgets. The coding system forms part of a broader Climate Change Fiscal Framework (CCFF) being prepared with support from the UNDP and that builds upon the NCCP and the Medium Term Budgetary Framework (MTBF) of Pakistan. The initiative is a step towards enabling more systematic response to climate change, one that links policy frameworks with public sector development budgeting and essential processes of resources allocation.

The need to embed CC in budgeting and planning is accentuated by increased availability of climate finance from international sources, particularly through operationalization of the Green Climate Fund (GCF) that is structured to channel large volumes of climate funding to developing countries. The MCC is Pakistan's National Designated Authority to the GCF and is tasked to facilitate necessary institutional arrangements for accessing and delivering GCF resources in the country. A set of local organizations have been nominated by the MCC for accreditation to the GCF, adding an additional dimension to the CC institutional landscape. The accreditation of national entities to the GCF is important to help develop country-led programming which is a core dimension of the business model of GCF.

The MoF is also a key player in GCF related controls and arrangements. A dedicated Climate Finance Unit has been set up at the MCC to coordinate climate finance from various international channels, with GCF forming the prime focus currently. This unit also looks after Global Environment Facility (GEF) and Adaptation Fund related functions and responsibilities of the national government.

Other attached departments and agencies falling under the MCC's administrative control include Global Change Impact Studies Centre (GCISC), National Disaster Management Authority (NDMA); Pakistan Environmental Protection Agency (Pak-EPA), and the Zoological Survey Department of Pakistan. It also has specialized wings to deal with matters relating to Environment and Forestry.

At the operational level, the MCC maintains close engagement with the Pakistan Meteorological Department, Pakistan Agricultural Research Council (PARC), Federal Flood Commission, Indus River System Authority, Water and Power Development Authority (WAPDA), National Energy Efficiency and Conservation Authority (NEECA, formerly ENERCON),and many private sector organizations.

3.3.3 Other key actors and their role in climate change mainstreaming

As mentioned already, climate change is a multi-faceted development challenge that needs to be taken up across sectors and institutions. Outside the MCC, which has essentially a coordination role, it is the line departments, and the ministries of finance and planning, that are the main vehicles for implementing CC strategies and goals.

As director of the budget preparation and public funds allocation process, all public sector spending is ultimately determined by the MoF. The allocations signal the government's investment priorities and interests and are important to the profile of direct and indirect climate-related public spending. Furthermore, all foreign economic aid flowing to the government of Pakistan, whether for on-budget support or off-budget projects, is channelled through the MoF. This has implications for international climate finance flows towards the country, particularly large loan-based resources which are likely to be needed in future to fund mitigation and adaptation needs. In the near future, the project co-financing requirement of the GCF is likely to increase the MoF's involvement in national climate finance dealings.

The MPDR steers processes around national development planning and vision setting at the federal level. It is also responsible for preparing and monitoring the Public Sector Development Programmes (PSDP) which determine the level and nature of investment in climate-relevant activities. Support from the MPDR is important in positioning CC within mainstream development systems in the country. In some instances, the MPDR might be viewed as a surrogate to the MCC, stepping in to perform some of the CC coordination and integration functions. This substitution is also an option at the sub-national level, as the case with AJK region for instance.

In addition, there are several line ministries and specialist institutions overseeing sectors relevant to CC planning and investment in Pakistan. These include the Ministries of Water and Power, Food Security and Research, Housing and Works, Industries and Production, and others. Attached to these ministries are organizations including the Alternative Energy Development Board (AEDB), National Energy Conservation Centre (ENERCON), PARC and others that intermittently participate in national CC policy dialogue and planning. The sectoral ministries and departments have a crucial role in generating projects and business plans for tapping climate funding and support from international and domestic sources.

To capture the substantial economic and environmental benefits provided by conserving energy, the Government of Pakistan established ENERCON in 1986. While the National Energy Efficiency and Conservation Act 2016 has been enacted recently. This has provided a legal basis to enforce necessary measures for efficient use and conservation of energy in the country in all sectors of the economy, in coordination with the relevant provincial departments.

With the notification of the Act, ENERCON was transformed into the National Energy Efficiency and Conservation Authority (NEECA) and will act as focal federal agency for initiating, catalysing and coordinating the implementation of energy conservation activities in all sectors of the economy under the auspices of the Pakistan Energy Efficiency and Conservation Board headed by the Federal Minister for Water and Power. The strategy going to be adopted by NEECA for promoting energy efficiency and conservation shall cover whole spectrum of activities starting from identification of energy efficiency and conservation opportunities and including technology demonstration, undertaking pilot projects, information and outreach, training and education, and development of plans and policies for promoting mitigation, energy efficiency and conservation best practices.

3.3.4 Institutional setup at the provincial level on climate change

The devolution of environment (which includes CC) has brought the subject closer to the implementation level which is expected to be helpful in synthesizing sources of policy and regulatory regimes. However, greater clarity is required regarding the roles and jurisdiction of different tiers of government in CC-related legislation, regulation and enforcement. The establishment of the federal Climate Change Authority is intriguing on the one hand around questions on the division of role and authority for CC governance along national and provincial lines and on the other it might provide a rendezvous between the provincial and federal domains.

With CC having historically remained a federal subject in Pakistan, capacities for related planning, regulation and delivery are relatively weak at the sub-national level in current setting. There is greater role and expectation for the MCC to transfer requisite CC knowledge and skills downstream, and to build effective vertical linkages.

Further, provinces could be constrained in CC-related legislation and regulation if due consideration is not given to policy and institutional linkages with other sectors. All four provinces have their own Environmental Protection Agencies (EPAs) which are now also responsible for delivering adaptation and mitigation planning, following the devolution process. The EPA in KP is at an advanced stage in drafting a provincial CC policy, and the Sindh and Punjab EPAs are pursuing similar outputs. However, it needs to be kept in mind that EPAs generally tend to have weak linkages with sectoral departments and more powerful provincial institutions involved in policy planning, and they are likely to require considerable, long-term support in developing and delivering integrated CC strategies for the provinces.

The EPAs in Punjab, KP and Balochistan are under the administrative control of the Environment Department; and in Sindh it is under the control of the newly established Climate Change, Environment and Coastal Development Department. In AJK, it is under the control of the Planning and Development Department (P&DD) and in GB under the Forest, Wildlife and Environment Department.

Just as at the federal level, effective multi-sectoral planning and coordination forums are needed at the provincial level to facilitate common and integrated agendas on climate compatible development. Equally important is the availability of consistent mechanisms and processes for coordination and capacity building between provincial and federal level, in order to achieve harmonization of national CC response efforts.

3.3.5 Federal and provincial linkages on climate change

In Pakistan, the development of intergovernmental institutions are still at an early stage in the wake of the devolution in 2010. However, with devolution, one important collaborative government entity has been re-invigorated to promote a more harmonized approach between federal and provincial interests — the Council of Common Interests (CCI), which dates back to the 1973 Constitution. The CCI was not very active in the decade prior to the 18th Amendment, in part because of a period of authoritarian rule.[36] It averaged just one meeting every three years between 1973 and 2010. However, devolution saw the CCI meeting about four times a year and discussing a wider variety of topics, including flood crisis response.[37] The council is envisaged to become an effective dispute resolution and economic planning and development forum to further the cause of participatory federalism.[38] The invigorated CCI provides an opportunity for some of the complexities of CC to be discussed in a high-level and authoritative forum. The inclusion of the MCC as one of the three federal ministries (or as an invited guest by the Prime Minister through the Secretariat) could further strengthen this discussion. Processing CC through the CCI in this way could help create a clear dictate for CC response through unpacking and clarifying the distribution of provincial and federal CC responsibilities. In addition, the CCI could further establish the importance of CC policies and links to the sectors, as well as fast-tracking CC responses in the provinces.

There is also the IPC Division at the federal level which was established to settle cases of major importance that require policy decisions and mutual discussions between the federal and the provincial

36 The CCI was held in abeyance in 1977 by the imposition of martial law. Its federal spirit was changed in 1985 through the 8th Amendment. It was held in abeyance again in 1999. The year 2003 saw it given a quasi-presidential form through the 17th Amendment.

37 Ahmed Mehmood Zahid, "Institutional analysis of Council of Common Interests (CCI): A guide for functionaries", (United Nations publication). Available from http://www.pk.undp.org/content/dam/pakistan/docs/Democratic%20Governance/Federalism/CCI%20Manual%20%281%29.pdf.

38 Rabbani, Raza. 2012. A Biography of Pakistani Federalism: Unity in diversity. Islamabad: Leo Books.

governments.[39] The importance of the IPC has increased after the 18th Amendment since environment is now a residual subject, and thus a responsibility of the provincial government, any policy/regulatory/administrative issues with broad-based repercussions could be taken up by the IPC. The IPC Division also serves as the CCI's secretariat. There is no formal mechanism through which the PEPA (at the federal level) is linked with provincial EPAs. PEPA did provide a common thread as it was a federal law but was being implemented by the provinces. Now that this commonality does not exist, PEPA can at best coordinate on surveys and reports and on the implementation of international treaties and agreements. There needs to be some coordination mechanism between federal and provincial EPAs to ensure effective implementation of policy instruments, international treaties and sanctifying CC/environment at the planning stage.

The way federal policy instruments are delivered in the provinces, and in particular, the way in which provincial needs for adaptation can be ensured through climate-proofing of federal initiatives, remains unclear. For example, environmental impact assessments (EIAs) for projects on the Federal Legislative List (nuclear power plant, highways and major ports) are a federal responsibility. However, provincial EPAs will have to rigorously coordinate with their respective local government departments to ensure there is adequate room for the implementation of adaptation and mitigation activities at the district/tehsil municipal administration (TMA) level in local government laws. The process by which the harmonization of the federal and provincial levels can be achieved must emerge to allow optimal gains to be made from the devolution process; this requirement covers the institutional, legislative and policy areas.

Environment is not the only subject area which requires collaborative working between the federal and provincial levels. For example, the NDMA is a key federal entity responsible primarily for adaptation activities and building community resilience to cope with climatic disasters like floods. The NDRRP, 2012 builds on decentralized responsibilities as defined in the National Disaster Management Act, 2010 at the provincial and district level. While institutional structures have been set up (provincial disaster management commissions, provincial- and district-disaster management authorities), there remains a capacity gap for implementation. One of the principles of the NDRRP is a clearly-defined division of roles and responsibilities between different layers of Government. It states "DRR is first and foremost a provincial- and district-level subject. National policies provide an overarching framework for risk reduction but provincial, district and municipal governments, together with civil society groups, are best placed to promote and support risk-reduction behaviour among vulnerable communities. This requires a clear definition of roles and responsibilities between different layers of governance and actors" (NDRRP, 2012, point 2.3.6). Similarities between DRR and CC in terms of federal-provincial linkages are apparent, perhaps because DRR covers CC-related disasters, which include cyclones and flooding.

Other CC-relevant entities that exist at the federal level, but have provincial government involvement include the Pakistan Environmental Planning and Architectural Consultants, the Pakistan Environmental Protection Council, the Zoological Survey Department and the National Agriculture Research Council. Collaboration in all of these areas between the federal and provincial levels is needed for a harmonized approach, and within that, the emphasis on CC-related initiatives or CC-proofing of investments needs to be determined and implemented. Policy delivery and climate-compatible investment must be considered as well.

In KP, steps towards legislating for CC have already been taken with the introduction of the PEPA in 2014. The Chairman of KP's taskforce on the Green Growth Initiative (GGI) recognizes that "Climate change remains a pressing challenge for the KP province owing to its geography and topography". The GGI targets enhancing climate resilience through vulnerability mapping and climate-proofing of provincial infrastructure. In our discussions with the Environment Department and Planning Division, recent floods and resulting infrastructure loss were used as an example of climate vulnerability. From the point of

39 Government of Pakistan, "Inter-Provincial Coordination Division", 2011–2012. Available from http://www.ipc.gov.pk/.

view of integration into planning and budgeting, PEPA ensures that climate adaptation concerns will be integrated into the planning process through EIAs and PC-I preparation stages. The KP Act introduces a decision support process for strategic environment assessments (SEAs) for certain areas. The Director General of the EPA explained that this would help in assessing both policies and projects. While the SEA does not yet specifically mention CC, the Provincial Environmental Protection Council notification may be used as a vehicle to make CC explicit in the SEAs.

As discussed earlier, the 18th Amendment has long-ranging implications for institutional arrangements and the dispensation of governance in Pakistan. The devolution process provides an opportunity to coordinate the federal and provincial inter-linkage better on crosscutting subjects like CC through strengthened bodies such as the CCI. It also allows tailoring the CC response more closely to provincial needs.

3.3.6 Strengths and challenges of the institutional setup

Devolution through the 18th Amendment was a substantial modification to the governmental and governance system of Pakistan that would inevitably have important consequences for the climate change response. The following points try to encapsulate some of the possible challenges and strengths of the devolution process.

Challenges of the devolution process for CC include:

- Unclear division of responsibilities between the federal and provincial levels: While the abolition of the Concurrent List was meant to remove the complexities associated with shared responsibility, the devolution process has in fact re-established a slightly different set of complexities. The federation is responsible for the implementation of international agreements and treaties,[40] but CC implementation lies with the provinces, which makes coordination for compliance to agreements complex.
- A lack of processes for a comprehensive collective establishment of federal-provincial harmonized CC response: While there are institutional structures at both the federal and provincial level, there seems to be a lack of systems and processes that can lead to collaboration for a harmonized outcome for CC response. Progress towards the development of a detailed and technical agreement on CC response across the centre and the provinces is vital to ensure efficient budget spending and to target expenditure on CC issues that are directly relevant to the local geomorphological and socioeconomic character of each province.
- The lack of implementing capacity within provinces: The devolvement of CC-delivery to the provinces places this responsibility in a historical vacuum in terms of capacity. There was no development of provincial CC policy before 2010 as leadership was, in practical terms, provided at the federal level. However, the provinces were not only presupposed to be able to set policy objectives and assess CC-related expenditure priorities post 2010, but also to target interventions with the most cost-effective outcomes. The lack of capacity to implement CC policies and plans in provinces can undermine some of the benefits of devolution.

The strengths of the post-devolution setup include:

- Closer links between local vulnerabilities and site-specific adaptation activities: With increased clarity in CC response directions and increased discretionary expenditure, the provinces can improve the fit between budget expenditures and local needs, over time. Provincial discretion in setting budget expenditures is likely to improve the linkage between vulnerability and expenditure.

40 International treaties, conventions and agreements and international arbitration are part of the Federal Legislative List.

- Widening of the CC policy community and institutional landscape: the pool of decision-makers and stakeholders involved in CC planning and budgeting has widened with the devolution of powers to the provinces. This provides opportunity for extending the technical, financial, and leadership capacities required in CC governance beyond a single central ministry to a larger group of planners and decision-makers.
- The national policy frame of the NCCP can be downscaled to provide impetus for the provinces: With the promulgation of the NCCP, the provinces have a robust starting point for elaboration of provincial policy objectives relevant to the provincial context. The NCCP is providing the broader framework for development of provincial climate change action plans to address province-specific CC challenges.
- Opportunity for enhanced collaborative and harmonized working: As the devolution process has not fully transferred CC policy functions to the provinces, there remains the opportunity to optimize the capitalization on skills and competences of multi-level institutions. With a robust process to harmonize the multi-level CC response, the division of responsibilities can maximize the capitalization of CC-delivery as well as opportunities for financial support. For example, the proximity of provincial administrations to their localities could make them most appropriate for delivering adaptation gains to their inhabitants and resources, whereas the federal position in the UNFCCC and allied GHG emissions budgets may make it more appropriate to lead national mitigation actions. An agreed division of responsibility and enhanced capacity in certain areas can promote a clearer dialogue to development partners in areas that grants and budget support would be most needed, and provide cost-effective interventions.

3.4 Challenges for an integrated climate change response

This chapter has separately considered the policy and institutional domains of CC. However, there are a number of identifiable challenges related to a more integrated CC response when these two areas are combined.

- Other significant governmental challenges: The most serious challenge CC policy is facing in its implementation is that the Government's priority is focused on other difficult challenges the country is facing. Chief among these are energy shortages and fighting terrorism. Major efforts and financial resources are targeted at these problems leaving limited time or financial resources for dealing with CC. However, certain provinces may provide increased leeway for a focus on sustainable economic development and enhanced wellbeing, including building resilience to CC.
- CC prioritization: The comprehensive nature of the policy means that policy delivery requires significant political commitment and financial and technological inputs over a broad range of sectors such as energy, transport, water, agriculture, town planning and DRR activities. Within a resource-constrained environment, some degree of prioritization is required to ensure the most effective use of resources. Though the framework for the implementation of CC policy does provide some degree of broad prioritization, further work is required on the development of provincial CC action plans. The policy does emphasize that it targets vulnerability and supports climate-resilience development,41 and thus has a relatively explicit adaptation focus.
- Provincial ownership and delivery: With their increasing degree of autonomy devolution has to some extent eroded ownership of the NCCP by the provinces. Political differences between some provincial governments and the Federal Government can also affect provincial policy ownership and implementation. Presently Punjab, KP and Sindh are trying to develop provincial CC policies. While the development of these provincial CC policies is useful, provinces need to be focusing more on

41 NCCP goal: "To ensure that climate change is mainstreamed in the economically and socially vulnerable sectors of the economy and to steer Pakistan towards climate-resilience development."

development of CC Action Plans as a necessary step to point resources at key provincial issues. Further the mechanism and process for provincial policy delivery are not defined and could potential be highly variable between provinces.

- Coordination and facilitation: The MCC leads coordination on CC and the NCCP, and is also the entity engaged with the UNFCCC and host of the Clean Development Mechanism (CDM) of the UNFCCC. However, delivery of much of the NCCP relies on the provinces to which important sectors such as environment and forestry have been devolved. The MCC's challenge is to organize and orientate federal and provincial efforts in CC response, which will largely take place in provincially-devolved sectors. To coordinate effectively, there is a need for ongoing monitoring and assessment of provincial efforts through appropriate information flow from the provinces to the MCC; such information needs a degree of consistency between the provinces in order to furnish the MCC with a unified perspective. A lack of information will undermine the MCC's ability to effectively coordinate, orientate and prioritize the response.

3.5 Findings and conclusions

1. Harmonization between federal and provincial institutions has the potential to be supported by various bodies (e.g., the CCI), but the diversity of provincial institutional setups makes the formulation of a consistent process for provincial-federal harmonization very challenging. Opportunities for harmonization within CC have yet to be exploited, though there are examples in environmental protection and disaster management.
2. Pakistan's first CC policy, the NCCP, was approved in 2012 to ensure that CC was mainstreamed in the economically and socially vulnerable sectors of the economy and to steer Pakistan towards climate-resilient development. In 2013, a Framework for the Implementation of the CC policy was developed as a catalyst to mainstream CC concerns into decision-making at the federal and provincial levels. A further consideration was creating enabling conditions for integrated climate-compatible development processes.
3. The NCCP and framework were comprehensive and developed through extensive consultation. However, there are a number of challenges related to implementation. These include overriding and pressing governmental challenges such as security and energy supply, leadership and decision-making to prioritize CC responses, coordination and facilitation of CC across sectors and provinces, and the development of sector/provincial CC policies and strategies.

CHAPTER 4 - CLIMATE CHANGE AND THE BUDGET PROCESS

4.1 Climate change and planning

It is well recognized that Pakistan has been a responsible and active global participant of the climate debate. As the chair of the G77 Negotiating Group in 1992 and 2007, Pakistan spearheaded consensus-building on the basic founding principles of the UNFCCC as well as "agreement on the four building blocks of climate change, namely mitigation, adaptation, technology and finance — which have framed the debate ever since."[42] While highly commendable on a world stage, the effects of this commitment are not so easily discernible in the GoP's overall policy framework at home, both at federal and provincial levels.

The three key institutions at the federal level directly involved in CC investment decisions are:

- The MPDR (formerly the Planning Commission) — responsible for the development of the Public Sector Development Programme (PSDP) in coordination with relevant ministries;
- The MoF — responsible for current and development budgetary allocations;
- The MCC — custodian of the Climate Change Policy, 2012.

This chapter focuses on planning and budget processes and their present and future linkages with CC. The chapter commences with a consideration of the main governmental planning tools and the positioning of CC within them. It then considers the federal PFM system, and in particular, the MTBF which has become the key planning and budgeting approach for the budget; a focus is made on the selection criteria for development projects. The chapter then shifts focus to the budget arrangements and positioning of CC in the four provinces and three regions, namely AJK, GB and FATA. A number of key findings and conclusions are made after revising the degree to which CC is embedded and institutionalized within the Government.

4.2 Planning processes in Pakistan and climate change

Development investments in Pakistan are largely in the public sector. Although there may be economic growth instigated through the private sector in the Pakistani ethos of social development, both poverty alleviation and development remain firmly the responsibility of the State. This perspective of development becomes quite important in the context of CC as across the globe and in Pakistan, climate-related investments are needed in both the public and private sector. While the focus of this review is on public sector investments, the importance of country-level development processes enabling a more involved private sector, cannot be underscored enough (e.g., public-private partnerships at the strategic level).

A review of the literature shows that CC has been increasingly linked to vulnerability and poverty, circa 2005 and beyond. The Poverty Reduction Strategy Paper (PRSP) II (2009) takes cognizance of the IPCC's fourth report and emphasizes CC as a challenge to poverty reduction, hence increasing the development-related aspect of CC by adding social development to the realm of economic development.

42 Malik Amin Aslam Khan, Pervaiz Amir, Shakeel Ahmad Ramay, Zuhair Munawar and Vaqar Ahmad, "National economic and environmental development study (NEEDS)", Report (Islamabad, Ministry of Environment, 2011). Available from https://unfccc.int/files/adaptation/application/pdf/pakistanneeds.pdf.

A departure from the paradigmatic aligning of CC and environment is seen in the recent Sustainable Development Strategy, 2012, which is yet to be officially approved. It elaborates on Pakistan's position in the global CC challenge while emphasizing "globally-accepted principles of ensuring equity" that are aligned with "common, but differentiated responsibilities" between developed and developing countries (NSDS 2012:48),

Pakistan is a very small contributor to the problem. It has among the world's lowest per-capita GHG emissions, accounting for just 0.8 percent[43] of the total. Yet, it is one of the worst casualties of CC. This undeniable fact is being duly acknowledged as the country is now consistently placed in the extreme vulnerable category by a host of CC impact indices. These include the Maplecroft index, the Columbia University Vulnerability Index and the recently launched Germanwatch Climate Risk Index, which has placed Pakistan at the top of the list of countries at risk from CC in 2010 (ibid).

4.2.1 PSDP

Since its inception in 1958, the Planning Commission (now the MPDR) has been a significant planning and coordinating body (Appendix 4.1). Planning in Pakistan is undertaken via the formulation of long-, medium- and short-term planning documents at the federal and provincial level. Different kinds of plans, distinguished on the basis of timeframe and emphasis, are developed by the Government which include:

- Perspective plans[44] (15–25-year economic and social policy visions);
- Five-year plans[45] (general statements of objectives and targets relating to the economy);
- Roll-on plans[46] (three-year, medium-term plans designed for sectoral and project-wise adjustments in five-year plans and annual plans).

The Federal Government produces a PSDP through the MPDR which lists all public sector projects/programmes with specific allocations made for each in a particular financial year.[47] Similarly, ADPs are published by provincial governments. Recently MPDR has included CC in the budget call circular letter which indicate a GoP policy commitment on integrating CC in budget and planning process.

To be included in the PSDP, projects require approval by the sanctioning machinery of the Government after due scrutiny of various technical, financial and organizational aspects. The introduction of the Medium-Term Development Framework (MTDF) in 2005 saw a shift to indicative planning. This was preceded by the introduction of the MTBF in 2003. At this point, one can argue for the influence of shifting institutional importance whereby the MTBF produced by the MoF has become the major tool for indicative planning and budgeting.

4.2.2 Climate change in federal and KP planning documents

References to CC in planning documents at the federal level were all within the discussion on environment. The MPDR's Annual Plan, 2013/14 discusses CC in a chapter on environment. The Plan includes both CC adaptation and mitigation as environmental challenges. The challenges of the environmental sector include (Annual Plan 2013/14, p. 135):

- Adaptation to CC impacts for energy, water and food security;
- Preparedness for adaptation/mitigation due to CC and availing opportunities under CDM.

43 Pakistan, Ministry of Planning, Development and Reforms, *Final Report of the Task Force on Climate Change* (Islamabad, 2010).

44 Vision 2025 was launched on 11 August 2015.

45 Five-year plans were once the backbone of development planning in Pakistan. However, there have been none since 2005.

46 This role has been taken up by the MoF whereby the MTBF serves as the plan for all government entities to adhere to.

47 The PSDP includes the total cost of each project, the foreign exchange component of the total cost and expenditures incurred up until the end of the last financial year.

In similar fashion, the Pakistan Economic Survey (2006–2016) positioned CC in the chapter on environment. The Survey has been mentioning the NCCP since 2012/13, albeit under the environment section. This is a positive development as such mentions are a step that is necessary for policy integration into mainstream public sector discourse. It is worth mentioning that all of the Economic Surveys mention CC and give related statistics. In addition, CC is explicitly mentioned in the PRSP II (2007–2009) under environment and integrated energy resources.

In the case of the provinces, the documents consulted show that provincial EPAs are the custodians of the PEPA Act, dealing with environmental regulations, with the addition of CC since December 2014. The Economic Analysis Sections within the provincial P&DDs has been mandated with policy issues regarding CC. However, during discussions with the Finance Department, it was felt that there was a gap between written and actual understanding in government bodies; CC was clearly *not* seen as a priority at provincial level. Furthermore, poverty generally was listed as an immediate problem to tackle, but its link to CC was not clearly acknowledged in any province.

4.3 Federal public financial management

The PFM structure has changed since the 1973 Constitution. The accounting and audit function are historically separate, sitting presently with the Accountant-General of Pakistan and the Controller-General of Accounts (CGA), respectively. Legislative scrutiny of public accounts is presently done by Public Accounts Committees (PACs) at the federal and provincial level. Enhanced accounting and auditing procedures have been implemented over the last few years through the Project for Improvement of Fiscal Reporting and Auditing (PIFRA) (Appendix 4.2). Since 2003, a three-year rolling MTBF has been expanded across all federal and provincial governments. This has connotations for both CC planning and budgeting.

4.3.1 The MTBF budget process

Since 2003, the three-year rolling MTBF has aimed "to strengthen the alignment of allocations through the federal budget to the strategies and policies of the Government".[48] At present, the federal MTBF is at a more advanced stage than the provincial MTBFs.

The lynchpin for starting the annual budgetary process at the federal-level MTBF is based on two mutually reinforcing processes:

- The "top-down" approach establishes medium-term ceilings for each line ministry at the start of the annual budget preparation process;
- The "bottom-up" approach sets in motion the budget-making process within line ministries, directed by senior management.

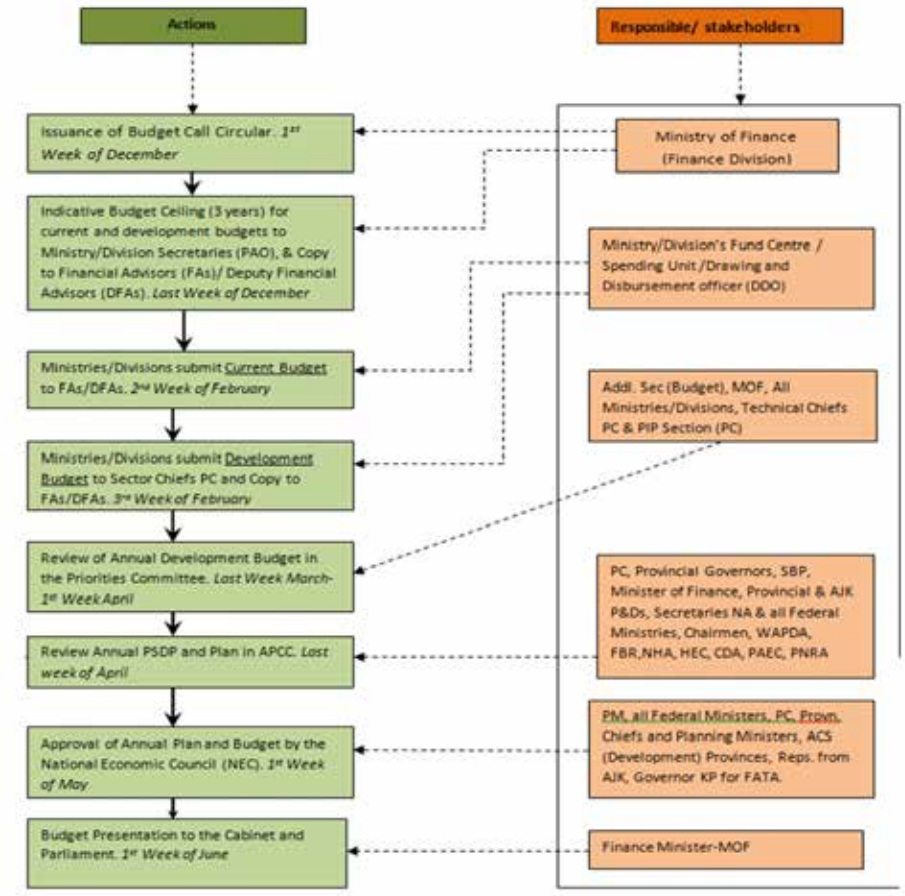
Since 2012, the MTBF requires ministry/division-wise information on an annual basis. For example, the MTBF defines, the "protection of environment, energy and conservation of wildlife" as an outcome of the MCC. The MCC's entire budget is broken down to lines following four defined MTBF outputs:

- Protection of environment and energy services;
- Social work/capacity building services;
- Conservation of wild life and forests;
- Research and survey services.

48 MTBF-based budgets were first piloted in the Ministry of Health and the Ministry of Population Welfare in 2005/06. The MTBF was rolled out to another three ministries in 2006/7 (Food and Agriculture, Education and Women Development). The next two years witnessed the rollout to 20 ministries. The Cabinet approved a complete MTBF roll out to all line ministries other than the Ministry of Defence in 2009/10.

Budget preparation is a multi-stage affair lasting some seven months. It calls for the involvement of all ministries in providing information to help determine budget ceilings. The process is managed by the MoF's Finance Division (Figure 4.1). Within an initially set budget ceiling, ministry-level output-based budgeting defines the desired policy-related outcomes and costs of those outcomes for each ministry. These ministry-level inputs are reviewed and revised, and the draft budget is finally submitted to the National Economic Council (NEC), Cabinet and Parliament for approval. The MTBF provides a very good opportunity for ensuring that CC is considered an essential part of development policy and is accounted for in planning and budgeting.

Figure 4.1: Diagrammatic representation of budget preparation, budget-approval cycle, timeline and associated stakeholders



With the budget being set along institutional (ministry) lines and predicated on policy-related outputs in each of the ministries, budget allocation tends to reinforce core and normal business activities. For example, the construction of a dam by the MoWP requires the budget process to be aligned to provide a budget for that purpose. Projects that focus solely on mitigation or adaption to CC rank low on the prioritization scale at all levels of decision-making. However, large investment projects, e.g., current hydropower projects for increasing energy supplies and water availability rank high on the priority scale; it is a fortunate outcome that externalities lead to CC mitigation.

For CC, the delivery of outcomes will not generally rest within the associated institution (MCC), but with a wide range of ministries in relevant sectors such as water, power and agriculture. Within this array of ministries, many projects will not be explicitly linked with CC, but may have small elements of climate-

proofing within them. Thus, the setting of budget ceilings for policy-related outcomes tends to focus on key development purposes like the aforementioned dam, and exclude associated positive attributes such as climate-proofing.

Ministries will concentrate on their own key sector policies as major drivers for the derivation of their investments and most likely pay minimal attention to umbrella policies such as the NCCP. This approach may be correct in that it focuses the ministry on associated policy delivery, but provides a negligible entry point for CC in the preparation of MTBF budget ceilings.

4.3.2 The role of selection committees

Figure 4.1 is something of a simplification of the process required to develop budgets at the line ministry level. After receiving indicative ceilings from the Finance Division, the fund centres of individual line ministries prepare project feasibility reports (PC-I pro-formas) and categorize new projects for review by three selection committees as per the following investment limits (Figure 4.2).[49]

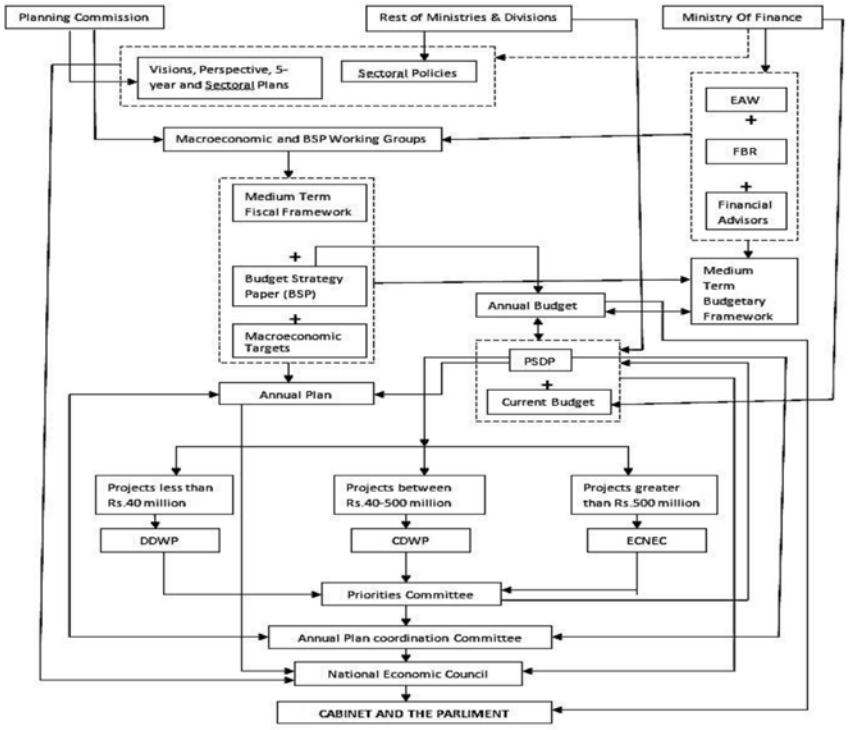
- Projects costing less than PKR 40 million are finalized and approved by an in-house Departmental Development Working Party (DDWP) under the chairmanship of the secretary of the line ministry/ division.
- Projects costing PKR 40–500 million require a Central Development Working Party (CDWP) headed by the Deputy Chairman of the MPDR with members from the MoF and respective ministries to approve and recommend them for inclusion in the PSDP.
- Projects costing more than PKR 500 million are reviewed and approved for PSDP inclusion by the ECNEC, which is chaired by the Prime Minister/Finance Minister and attended by representatives from all ministries, including the MPDR and provincial finance ministers and relevant finance officials.

Decisions from these three selection committees flow to the Priorities Committee.

The approval of projects by different committees depends upon their financial outlays, making it expedient for CC to be recognized at different tiers of the Government and by different sectors. The PC–I, a fundamental document for project approval, also requires EIAs and Initial Environmental Examinations (IEEs). This provides an opportunity to review projects from an environmental angle. There is now a need to review projects from a CC lens which necessitates the inclusion of CC in all PC formats (I–V) so that it becomes one of the indicators for committees to consider when approving projects.

49 The present method for planning, processing and reporting on development projects is based on five pro-formas. Project appraisal and approval requires the submission of project proposals (PC-I and PC-II). Progress of on-going projects is reported in the PC-III. PC-IV and PC-V are submitted after project completion.

Figure 4.2: Positioning of selection committees (DDWP, CDWP and ECNEC) in the wider budget preparation process



The schemes/projects recommended by the three aforementioned committees are put together by each of the line ministries and submitted as line ministry development budgets to Sector Chiefs of the MPDR and financial advisors. These projects are discussed in the Priorities Committee of the MPDR and recommended individually. Contours of overall PSDP allocations for the next year are established. The Priorities Committee's function is to discuss and recommend the scheme-wise and overall allocations of the PSDP of the next year for submission to the Annual Plan Coordination Committee (APCC). It is chaired by the Additional Finance Secretary (budget).[50]

The proposed Annual Plan (for the next year) formulated by the MPDR and the PSDP of the Priorities Committee are submitted for review and deliberations to the APCC, chaired by the Deputy Chairman of the MPDR and a host of high-level federal and provincial finance officials, including the Governor of the State Bank of Pakistan (SBP). The proposed Annual Plan and annual budget (PSDP) plus the recurrent budget are submitted for approval to the NEC. Finally, the annual federal budget is presented to the Cabinet and the Parliament by the Finance Minister for approval.

4.3.3 Climate change in the PSDP

In theory, budget ceilings are allocated according to the MTBF. However, in practice, there are many strategic objectives, both political and non-political. These include whether or not the country is under an International Monetary Fund (IMF) programme that affects the ceilings. For the MTBF 2014–2017, the then-Climate Change Division's (CCD) budget (both current and development) estimate for 2014/15 was

50 Members also include Technical Chiefs of the P&DD, the Chief of the Public Investment Programme Section (Planning Commission) and representatives of all ministries/divisions.

fixed at PKR 312 million. In the MTBF 2015–2018, the CCD's budget estimate (BE) for 2014/15 remained unchanged, including forecasts for 2016/17 and 2017/18.[51]

There are no concrete criteria for decisions regarding the inclusion of projects in the PSDP. Stakeholder political influences,[52] parliamentarian influences, and political party priorities, sectoral policies and foreign funding (to a lesser degree) are some of the factors that shape the final list of projects included in the PSDP. Block expenditure allocations are also made in the budget for line ministries for priority projects whose PC-Is are not ready at the time of budget finalization. This also applies to projects whose approval may have been granted during the year in CDWP and ECNEC meetings.

The selection process is an ongoing one and, in a step-wise manner, creates a portfolio of investments to be funded subject to other factors, provided adequate budget resources are available. Being spread across so many sectors but not of prime concern, CC is well-positioned to be one investment attribute that influences selection committee decision-making. However, doing this will require the sensitization of committee members in order to appreciate the severity of climate impacts in terms of undermining development investments. Investments in which interventions are climate-proofed are more likely to provide an extended functional/operational value and a better return on investment. Within the federal PSDP budget, positively selecting projects with attributes related to positive CC response could dramatically extend CC mainstreaming across multiple sectors. It could also promote more sustainable investments.

4.4 Delivery of the federal PSDP budget

4.4.1 PSDP implementation

At the implementation stage, Finance and Planning Divisions/Departments continue to possess a strong role, not only in allocating fiscal resources across sectors and departments, but also among expenditure heads, activities and schemes. For example, no re-appropriation from, to, or within establishment charges can be made without the prior concurrence of the Finance Division/Department. Such centralized controls discourage line ministries from saving on wages (in case planned vacancies in the line ministries are not filled) and diverting funds to enhance allocation for repair and maintenance expenditures. Re-appropriation allows some flexibility to the line ministry to re-appropriate (divert) funds (with Finance Division approval) during the year from slow-moving projects to faster ones.

4.4.2 PSDP monitoring and evaluation

The monitoring of projects, five-year plans and perspective plans is undertaken by the MPDR. Projects are monitored (through the PC-III pro-forma) to assess their implementation in accordance with timelines, costs, quality and outputs specified in PC-Is and PC-IIs. The evaluation of projects is carried out after their completion through reporting in the PC-IV form. The PC-V is submitted annually for five years by the agency responsible for operations and maintenance.

The monitoring activities undertaken by the MPDR and documented in the PC-III are input-, activity- and output-based, and *not* outcome-based. The purpose of the monitoring activity is to reduce the incidence of cost overruns and time delays in project implementation and ensure smooth functioning. The evaluation process of projects in terms of outcomes (as distinguished from impact) as envisaged in the PC-IV and PC-V is not a regular and active practice, and is being strengthened. However, since 2012, the MTBF requires ministry/division-wise information on an annual basis.

51 Federal medium-term budget estimates for service delivery, 2014–2017 and 2015–2018.

52 All federal ministers and provincial finance and planning ministers are members of ECNEC, the body that approves projects valued at more than PKR 500 million. Once large projects reflect the political interests of various ministers, they may crowd out investments even in smaller projects or development budgets of smaller ministries specifically under tight fiscal space. One of the functions of ECNEC is "to allow moderate changes in the plan and sectoral re-adjustments within the overall plan allocations".

4.5 The provincial budget process and climate change

During the last decade and even prior to the passage of the 18th Amendment, the four provinces were actively pursuing a greater role, autonomy and involvement in formulating sub-national economic policies and plans. During the last five years, following provincial medium-term plans, development frameworks and crisis management, policies reflect complete ownership and Provincial Governments commitment in pursuing sustainable development at the provincial level. The noteworthy provincial documents in this respect are Punjab Growth Strategy 2018, KP Economic Growth Strategy and the Comprehensive Strategy (2010–2017), Sindh Strategy for Sustainable Development and Balochistan Conservation Strategy.

Compared to the strength of linkages between planning/policy documents and budget formulation at the federal level, the strength of linkages at the provincial level between planning documents and budgetary allocations was weak prior to devolution and the 18th Amendment. However, it is gaining momentum in all four provinces after devolution. One of the main reasons for the dearth of sector-specific policies at the provincial level is the provinces weak technical capacity to formulate such policies specifically in KP and Balochistan. In many instances, the four provincial governments, "piggyback" onto federal policy, making only minor policy changes. Although the four provinces are dependent on the Federal Government for 73–88 percent of their resources (development and current), they are free to spend the transfers (fiscal revenue, grants, straight transfers and foreign loans guaranteed by the Centre) at their discretion.

The formulation and allocation of recurrent budget of all four provinces (constituting (64–83 percent of the total budget) is largely in the hands of the provincial Finance Departments headed by the Additional Chief Secretary of the provinces. This component is financed out of federal transfers, and provincial revenue generation. The provinces development budget or ADPs are formulated in collaboration with the Finance and P&DDs of the provinces. Other stakeholders include federal agencies (CDWP, APCC, NEC, Cabinet and the Parliament), but 67–100 percent of ADP is financed from the provinces' legal share of resources under the NFC Award. Balochistan finances its entire ADP from domestic sources while at other end 16–33 percent of KP's ADP is financed from external resources (foreign loans and grants).

Within the province, the Provincial Development Working Party (PDWP) scrutinizes and approves all provincial projects:

- Costing up to PKR 200 million (local currency), or those with a foreign exchange component below a 25 percent limit;
- Costing up to PKR 1,000 million that are fully funded through provincial resources;
- Costing more than the aforementioned limits. These are submitted for approval to the MPDR/CDWP.

The provinces' budget approval and project inclusion cycle is a substantial departure from the federal budget process, but resembles the 'block allocation' practice of the Federal Government. The four provinces' ADP is based on the concept of clearance of the projects. The PC-I of each individual project is prepared after the budget is passed by the provincial assemblies. The PC-Is are sent to the PDWP which forwards them to the Finance Department for funds release. In practice, the PC-Is are prepared as late as December of the ongoing fiscal year for projects that have been approved in the current budget. In case the PC-I estimates are substantially above the first round of budget estimates, the project is again included in the upcoming new FY budget as a new project, implicitly seeking a renewed approval from the finance department and provincial assemblies. This has led to substantial carry-forward of projects especially in Balochistan and Sindh. The concept of clearance of projects is subject to more political manoeuvring, with the risk of diluting the basic principles of project financial and economic feasibility.

Project proposals for development budgets or ADPs are received by the MPDR from the line departments in December. These are filtered in the Finance Department and MPDR. In March, the project's concept is

approved under the Chairmanship of the Chief Minister (CM) of the province. In May, secretaries of various line ministries present their projects to the CM for inclusion in the provincial budgets. On average, the CM selects 30 percent of the projects. Project financing and approval is often political as districts do not always get their due share of development projects. Funds are allocated depending on the political clout of a particular district rather than on the basis of need.

The 18th Amendment affected the provinces' PFM systems from both the revenue and expenditure side. The increase in expenditures associated with the devolution of responsibilities outweighed the revenue gains from the NFC Award. On the revenue front, the provinces' own tax collection has ranged from a low of 4 percent of total revenue receipts for Balochistan to a high of 23 percent for Punjab and Sindh in the last four years. Varied reasons across the four provinces exist for the low tax base, that include poor law and order situation, energy shortages and weak capacity and political will to enforce tax compliance. The paradox in this PFM is that due to capacity weaknesses in project implementation,[53] KP's Finance Department had unspent balances of PKR 54.4 billion in 2014/15 and Sindh's share of cash balances in ADP ranged from 6 to 20 percent of ADP in the last four years.

4.6 Provincial budgets and the NFC awards

Devolution following the 18th Amendment has shifted on the ground responsibility for CC delivery to the provinces (as detailed in chapter 3). The provinces started receiving an increased share of Government revenues as a result of the seventh NFC Award (which was adopted in March 2010 just prior to the 18th Amendment). The award increased the magnitude of financial resource transfers from the Federal Government to the provinces and also increased provincial expenditure discretion. However, the terms of the award were set prior to the adoption of the 18th Amendment. It therefore did not explicitly account for the additional responsibilities the provincial governments acquired, (UNDP 2013[54]).

Unlike with previous awards, the allocation of the seventh NFC Award was calculated using a number of weighting factors other than just population size. These included inverse population density, poverty and societal backwardness, provincial GDP and revenue collection and urban density. The inclusion of interpretation and weighting design based on revenue-need macro-indicators reveals the possibility for further refinement of allocation procedures. For example, in relation to CC, it would be possible to weight future awards on the basis of provincial vulnerability assessments based on future climate scenarios. This would further strengthen the linkage between allocation and relative need between the provinces in order to optimize budget targeting.

At present, the role of CC in the provincial budgets process is negligible. There are no concerted efforts on CC by the provinces; it is not a subject of priority or even a consideration, despite the fact that there are implications for impact on livelihoods, health and food security. Only projects with indirect climate benefits, like hydropower generation, are being implemented; there are no resources for well-thought-out CC-related projects. The provinces have other priorities like addressing the dearth of primary schools for girls.

4.7 Embedding climate change in budget decision-making

Positive selection towards CC-positive projects will be required for CC to gain traction and be mainstreamed through the governmental budget process, and more specifically the PSDP. Doing this in a systematic and objective way requires the use of criteria for prioritization and selection of investments across many sectors. Currently, the assessment seems to be focused on technical elements; the absence

53 Human resource shortages do not allow the undertaking of the formulation and implementation of the projects.

54 UNDP Pakistan, "Strengthening participatory federalism and decentralization: Strategy paper", (United Nations publication). Available from http://www.pk.undp.org/content/dam/pakistan/docs/Democratic%20Governance/Federalism/Final%20Strategy%20Paper%20(SPFD).pdf.

of clearly laid out prioritization criteria provides an opportunity to develop such a process in a way that makes project selection criteria climate-relevant.

However, even with generic criteria that lay out the CC-related nature of investments, it is necessary for line ministries to be able to understand and appreciate the climate challenges within their sectors, and to plan investments appropriately. Although climate is referred to in a number of key Government documents and the NCCP, it has a very low profile in the line ministries which tend to be more focused on sector policy delivery. Building CC into investment projects requires both acceptance and recognition of the level of priority of CC. Line ministries must realize CC correlation with their own interests and the technical basis for design/plan alternatives to accommodate CC. The technical basis for adaptation would be sector specific and link climate projections with planning horizons. It would then identify suitable climate-proofed or climate-sensitive design modifications or approaches. For mitigation, technical inputs would be required in the identification and uptake of low-carbon approaches through efficient energy production and distribution, energy saving and energy efficiency of industrial processes.

During interviews with officials from MCC, issues regarding communication and coordination with the MPDR were also raised. While the MCC is not involved at any stage with the line ministries or invited to the different approval forums, the MPDR sends the federal and provincial PC-Is to the NAMA office for assessment as it lacks the technical expertise to perform the assessment itself. This is an informal arrangement of collaboration between the MCC and the MPDR. However, it is a demonstrative example of how CC-positive investments can be screened and prioritized; it highlights the potential role of the MCC and how it could be institutionalized into the budgetary process.

The pivotal decision-making point within the process of finance allocation for development investments has to be the Priorities Committee. This is headed by the Finance Secretary and has representation for the MPDR and the relevant ministry (whose projects are being discussed). Its role is to discuss and recommend the scheme-wise and overall allocation of the PSDP for the next year to the APCC. The ministry in question may also invite technical ministries. However, this is not usually done.

Equally important is the ECNEC meeting stage, since it not only recommends very large projects, but because a mix of political and administrative decision-makers are represented. Any exercise with them for sensitization on CC will have far-reaching dividends. Given that project approval is being done at the department level, the DDWP and CDWP may also be considered important for sensitization. Moreover, the members of the DDWP and CDWP are also involved in formulation and/or approval of larger projects as well for their respective departments, or, in the case of the CDWP, their relevant sections. It is, therefore, important that the PC-I document clearly articulates the link to CC. However, in order to understand and effectively respond to a PC-I section outlining the technical CC-related aspects of the proposed development project, the relevant ministries will need the checklist, guidance and capacity building for its use. The exercise may start with the two ministries (federal level) and two departments within each of the four provinces with the largest number of relevant projects.

As things stand, the MTBF is even more significant than the MPDR plans as a key document where climate relevance can be reflected. At the same time, within the current structure of the MTBF, the financing is top-down (budget limits) while the planning is bottom-up (outcomes and outcome indicators), so sector policies remain important. If linked properly with sector policy, the perspective plans, the periodic plans and the annual plans provide a basis of inclusion of climate relevance in development planning. It is important to have the MoF (federal) and Department of Finance (provincial) on board to introduce climate-relevant key performance indicators (KPIs) for the MTBF. This can be further linked with the process by introducing a CC link as part of the budget call circular to complement the introduction. At provincial level the budget call circulars normally ask that proposals be in line with the provincial Development Strategy, which in many cases recognizes CC as a crosscutting issue. However, this link can be made more explicit by adding an explanatory appendix for CC as part of the budget call circular link.

4.8 Findings and conclusions

- CC is included under the "environment" sector and, sometimes, the "development" sector in various government documents. However, the prioritization of CC in relation to other pressing issues is low at both the federal and provincial levels.
- Existing federal and provincial government processes have the potential to be strengthened to increase CC components of the budget through enhanced prioritization and selection of development projects.
- The three selection committees and Priorities Committee are vital in determining the portfolio of development investments. The lack of concrete investment selection criteria and the dispersed nature of the CC response can undermine positive CC budgeting.
- Technical challenges exist for embedding CC in development projects at the line ministry level in terms of robust climate-proofing for adaptation and managing technological upgrades for mitigation outcomes.
- The existing MTBF process can be strengthened to include CC. However, within MTBF planning, ministries will tend to concentrate on their own key sector policies as the main drivers for the derivation of their investments. Thus, the MDPR and MoF need to ensure that CC outcomes are robustly built into the MTBF financial planning system.
- Institutionally, the MCC is well-placed to champion CC if leadership, capacity building and coordination can position CC as an entity outside and beyond just the environmental sector, but within government planning processes.
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CHAPTER 5 - METHODOLOGY FOR DETERMINING CLIMATE BUDGET

5.1 Climate budget and aims

The CPEIR methodology has been developed from World Bank work on PERs, Public Expenditure and Institutional Reviews (PEIRs) and Public Environment Expenditure Reviews (PEERs). These approaches provided national governments with a review of aggregate spending and allocation in key sectors such as health and education in order to improve allocation and policy delivery. The CPEIR has a similar role — to aggregate spending across the area of CC, to provide information on spending and allocation and to link this to policy objectives. However, the CPEIR approach is made more challenging because of the disaggregation of expenditure across many government bodies as well as the climate-beneficial responses sitting within business-as-usual activities in those sectors.

Similar to PERs, the climate budget emerging from the CPEIR is not just a single figure or percent of national budget related to CC response. Linking climate expenditures to the key bifurcation in the CC response (adaptation and mitigation), to multiple policy objectives and to involved institutions, requires a climate budget that can be disaggregated into various sub-budgets which may be related, for example, to sector, intervention type or policy objective. Linkages to policy and institutional domains can be made through this disaggregation of the overall climate budget. This constitutes the climate budget's primary role within the CPEIR.

In methodological terms, the climate budget is made through the aggregation of separate climate-related elements. In this study (as well as in many other implemented CPEIRs), data was collected by budget line within key line ministries and then aggregated to form an overall governmental climate budget for the targeted institution. This basic process forms the core of the climate budget, although there are a number of complications and exclusions (see later in chapter). A three-phase process is undertaken for each budget line within the selected government bodies:

1. ***Identifying CC expenditure:*** Budget lines with an adaptation, mitigation or supporting component are selected as subsets of the overall data for further analysis.
2. ***Classifying CC expenditure:*** Budget lines are classified into one intervention type from a pre-determined list of intervention types linked to CC policy objectives.
3. ***Assessing climate relevance:*** The proportion of the expenditure of the budget line that is related to CC outcomes is determined.

Undertaking the three phases for the selected government agencies **(**federal and provincial) builds a picture of climate-related expenditure that can be aggregated to an overall budget total or assessed through a lens of differential expenditures across institutions. The focus is on adaptation/mitigation and types of interventions that link to policy objectives.

The following sections provide more methodological detail on the three stages of analysis identified above. Subsequently, the forms of accessible budget data, exclusions and complications in budget terms and the treatment of the investment and recurrent budget are elaborated upon. While the basic process for the development of a climate budget is quite well-defined, data availability, accessibility, consistency and exclusions related to governmental budgets make the formation of a retrospective climate budget a relatively involved procedure.

5.2 Identifying, classifying and assessing climate relevance

This section provides more detail on the manner in which expenditure line items were selected and analysed in the CPEIR budget process. Budget data is often presented in terms of short descriptions for line items. Such minimal textual descriptions can make it difficult to follow the phases outlined below. The process was carried out using expert judgement combined with consultations with various involved ministries.

5.2.1 Phase I - Identification of climate-related expenditures

The identification of budget lines with climate-related expenditures followed the definition of two key elements of CC: adaptation and mitigation. All selected projects budgeted expenditure items that were identified to have an aim or likely outcome (intended or not), to:

b) Improve resistance or resilience to present and forecast CC by protecting against negative effects on people, resources and infrastructure, or taking anticipatory action against projected future adverse effects, and/or:

c) Reduce resource inputs and GHG emissions per unit output though technological change, substitution and carbon sequestration. This could involve reducing GHG emissions directly (e.g., renewable energy generation, energy conservation and efficiency and reduced use of fossil fuel for transport) or through carbon capture.

Projects of a preparatory nature were also included as "supporting" as long as they were deemed necessary for the subsequent delivery of CC actions. Preparatory actions could include capacity building, institutional strengthening, and education, awareness-raising programmes for climate-resilient traits and policy developments and reform process.

All CC-related expenditure lines were carried forward to the next phase.

5.2.2 Phase II - Classification of climate responses

Phase I identified expenditure lines related to CC through adaptation and/or mitigation, and related preparatory activities. Phase II then classified those line items using a set of tasks determined from NCCP policy objectives. This was done to ensure a tight linkage between NCCP policy objectives and the classification of budget items.

It was recognized in Phase I that some tasks could have both adaptation and mitigation components, creating the theme of adaptation/mitigation (A/M). The potential for such mutual joint adaptation and mitigation gains is broad and developing rapidly. It was not considered useful to limit the potential for both types of gains to a limited number of tasks within the typology. This is likely to mean that the typology would become outdated and need ongoing revision as climate innovation and implementation develops. Thus, the typology includes the possibility of joint adaptation and mitigation gains for *every* task. This means that a task that directly derived climate benefits (as opposed to a supporting task) could be classified as adaptation, mitigation *or* A/M.

Example of such tasks could theoretically include:

- Renewable energy development (mitigation) in a remote village primarily to provide electricity for groundwater pumping to maintain subsistence agricultural production (adaptation).
- The development of urban public mass transport systems (mitigation) in riverine or coastal areas on raised platforms to maintain functionality during times of floods or inundation events (adaptation).
- The development of drought-resilient fodder crops for livestock husbandry (adaptation) specifically bred to reduce GHG gas emissions from livestock digestion processes (mitigation).

The tasks and activities were divided into three themes: adaptation, mitigation and supporting areas. The supporting areas theme was included as there are many activities that relate to CC and the creation of a governance and delivery platform. These in themselves do not deliver direct adaptation or mitigation benefits. In addition, the inclusion of this theme increased compliance to the structure of the NCCP as it covered the other elements without the adaptation and mitigation themes (chapters 6–11 of the NCCP). Tasks included capacity building, international climate negotiations and technology transfer for energy efficiency and low-carbon technologies.

Each expenditure item selected from Phase I was classified on the basis of theme and task (Table 5.1).

Table 5.1: Typology of themes, associated tasks and example activities with CC co-benefits, based on the NCCP classification of expenditures

Theme: Adaptation	
Task	*Example activities*
Water resources	• Water storage and infrastructure • Water conservation strategies • Integrated water resource management • Legislative framework • Capacity enhancement • Awareness raising
Agriculture and livestock	• Research • Technology • General management • Risk management
Health and other social services	• Health capacity building • Health policy and governance • Other social services
Forestry	• Awareness raising • Research • Reforms in governance • Adaptive capacity enhancement • Forest management
Transport	• Transport infrastructure • Rural and inter-urban roads and highways
Biodiversity	• Legal and institutional setup • Biodiversity research and practice enhancement • Enhancement of capacity for conservation
Vulnerable ecosystems	• Mountain areas • Rangelands and pastures • Arid and hyper-arid areas • Coastal and marine • Wetlands policy
Disaster preparedness	• Risk knowledge and response capacity • Early warning improvements • Climate-resilient infrastructure • Hazard mitigation
Theme: Mitigation	
Energy	• Clean energy technologies • Energy conservation and power efficiency • Hydropower and other renewables • Green growth and fiscal reforms in the energy sector • Electricity transmission and distribution

Transport	• Research and development • General transportation • Urban transport • Aviation • Railways • Inland waterway transport and ports and shipping
Town planning	• Policy and public administration • Research and development • Solid waste and wastewater collection management • Infrastructure
Industries	• Polices and regulations • Research and development • Capacity building and technology transfer • General industries and trade
Agriculture and livestock	• Research • Management practice improvements
Carbon sequestration and forestry	• Policy and governance • Access to international carbon financing • Reforestation
Theme: Supporting areas	
Capacity building and institutional strengthening	• Institutional mechanisms • Capacity enhancement
Awareness raising and education	• Awareness raising • Education
International and regional cooperation	• CC negotiations • Cooperation in research and development
Finance and technology transfer	• Climate financing • Technology transfers

Each development budget line was classified to a theme (adaptation, mitigation, A/M or supporting) and to a climate-related task by the end of Phase II.

5.2.3 Phase III - Determining the climate relevance of expenditures

The third phase of the expenditure line analysis determined the climate relevance of expenditures, which was expressed as a percentage of the total expenditure attributed to CC. Very few climate-relevant projects identified in Phase I are completely directed at CC outcomes. This is a consequence of the situation that much of the climate response sits within business-as-usual activities (e.g., irrigation, hydropower schemes) which have sector-related objectives (e.g., agricultural production, power generation) as well as climate benefits (e.g., drought-resistant crops, low-carbon/renewable energy production). The creation of a climate budget must try to include climate-related components, but *exclude* non-climate-related components.

Similar to many previous CPEIRs, categories related to expenditure were ranked from highly-relevant (75+ percent of expenditure line item predicated on CC) to marginally relevant (<25 percent) items. A rationale for the high, medium-low and marginal categories was established, and possible examples of the types of expenditures were placed in each category.

Phase III provided the percentage climate-related component of each budget line which then formed the base data for collation to ministry, theme/task/activity or policy objective. Some projects are fully focused on CC whereas others may have small or indirect CC benefits. Table 5.2 provides a rationale for each category of CC relevance with examples.

Table 5.2: Pakistan climate classification

Highly relevant	**Rationale**	**Clear primary objective of delivering specific outcomes that improve climate resilience or contribute to mitigation.**
Climate relevance weight, 75+%	Examples	• Energy mitigation (e.g. renewables, hydropower and nuclear, and energy efficiency). • Disaster risk reduction and disaster management capacity, particularly flood and drought risk reduction and management actions. • Forestation and conservation of protected areas. • Management, research and construction of water resources and infrastructure, including water reservoirs to combat increasing variability in drought and floods. • Actions taken in response to recent flooding/droughts, because they will have added benefits for future extreme events. • Relocating villages to provide protection against climate stresses (droughts, floods and sea level rises). • Health care directly associated with climate-sensitive diseases. • Building institutional capacity to plan and manage CC, including early warning systems and monitoring. • CC awareness raising. • Actions meeting the criteria of CC funds (e.g., the Green Climate Fund [GCF], the Global Environment Facility [GEF], Pilot Programme for Climate Resilience [PPCR]).
Medium relevance	**Rationale**	**Either secondary objectives related to building climate resilience or contributing to mitigation, or mixed programmes with a range of activities that are not easily separated, but include at least some that promote climate resilience or mitigation**
Climate relevance weigh, 50–74%	Examples	• Forestry and agro-forestry that is motivated primarily by economic or conservation objectives, because this will have some mitigation effect. • Watershed management, waterworks rehabilitation, water storages, water efficiency, water conservation, irrigation and canal lining — motivated primarily by livelihood improvements but will also provide protection against droughts. • Biodiversity and conservation, unless explicitly aimed at increasing resilience of ecosystems to CC (or mitigation). • Population control programmes, livelihood and social protection programmes, motivated by poverty reduction, but building household reserves and assets and reducing vulnerability. • Civil defence facilities enhancement actions that can contribute to DRR. • Restructuring of production technology in industry, building and transportation towards low-carbon intensity. • Education and research in agriculture, veterinary and animal sciences and environmental sciences. This can contribute to food security under climatic stresses. • Energy distribution system improvements.
Low relevance	**Rationale**	**Activities that display attributes where indirect adaptation and mitigation benefits may arise**
Climate relevance weight, 25–49%	Examples	• Water supply and water quality schemes unless improvements in water quality aim to reduce problems from extreme rainfall events, in which case relevance would be high. • Sanitation-sewerage schemes. Space, marine and dairy animals research programmes and education to hard-pressed areas. • General planning capacity enhancement, either at national or local level, unless explicitly linked to CC, in which case relevance would be high. • Road construction with identifiable elements of climate-proofing. • Livelihood and social protection programmes motivated by poverty reduction (zakat, Poverty Alleviation Fund, Benazir Income Support Programme [BISP]), but building household reserves and assets and reducing vulnerability. • Strengthening, improvement and rehabilitation of road infrastructure. Road and bridges reducing distances travelled. Roads in difficult areas- mountain areas, coastal areas. • Rehabilitation of flood damages. Urban storm drainage schemes. • Food security, drought recovery and satellite programmes. • Mass transit systems, railways. • Bridges over rivers, reducing distances.

Marginal relevance	Rationale	Activities that have only very indirect and theoretical links to climate resilience, or small elements/components of the investment which have a direct effect on CC.
Climate relevance weight less than 25%	Examples	• International trade promotion. • Education, research and health initiatives that do not have an explicit CC element. • Road investment with no particular climate-proofing. • Infrastructure development of which particular small aspects require climate-proofing. • Energy with no explicit objective of reducing emissions. • People work and Tameer-e-Watan programmes or area development funds.

5.3 The coverage of the climate budget

The climate budget presented in Phase II of this study is a complete budget of climate response in Pakistan covering four years of federal and provincial annual budgets, including federally administered regions. Though it primarily focuses on governmental expenditure it excludes private sector and NGO expenditures and some development partner expenditures that flow to standalone activities.

5.4 Budget data sources

There are three data sources for collecting Federal Government expenditure in Pakistan:

1. The MPDR publishes a comprehensive list (PSDP) of ongoing and new projects disaggregated by ministry/division along with sanctioning date, estimated cost, cumulative expenditure incurred till the current fiscal year in local rupees, foreign official project funding (multilateral and bilateral), throw-forward remaining expenditure, and allocations including foreign official project funding (BE) for the next fiscal year for *each* project. It lists on average 1,000–1,500 new plus ongoing projects in the last four years (2011/12, 2012/13 and 2013/14, 2014/15). This document is published in the last month of the current fiscal year and lists the cumulative expenditure to date on each of the projects as estimates rather than as actual expenditure.
2. The MoF annually publishes two budget documents, separately titled the "Federal Budget Details of Demand for Grants and Appropriation" for development expenditure and for current expenditure, respectively. The development expenditure is listed by ministry/division. The total development expenditure of each ministry/division is broken down by functional and object classification as per the New Accounting Model (NAM) introduced in 2004/05. The total development expenditure of each ministry/division is also broken down by project with a unique ID for each project, and then again by object classification. Budget and revised estimates of expenditure in the current fiscal year and BEs of the new fiscal year are given against each line item.

   The current expenditure information compiled in the "Federal Budget Details of Demand for Grants and Appropriation" for current expenditure is also broken down by ministry/division. However, within each ministry/division, the information on various heads (salaries, pensions, repair and maintenance, travel) is broken down by various sub-departments, sub-offices and sub-entities, *location-wise* rather than by projects.
3. The CGA of Pakistan "has been entrusted with the task of producing timely and accurate financial statements of the federation". Three to four months into the new fiscal year, the CGA publishes the development expenditure (project-wise inclusive of foreign project funding) and current expenditure (ministry and division-wise) of the federal, provincial and federal areas (AJK, GB, FATA) according to NAM classifications. Three types of data, namely, budget, revised expenditure and actual expenditure,

of each line item for the outgoing fiscal year are given.[55] These are audited accounts and presented to the Parliament PAC. Although most federal ministries/divisions and provincial/regional departments are legally mandated to send their detailed expenditure accounts to the CGA for auditing, "exempt" and "self-accounting" entities using their own accounting and internal auditing systems send just summary expenditure accounts to the CGA (Table 5.3).

It should be noted that the list of exempt and self-accounting entities include federal ministries/divisions/authorities that have CC-relevant investments and also undertake big-ticket investment expenditures, e.g. WAPDA (power sector), or their overall investment budget is sizeable, but spread over many small projects, e.g., the National Highway Authority (NHA) and the Higher Education Commission (HEC).

Table 5.3: List of exempt and self-accounting entities

Exempt entities	Self-accounting entities
• WAPDA (power sector) • Oil and Gas Authority • National Highway Authority • National Mass Transit Authority • All Government corporations, listed companies and others • Entities required to prepare reports under the Companies Ordinance, 1984	• National Saving Organization • Pakistan Mint • Food Wing of the Food and Agriculture Division • Pakistan Public Works Department • Ministry of Foreign Affairs • Geological Survey of Pakistan • Pakistan Railways • Forest Department • Ministry of Defence • HEC

This review extracted four years of BEs and actual expenditure data from the CGA appropriation accounts for projects in the development budget and ministry/division-wise data for the current budget.

The relevant ministries/divisions listed in the PSDP were used to extract four years of data for projects executed by exempt/self-accounting entities, which include WAPDA (Power Sector), the Food Wing of the Food and Agriculture Division, the Geological Survey of Pakistan, the Pakistan Public Works Department, Pakistan Railways, the Forest Department and the Ministry of Defence. One-line information on development (investment) expenditure provided by the CGA was used for the HEC. The NHA shared project-wise budgeted and actual expenditure data for four years.

Ministry/division-wise BEs and actual current expenditure data provided by the CGA appropriation accounts were used for current expenditure. The CGA also provided one-line current expenditure data for most exempt and/or self-accounting entities(except WAPDA and the NHA). The NHA shared current budgeted and actual expenditure data, and the HEC data series for current budgeted and actual expenditure was downloaded from its website. WAPDA (Power), as an exempt entity, did not share its current expenditure, so one-line current expenditure data from the CGA was used instead.

The current expenditure data provided by the CGA for the MoF and Economic Affairs Division included current expenditure of non-climate-relevant entities, namely, the National Saving Organization, the Pakistan Mint and expenditure heads such as domestic debt servicing. The CGA current expenditure data on the Economic Affairs Division included current expenditure on servicing and repayment of principal of foreign debt (short and long term).[56] Similarly, the Ministry of Defence included expenditure on the Armed Forces. From MoF publications (source 2 above), the expenditures on the above budget headings were subtracted to arrive at current expenditure for each ministry. The percentage of trimmed expenditure was then applied to CGA actual expenditure to obtain current expenditure for the respective ministry.

55 It is noteworthy that a sizeable number of foreign-funded vertical projects in social sectors (such as BISP) are treated as "current expenditure on capital account" in source 2 above and line item of the MoF's current expenditure by source 3 above.

56 The current expenditure data on debt servicing runs into trillions of Pakistani rupees.

5.5 Financial data analysis and assumptions

5.5.1 Development budget

The CGA provided the development (inclusive of foreign official project funding) and current budget appropriation accounts as softcopy spreadsheets. Both CGA and PSDP CC-relevant projects along with classification and CC-relevant weights (Phases I–III) were filtered by ministry/division.[57] Project data from the NHA was incorporated by the team's CC expert.[58] This exercise proved challenging as data for the four years did not follow a consistent accounting format or pattern across ministries, divisions and projects. This was due to weak inter-provincial coordination and a lack of ownership of ministries and their projects by the provinces in the aftermath of the 18th Amendment. The difficulties were as follows:

- The initial devolution of ministries and projects led to a reduction in historical ministries and projects in the federal budget.
- Devolution meant the re-allocation of ministries and projects and considerable re-thinking and compromise at the federal level, leading to the re-emergence of devolved ministries/divisions under a different nomenclature and modified powers and objectives. This again led to the re-emergence of more ministries/divisions along with the reallocation of projects (previously allocated to the provinces) to the federal budget.

In step two, actual expenditures in a given year on CC-related projects belonging to exempt/self-accounting entities were calculated from data in the PSDP. The formula was the difference of 'actual expenditure till the end of the fiscal year *t*' minus the "actual expenditure till the end of the fiscal year *t - 1*" from two consecutive PSDP publications. This was calculated and treated as actual expenditure in year *t*. The MPDR official indicated that the "actual expenditure till the end of the fiscal year *t*" was an estimate as it is an extrapolation of nine-month actual expenditure. This renders the actual expenditure calculated from the PSDP source during the year an estimate as well. However, it is close to actual expenditure in many cases. Allocations during the year against each project were considered equivalent to BEs given in the MoF publications.

In step 3, after combining the CGA and PSDP climate-relevant projects, the CC-relevant BE and actual expenditure were calculated by multiplying the total current year BE and actual expenditure on the project by its CC-relevant weight. This exercise was repeated separately for all four years.

In step 4, the summary development (investment) statistics of certain indicators were prepared by summing individual projects ministry/division-wise. These indicators were total BE and actual expenditure, CC-related BE and actual expenditure, two ratios of CC-related BE and actual expenditure to total BE and actual expenditure. After aggregating CC-related investment expenditures during a given year across all ministries/divisions, two ratios of CC-related BE and actual expenditure in each ministry/division to total CC-related BE and actual expenditure in a given year were calculated. Dividing aggregate CC-related yearly actual expenditure by yearly size of PSDP yields investments in CC projects as a ratio of the PSDP.

5.5.2 Current budget

The two data sources for the Federal Government's current budget (which constitutes 70–80 percent of the total budget) were the CGA appropriation accounts (source 3 above) and the MoF (source 2 above). Although both sources document detailed current expenditures by ministry/division according to NAM classifications, it was almost impossible to identify CC-related current expenditure within each federal ministry/division.

57 PSDP projects were reviewed where the data from CGA was not available.

58 Projects with the same name appearing more than once in the same or different ministries were filtered out. These filtered projects from CGA accounts were crosschecked with unique project ID information, name and current year budget estimate information in the MoF's Pink Book, and then reduced to unique and single IDs and names. These were then allotted to a single ministry/division in the CGA's main spreadsheets.

CC-related current expenditure was estimated by assuming that ministry/division-wise CC yearly current expenditure is proportionally related to the CC-related yearly development expenditure.[59] As a first approximation, the ratio of CC-related development expenditure to total development expenditure of each ministry/division (calculated in step 4 above) was applied to total current expenditure of the corresponding ministry to obtain CC-related yearly current expenditure.[60] CC-related BE of the current expenditure was also obtained using this method.

This process makes a significant assumption that the development and current budget are substantively related. There are a number of reasons why this may not be the case. For example, the current budget is predicated on previous development expenditures, which, historically possessed less climate relevance than the present development portfolio. However, no sufficiently robust alternative approaches could be determined to assess the climate relevance of the current budget.

In step 5, the aggregate CC actual development and current expenditures were combined to focus on total actual CC expenditures in a given year. Dividing the total actual CC expenditures by the total size of the federal budget gives a unique estimate of yearly CC-related actual public spending at the federal level as a percentage of the total federal budget. A similar percentage can also be calculated for CC BE of current expenditures.

5.6 The final climate budget dataset

The final data used by the methodology was as follows:

- All climate-related expenditure at the federal and provincial level;
- Coverage of the period July2011 to June 2015 ;
- Coverage of both development and current budgets;
- Classification of all climate-related investments into themes, tasks and activities.

59 Admittedly, this highly-simplifying assumption is open to question and subject to empirical validation.

60 Weighting by number of projects in each ministry/division can also produce another estimate of current expenditures.

CHAPTER 6 – FEDERAL-LEVEL CLIMATE CHANGE BUDGET AND INSTITUTIONAL ASSESSMENT

6.1 Federal budget overview

A brief profile of Pakistan's federal budget of the last four years is provided to put into context the scale and trends in major heads of federal expenditures, revenues and foreign resources. The budgeting paradigm of fiscal federalism followed in Pakistan entitles provinces to a share of resources from tax and non-tax revenues collected and foreign development/non-development inflows received by the Federal Government. The budgetary profile is based on the MoF's yearly document, the "Budget in Brief", that publishes budget and revised estimates. In order to build trends and a profile, revised estimates are frequently used as they are based on 9-month estimates and are closer to actual estimates.[61]

The overall size of the federal budget in nominal terms as per revised estimates increased from PKR 3,109,732 million in 2011/12 to PKR 4,235,111 million in 2014/15, indicating an AAGR of 10.8 percent (Table 6.1). This growth in expenditures is above the average annual inflation rate of 8.1 percent during the period. Only in 2011/12 did the revised expenditures (REs) substantially overshoot the BEs as the Federal Government allocations compensated for the inflationary shock during the period 2009/10–2011/12.

Table 6.1: Overview of the federal budget, 2011/12–2014/15

Year	Budgeted Expenditures (PKR millions)	Changes in Budgeted Expenditures (%)	Revised Expenditures (RE) (PKR millions)	Changes in Revised Expenditures (%)	Rate of Inflation CPI	RE as % of GDP
2011/12	2,766,815	13.26	3,109,732	21.5	11.5	15.06
2012/13	3,202,999	15.76	3,478,353	11.85	7.5	15.18
2013/14	3,985,437	24.43	4,057,293	14.27	8.5	15.97
2014/15	4,301,743	7.94	4,235,111	4.38	4.8	15.47

During the last four years, the share of federal current expenditures in total federal expenditures moved in the range of 79–85 percent, indicating the tight fiscal space available to the Federal Government to spend on development activities. However, the AAGR of development expenditures (REs) was 16.4 compared to the 9.8 percent of current expenditures during the last four years.

Table 6.2 gives a summary breakup in percentage shares of revised estimates of federal expenditures under broad expenditure heads.

The share of current expenditure going to interest payments on domestic and foreign debt is fairly large and increased in the four years. The expenditure on defence, though a significant portion at 19–21 percent of the total current expenditure, remained stable. The Federal Government substituted straight grants and transfers to the provinces by development loans over the last four years. Consequently, the share of grants and transfers declined in current expenditure and increased in the development

61 Actual estimates of major categories of public finance line items are available in select publications and usually come with a one year lag.

Table 6.2: Share of main expenditure heads in the revised federal budget (percentage)

Current Expenditure	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Interest Payment/Foreign Loans Repayment	37%	42%	45%	45%
Defence Affairs and Services	19%	20%	20%	21%
Grants and Transfers and Subsidies	30%	24%	21%	19%
Running of Civil Government	8%	9%	8%	9%
Development Expenditure				
Federal PSDP	64%	68%	49%	72%
Development loans and grants to provinces	11%	13%	17%	11%
Other Development Expenditure (Outside PSDP)	25%	19%	34%	11%
Current Expenditure as % of Total Govt. Expenditure	85%	84%	79%	82%
Dev. Expenditure as % of Total Govt. Expenditure	15%	16%	21%	18%
PRSP expenditures as % Total Govt. Expenditure	62%	55%	48%	51%

expenditure.[62] Note that the resources devoted to the running of the Government are stagnant at 8–9 percent. During 2012–2014, the share of expenditure through the PSDP declined sharply from three-fourths to nearly half while the outside PSDP development expenditure doubled from 17 to 34 percent. This may again be partly due to expenditures on infrastructure reconstruction due to floods in 2010 and 2011, infrastructure for enhancing security and new development initiatives backed by foreign funding. In 2014/15, the share of development expenditure through PSDP climbed back to about three-fourths, indicating a move towards planned expenditures rather than *ad hoc* allocation. The rising trend of the share of development expenditures is a mirror image of a falling share of current expenditures during first three years of the period.

Pakistan became a recipient under the World Bank/IMF crafted Poverty Reduction and Growth Facility (PRGF) lending programme at the beginning of the millennium, which entailed development of a Poverty Reduction Strategy Paper (PRSP). A detailed accounting system was set up in the PRSP Secretariat established in the MoF. It was operationalized to monitor and track expenditures on pro-poor sectors of the economy, including multilateral and bilateral foreign funding channelled through the government budget. The overall spending (development and current) in pro-poor sectors as a ratio of total Government spending fluctuated along a declining trend in the last four years.

Pakistan's tax-GDP ratio is the lowest among the comparable per-capita income developing countries. Moreover, its annual import requirements outstrip its export earnings. Therefore, Pakistan remains a resource-constrained (rupee as well as foreign exchange) economy dependent on foreign flows in the shape of loans, foreign investment, aid or grants. The GoP's budget dependence on external resources (excluding foreign investment) for development purposes can be gauged from Table 6.3.

During the last four years, the dependence on external resources has increased. As a percentage of overall government expenditure it has more than doubled from 8.3 percent in 2011/12 to 19.1 in 2014/15. External support to the development budget has almost doubled from 47.3 percent in 2011/12 to 91.8 percent in 2014/15.

62 However a large portion of the above two heads in current and development budget goes to non-provincial entities and other heads, e.g. subsidized interest on populist credit schemes.

Table 6.3: Contribution from external resources to the revised federal budget

	2011/12	2012/13	2013/14	2014/15
External Resources as % of overall Government Expenditure	8.3	8.3	17.6	19.1
External Resources for Development as % of Development budget	47.3	42.6	83.2	91.8
Project Aid as % of Total External Resources	71.2	71.2	24.4	30.6

A snapshot of trends in resource mobilization and their distribution among the federation and provinces completes the flip side of the budgetary equation. Table 6.4 shows resource mobilization and its distribution among the federation and four provinces. Total federal receipts (tax and non-tax) increased from PKR 2.5 trillion in 2011/12 to PKR 3.9 trillion in 2014/15, representing an AAGR of 15.9 percent. Non-tax revenue collections grew at a rate of 26.7 percent compared to the growth of tax revenues at 12.9 percent during the period. A major portion of non-tax revenue comprises license fees and charges in the telecommunications sector, gas development charges, foreign grants and royalties on crude oil. The Federal Government is left with net revenue receipts after giving the provinces their share of gross receipts under the seventh NFC Award (2009).

The Federal Government's net revenue receipts increased at an average annual rate of 21.4 percent compared to the growth rate of 9.2 percent in the provincial share. Though overall provincial share (statutorily fixed) was meant to increase from 56 percent in 2010/11 to 57.5 percent in 2012/13 onwards, revised BEs indicate that the provinces' share remained in the range of 39–48 percent during 2012–2015.[63] The inter-provincial share is determined by a formula composed of weights to factors such as population, poverty/backwardness, revenue collection and inverse population density. The trends indicate that shares across the four provinces continue to remain stable as per the agreed formula in the NFC Award.

Table 6.4: Federal resource mobilization and provincial shares (revised estimates in PKR millions)

	2011/12	2012/13	2013/14	2014/15
Tax Revenue	2,024,568	2,124,575	2,513,945	2,910,180
Non-Tax Revenue	512,184	711,987	1,083,197	1,042,292
Total Revenue Receipts	2,536,752	2,836,562	3,597,142	3,952,472
Provincial Share	1,208,616	1,221,022	1,413,335	1,574,709
Net Revenue Receipts	1,328,136	1,615,540	2,183,807	2,377,763
Provincial share as a % of Total Revenue Receipts	48%	43%	39%	40%
Net Revenue Receipts as a % of Total Revenue Receipts	52%	57%	61%	60%
Distribution of provincial share (%)				
Punjab	48%	47%	47%	48%
Sindh	26%	27%	27%	26%
KP	16%	17%	17%	16%
Balochistan	9%	9%	10%	10%
Overall fiscal deficit as a % of GDP	6.8%	8.2%	6.3%	4.9%

63 One reason for lower provincial share compared to statutorily fixed share in the divisible pool is as follows; as per the NFC award, the Federal Government was supposed to collect General Sales Tax (GST) on services on behalf of all the 4 provinces. This was challenged by the province of Sindh in 2011/12 (not by other 3 provinces) and the Federal Government eventually acceded to the province's constitutional right to collect GST on services.

What do the aforementioned macro-trends of the federal budget portray in terms of fiscal space available to the Federal Government for CC response? From an investment angle, the growth in development expenditures is fairly respectable and nearly three times the growth in current budget. A slowly increasing share of climate response is embedded in the investment of projects related to energy, agriculture and communications. However, the increasing share of investment spending outside the PSDP versus PSDP-budgeted investment during the first 3 years indicated that the short-term priorities overruled planned policy aligned-allocations. While the share of planned allocations once again assumed importance in 2014/15, if the former trend had continued it would have undermined the formal process of PSDP formulation with a probable consequential fall-out for increasing explicit investment in climate-related projects.

In terms of budgeting higher current expenditure for climate response, the trend indicates that the current budget is overstretched, with only 8–9 percent allocated to the running of the Federal Government and a large part committed to non-discretionary expenditures. Effective climate response will require increasing technical and professional capacities of existing human resources as well increasing the pool of human talent and allied supporting infrastructure. Thus, the challenge for planning and finance officials is to mainstream CC into the current budget.

6.2 Climate programmes and budgets

Based on the methodology and sources outlined in chapter 5, individual climate projects/programmes are identified at the first stage from CGA and PSDP data. It is pertinent to mention that identifying CC projects and climate-related expenditures is a subjective task in the absence of any agreed upon accounting definitions for the functional classification of CC-related expenditures in use by the GoP.[64] Table 6.5 gives a four-year summary trend profile of a number of climate-related projects identified from CGA and PSDP data (for ministries that possess complete four-year data).[65, 66, 67] The details of all ministries are provided in Appendix 6.1.

The main observations from Table 6.5 are:

i) There is no clear stable trend (increasing or decreasing) in the percentage of projects with a climate dimension during the four years under review.

ii) The percentage of climate-relevant projects across various ministries and across the four years also vary considerably, ranging from a high of 97 percent in the Ministry of Communications (2013/14) to a low of 18 percent in the Ministry of Federal Education (2013/14).[68, 69]

iii) During 2011–2014, the percentage of climate-relevant projects among total projects in the Cabinet Secretariat, Ministry of Federal Education and Ministry of Finance, Revenue, Statistics and Privatization , show greater variability than the remaining ministries.

The overall variability in projects that have climate relevance across ministries and across the four years can be traced to:

i) The "administrative transition" faced by the federal and provincial government and the latter's various ministries/divisions. This transition continues today;

ii) The lumpiness of investment reflected in the development budgets of various ministries and divisions;

64 However Chart of Accounts 2002 gives codes for Environment Protection. Under minor functional classification it gives six codes and under sub-detailed function description ten codes are mentioned. However, neither the word "climate" nor any related code is found in the Chart of Accounts.

65 Complete profile of climate-related projects for all ministries/divisions included in the study are in Appendix 6.5.

66 It needs to be mentioned that 18th Amendment led to considerable re-shuffling, bifurcation, merger, renaming and devolution of federal ministries and divisions during this four year transitory period and consequent inconsistent grouping and aggregation of federal accounts.

67 Also excluded from this table are ministries with climate-related projects less than 15 percent of total projects.

68 Excluding the 100 percent relevance attributed to the projects of Ministry of environment/climate change.

69 As the Higher Education Commission (HEC), a self-accounting identity did not share project-wise actual expenditure data with us, all projects under it were assumed to have climate dimension.

Table 6.5: Total projects and projects with a CC dimension

#	Federal Ministries/Divisions	2011/12			2012/13			2013/14			2014/15		
		Total # of Projects (CGA+PSDP)	Total # of CC-related Projects (CGA+PSDP)	%	Total # of Projects (CGA+PSDP)	Total # of CC-related Projects (CGA+PSDP)	%	Total # of Projects (CGA+PSDP)	Total # of CC-related Projects (CGA+PSDP)	%	Total # of Projects (CGA+PSDP)	Total # of CC-related Projects (CGA+PSDP)	%
1	Cabinet Secretariat/ Atomic Energy Commission Division	266	75	28.2%	58	31	53.4%	112	67	59.8%	84	59	70.2%
2	Communication/ NHA Division	124	116	93.5%	81	78	96.3%	98	95	96.9%	78	53	67.9%
3	Defense Division and SUPARCO	39	23	59.0%	24	16	66.7%	22	12	54.5%	11	4	36.4%
4	Federal Education and Professional Training	8	5	62.5%	10	7	70.0%	11	2	18.2%	16	7	43.8%
5	Environment /Climate Change Division	8	8	100.0%	6	6	100.0%	6	6	100.0%	2	2	100.0%
6	Finance, Rev, Stat & Privatization	383	181	47.3%	252	174	69.0%	232	100	43.1%	191	55	28.8%
7	Interior and Narcotics control/ Ministry of Population welfare	172	45	26.2%	105	27	25.7%	134	51	38.1%	142	51	35.9%
8	Kashmir Affairs & Gilgit-Baltistan Division	20	17	85.0%	14	10	71.4%	11	7	63.6%	11	5	45.5%
9	Science & Technological Research Division	56	34	60.7%	66	29	43.9%	55	38	69.1%	43	22	51.2%
10	Water and Power Div (Water & Power Sector)	153	92	60.1%	185	84	45.4%	134	107	79.9%	165	122	73.9%
11	Railways Division	29	19	65.5%	37	21	56.8%	35	26	74.3%	24	24	100.0%
12	Housing & Work Division	49	14	28.6%	56	22	39.3%	74	18	24.3%	15	5	33.3%
13	Higher Education Commission	1	1	100.0%	1	1	100.0%	1	1	100.0%	54	54	100.0%

iii) The changing priorities of the Government in power;

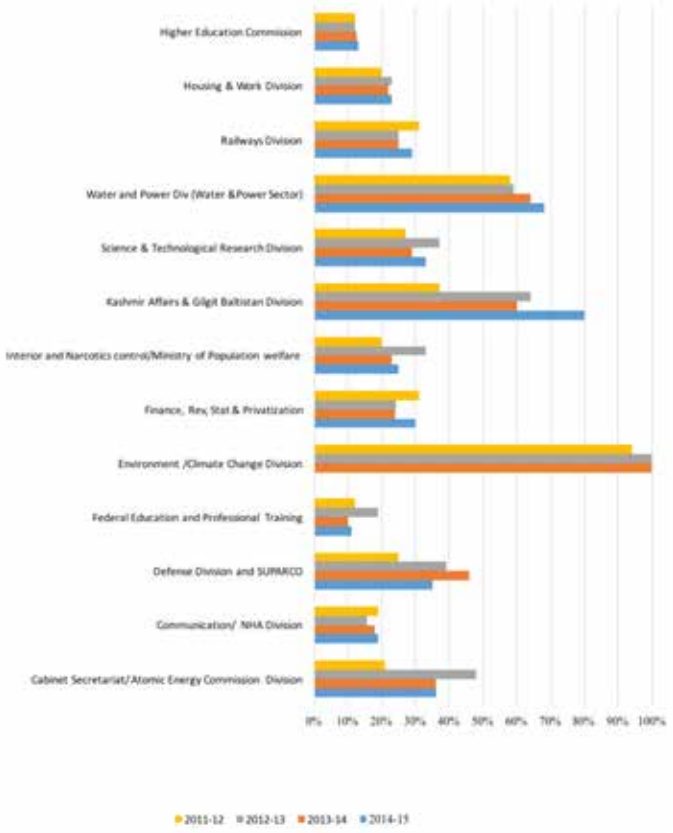
iv) The fluctuations in actual and committed fiscal resources (domestic and specifically foreign) available to the Government in any given year;

v) The substantial throw-forward of projects already in the pipeline.

Figure 6.1 gives the average climate relevance of selected ministries. The average is the sum of climate relevance weights assigned to the investments of each climate-relevant project divided by the number of projects/programmes in each ministry. The assignment of weight to each project/programme is in accordance with the methodology discussed in chapter 5. The average relevance weight for the ministry is sensitive to the total number of projects with climate dimensions, as well as to the type of projects (that determine the weight assigned to each project) in the individual ministry. As a summary measure, it also profiles the ministries that undertake projects with strong, significant and weak climate dimensions. It also examines how that strength has varied over the four-year period (Appendix 6.2).

The average relevance weight should be a relatively stable number across time and across ministries in the absence of the "administrative transition" mentioned earlier. However, the observed fluctuations not only reflect the counterfactual, but also the impact of tight and uncertain fiscal space experienced by the country in this period. Generalizing the four-year trend, the projects initiated in the Federal Ministry of Kashmir Affairs and Gilgit-Baltistan exhibits strong relevance, followed by the water and power sector.[70]. The average climate relevance of projects under Science and Technology Research and Kashmir Affairs and Gilgit-Baltistan divisions show variability across the four years and possess strong to moderate relevance. Projects undertaken by the remaining ministries have moderate to weak climate relevance as the ministry-wise averages of climate relevance are usually below 50 percent. In addition, average relevance is one element that contributes to an understanding of year-to-year variations in ministry/division-wise climate-related investments.

Figure 6.1: Mean climate relevance weight (percentage) by federal institution



70 In 2014/15, there were only two projects by the Federal Climate Change Division. Both were regarded as relevant to climate change. The projects of the Climate Change Division were merged with the Cabinet Division in 2014/15.

Two indicators are used to estimate the climate-relevant development expenditure of ministries. (Appendix 6.3). The first indicator is plotted as a bar chart (Figure 6.2a) and shows the percentage share of the climate-relevant actual development expenditure of each ministry/division out of total climate-relevant actual development expenditure of all ministries (the total will not add up to 100 percent, as only a subset of ministries is represented in the figure). The second indicator is the percentage of the climate-relevant development expenditure of each ministry with respect to each ministry's total PSDP + non-PSDP allocations (Figure 6.2b). This latter percentage is applied to the actual current expenditure of each ministry to obtain an estimate of climate-relevant actual current expenditure.

The highlights of the two indicators are as follows:

a) Between 60 and 80 percent of the total climate-relevant actual investment expenditure during the four years is split between two ministries, namely the MoWP (including WAPDA) and the Cabinet Division (including the AEC).

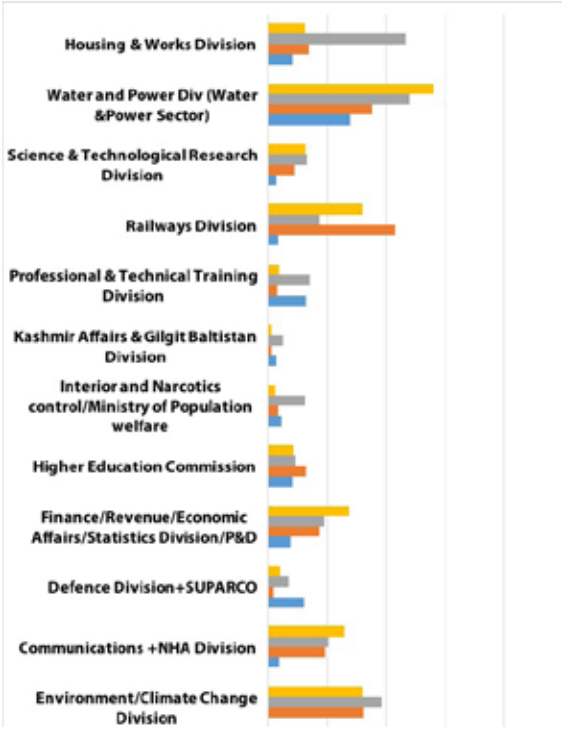
b) The share of each of the three ministries in total climate-relevant investments (Communications, NHA, Finance and Railways) ranges between 2.3 and 9.4 percent. The corresponding share of the remaining eight ministries is less than 1 percent.

c) The aforementioned profile of investment shares in CC activities is consistent across the four years, but varies within each ministry/division.

d) The ministry/division-wise profile of climate-relevant actual investment expenditure as a percentage of each ministry's total PSDP + non-PSDP allocations, show no clear trend in any ministry across four years (Figure 6.2b). In stylistic terms, the ministries (Cabinet Division, Interior and Population Welfare, Professional and Technical Division, Railways, Water and Power and Housing and Works) show higher variability in climate-related investments than other selected ministries. This can once again be traced to variability in the number of projects with a climate dimension, the type of projects and the budgeted amounts allocated to each ministry.

Figure 6.2a: CC weighted actual development expenditure as a percentage of total CC weighted actual expenditure

Figure 6.2b: CC weighted actual development expenditure as a percentage of overall development expenditure



6.2.1 Climate change response by the Atomic Energy Commission

Nuclear energy investments have a potentially important impact on long-run climate change mitigation. In view of this, the AEC's aggregate investment (development) in each of the four years at the federal level are profiled in three key ratios in table 6.6. The three indicators are: a) AEC share of climate-relevant investment expenditure as a ratio of development budget (PSDP plus outside PSDP) of the Cabinet Division, b) AEC's climate-relevant development expenditure as a ratio of total CC-weighted development expenditure budget, and c) Share of AEC's mitigation expenditure in total mitigation budget.

Table 6.6: The role of the AEC in climate budget metrics, 2010/11–2013/14 (percentage)

	2011/12	2012/13	2013/14	2014/15
Share of CC-weighted actual development expenditure in total CC-weighted actual development expenditure	26.9	17.3	20.2	13.9
Share of CC-weighted actual development expenditure in PSDP + non-PSDP allocations of Cabinet Division (incl. AEC)	29.6	39.6	53.3	48.3
Share of AEC's mitigation expenditure in total mitigation budget	87.6	45.9	37.4	17.3

If one considers power supply from nuclear energy an emissions reduction measure or climate mitigation, the indirect/implicit influence of investments being undertaken by the AEC in overall climate-related investments as well as budget, is substantial, though variable in three of four years under study.

6.3 Climate-relevant expenditure in development and current budget

As mentioned earlier, the ministry-wise share of PSDP + outside-PSDP development budget spent on climate-relevant projects and programmes is the main driver for calculating ministry/division-wise climate-relevant current expenditures. Applying the yearly ratios given in figure 6.2b to ministry/division-wise yearly total current expenditures from CGA data approximates to federal current expenditures spent on climate-related activities in four years. Table 6.7 shows the aggregate investment (development) and current expenditures on projects with a climate dimension in each of the four years at the federal level. This is profiled in absolute terms and shows three key ratios. These are a) climate-relevant investment expenditure as a ratio of development budget (PSDP plus outside PSDP), b) climate-relevant current expenditure as a ratio of total current expenditure budget, and c) climate-relevant total (development + current) expenditure as a percentage of total federal budget (development + current).

Investments in projects that have CC benefits increased from PKR 129 billion to PKR 242 billion at an average annual rate of 23.2 percent as compared to the corresponding increase of 16.4 percent in the total revised development budget.

The ratio of climate-relevant development expenditures to total development varied from a high of 35.9 percent in 2014/15 to a low of 26.2 percent in 2012/13. The 10 percentage point increase during the two fiscal years, 2014 and 2015, reflects doubling of climate-relevant investment expenditures in the water and power sector.

The derived climate-relevant current expenditures shows a rising trend from PKR 70 billion in 2011/12 to PKR 94 billion in 2014/15, an average annual increase of10.4 percent, less than half of the annual increase of 23.2 percent in climate-relevant development expenditures. The federal budget for current expenditures increased at an average annual rate of 9.8 percent. Consequently, the ratio of climate-

relevant current expenditure to total current budget fluctuated in the range of 1.75–2.70 percent.[71] The ratios and levels of current expenditure reflect the four-year profile of climate-relevant development expenditures.

The aggregate (investment + current) climate-relevant budget shows an increasing trend from PKR 199 billion in 2011/12 to PKR 336 billion in 2014/15 during the four-year period. As a percentage of total federal budget, the climate-relevant expenditures have moved gradually from 5.8 percent in 2012/13 to 8.1 percent in 2014/15.

Table 6.7: Four-year summary analysis of climate-relevant expenditure in the current and development federal budget (PKR millions)

Development Expenditures (PKR millions)	2011/12	2012/13	2013/14	2014/15
CC weighted Actual Development Expenditure (a)	129494.76	133544.91	187485.67	242417.51
Revised Budgetary Development Expenditure				
PSDP	303664.00	388407.00	425000.00	542000.00
Outside PSDP	121759.00	107388.00	289360.00	132292.00
Total Revised Budgetary Development Expenditure (b)	**425423.00**	**495795.00**	**714360.00**	**674292.00**
Ratio- (a)/(b)	**30.44%**	**26.94%**	**26.25%**	**35.95%**
Current Expenditure (PKR millions)				
CC weighted Actual Current Expenditure (c)	69835.31	63188.51	55914.82	93992.94
Revised Budgetary Current Expenditure (d)	2631911.00	2907053.00	3198585.00	3480790.00
Ratio- c/d	**2.65%**	**2.17%**	**1.75%**	**2.70%**
Total Expenditures (PKR millions)				
CC weighted Development Actual Expenditure-	129494.76	133544.91	187485.67	242417.51
CC Weighted Current Actual Expenditure	69835.31	63188.51	55914.82	93992.94
Total CC Weighted Actual Expenditures-(e)	**199330.07**	**196733.42**	**243400.49**	**336410.44**
Revise Budgetary Development Expenditure	425423.00	495795.00	714360.00	**674292.00**
Revise Budgetary Current Expenditure	2631911.00	2907053.00	3198585.00	3480790.00
Total Revise Budgetary Expenditure-(f)	**3057334.00**	**3402848.00**	**3912945.00**	**4155082.00**
Ratio- (e)/(f)	**6.52%**	**5.78%**	**6.22%**	**8.10%**

71 Numerically climate-related current expenditures are fairly small, but constitute 20–30 percent of 8–9 percent of federal current expenditure devoted to running of the civil government (see table 6.2). In turn the small percentage of current expenditures devoted to the running of civil government is due to large weight of interest payments, defence budget and subsidies.

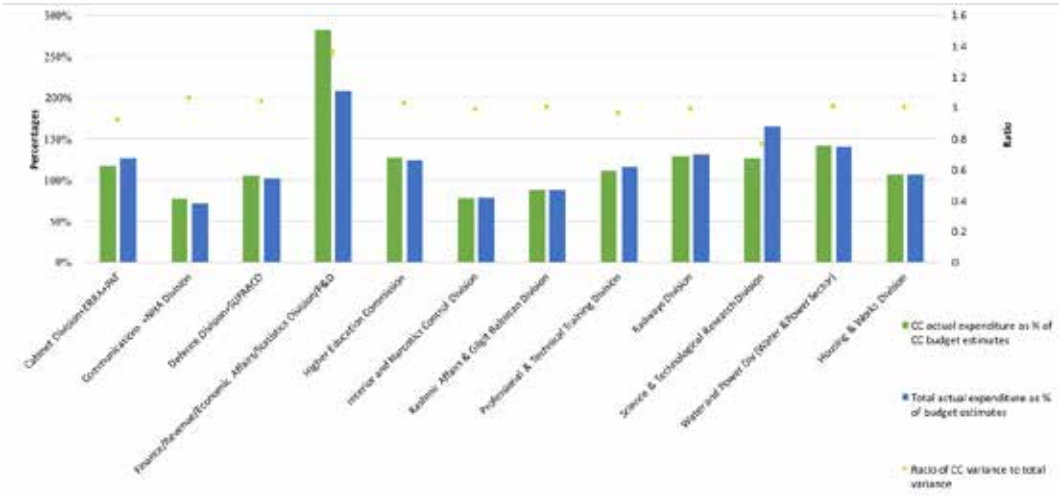
6.4 Budget variance analysis

A comparison of annual planned or budgeted expenditure at the start of the fiscal year with the actual end-year expenditure serves implicitly to highlight the efficiency, effectiveness and impact of public fiscal management in pursing long-term policies, priorities and national goals. A three-way comparison is undertaken for 2014/15 in figure 6.3.[72] The dark bar refers to the percentage deviation of climate-relevant actual capital expenditures from CC budgeted capital expenditures for each of the selected ministries/ divisions. The light bar indicates the percentage deviation of overall (climate- plus non-climate-related) actual investment expenditures from the total development expenditures for the same ministries/ divisions. The ratio of CC deviations to overall deviations is depicted as a shaded circle. A ratio value greater than one suggests that deviation in CC-related investments is higher than deviation in overall investments in the respective ministry/division.

In majority of the sectors, climate-relevant actual investment spending is more than budgeted spending. It is higher than 100 percent for 9 out of 12 ministries under review. At the overall budget level, the actual spending of 10 of 12 ministries is more than 100 percent of budgeted spending. In other words, spending patterns for climate-relevant projects is similar to spending pattern at the aggregate level. The ratio of the two deviations is a more robust and meaningful indicator; a value greater than one for six ministries/ divisions suggests that deviations in climate-proofing investments are larger than deviations for all projects combined, for nearly half of federal ministries. The six ministries/divisions in question are Cabinet, Communications, Defence/Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), Finance, Kashmir Affairs and Gilgit-Baltistan, and Water and Power. For another four ministries the ratio is above 90 percent, suggesting that the deviations in climate-proofing investments and overall investments are almost equivalent.

Apart from Communications and Housing and Works Divisions, the characteristics of the portfolio of projects in the other four ministries/divisions are fairly heterogeneous, and the reason for low allocations and larger deviations could be challenges faced in CC project delivery. In the case of the two aforementioned ministries, short-term Government priorities most likely lead to the re-appropriation of funds from more to less CC-relevant projects.

Figure 6.3: Federal budget variance analysis, 2014/15



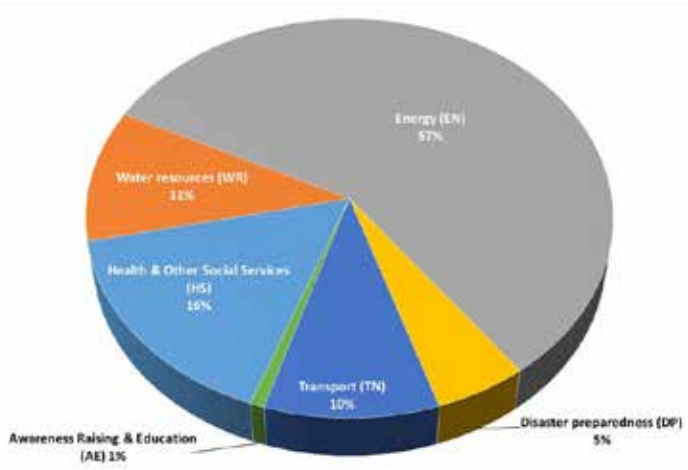
72 The comparison for the latest year 2013/14 is most likely to yield more stable ratios compared to earlier years as various administrative and legal issues pertaining to devolution, re-shuffling and emergence of renamed ministries and divisions are finalized on a permanent basis.

6.5 Climate expenditures by theme and task

As outlined in chapter 5, a typology of tasks for CC response activities was developed based on the National Climate Change Policy (NCCP). Each of the PSDP development project budget lines with a climate-relevant component were coded to one activity type within the typology. This information, in addition to the proportional expenditure of the budget line on the climate-relevant component, permitted overall expenditures to each activity type of the typology to be identified. This analysis was carried out for federal development expenditures for 2014/15.

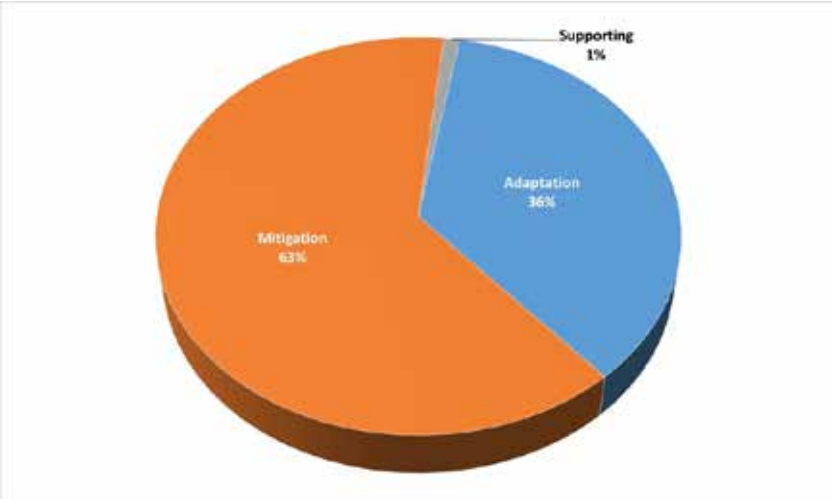
The analysis illustrates that energy represents the dominant climate-relevant expenditure task in the typology, representing over half of the expenditure. Other important task areas are health and social services (16 percent of PSDP CC expenditure), water resources (11 percent), transport (10 percent) and disaster preparedness (5 percent) (Figure 6.4).

Figure 6.4: Allocation of expenditures to climate-relevant tasks in the PSDP, 2014/15



Following on from the structure of the NCCP, the typology also codes activity-types under three themes: mitigation, adaptation and supporting activities that are CC response enablers. The 2014/15 climate-relevant federal CC expenditures were related mainly to the mitigation theme, with supporting activities making up just 1 percent (Figure 6.5).

Figure 6.5: Allocation of expenditures to climate-relevant themes in the PSDP, 2014/15



The allocation of expenditures to tasks within each theme demonstrates further detail about climate-relevant expenditures (Figure 6.6). Within mitigation (57 percent of total federal CC expenditure,) a majority (90 percent) is made up of the energy task area. The remainder is contributed by transport. Energy is thus dominant in the climate budget, making up around 60 percent of the total PSDP CC budget in 2014/15. Adaptation has a more varied selection of climate-relevant tasks, but with three tasks making up around 90 percent of the adaptation expenditure; health and social services, water resources, and disaster preparedness. The supporting areas theme which represents just 1 percent of the CC budget is dominated by the awareness raising and education task.

Figure 6.6a: Allocation of climate-relevant PDSP expenditure in the 2014/15 budget to task areas within the three themes of CC response (mitigation theme)

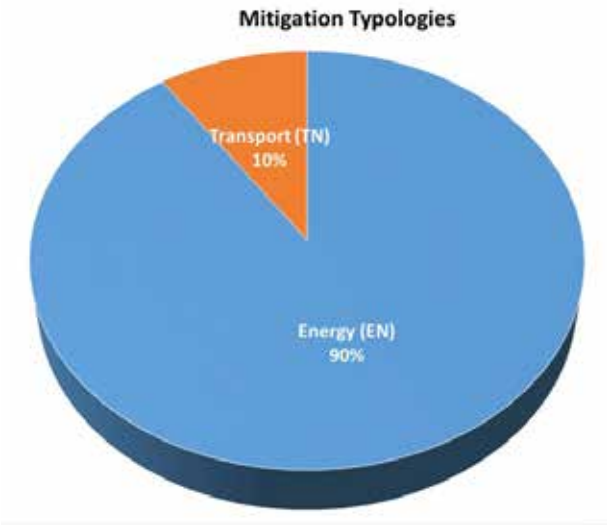


Figure 6.6b: Allocation of climate-relevant PDSP expenditure in the 2014/15 budget to task areas within the three themes of CC response (adaptation theme)

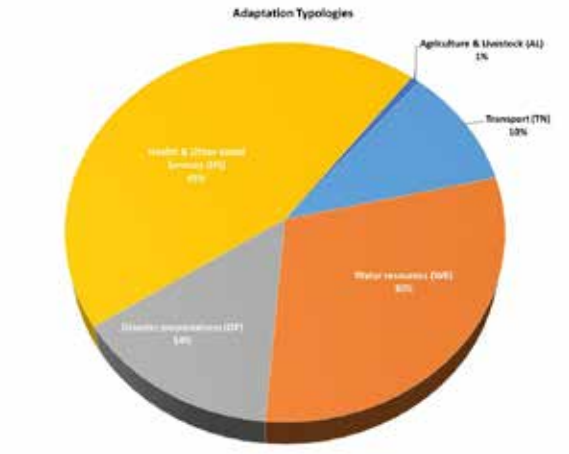
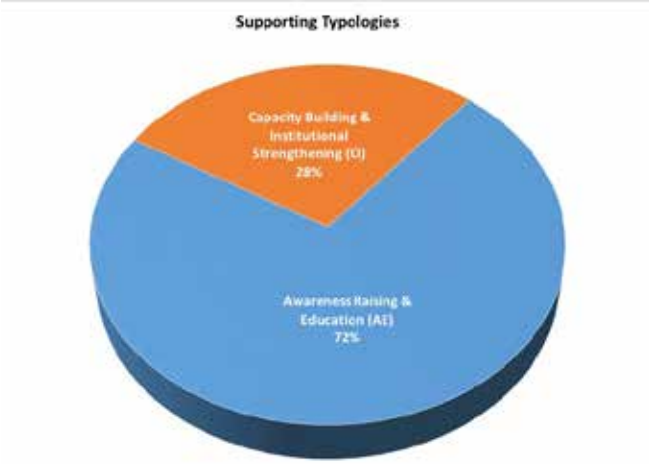


Figure 6.6d: Allocation of climate-relevant PSDP expenditure in the 2014/15 budget to task areas within the three themes of CC response (supporting areas theme)



6.6 Federal institutional assessment

6.6.1 Institutional and policy arrangements

Climate change falls under the purview of the MCC at the national level in Pakistan. The MCC is the central authority responsible for steering and coordinating Pakistan's national climate change policy and plans, and serves as a national focal point to the UNFCCC and related international processes that the Government of Pakistan is a party to. The MCC has several wings and units, including a Climate Finance Unit set-up to coordinate climate finance from various global funds and channels. MCC's role as a National Designated Authority to the Green Climate Fund (GCF) and the Adaptation Fund (AF) is facilitated through the unit.

The Office of the Inspector General (IG) of Forests also falls under the MCC. The IG Forests Office steers matters related to REDD+ (Reducing Emissions from Deforestation and Forest Degradation) financing and implementation, including preparation of a national REDD+ Strategy for Pakistan, and updating of Pakistan's National Forest Policy. Although forestry is a provincial subject, international obligations related to the management of forest carbon stock and REDD+ are coordinated at the national level.

The MPDR and MoF are important actors in terms of climate planning and budgeting at the federal level, given their role in developing and financing the PSDP. It is worth remembering that the MPDR is not a decision-making body, but provides recommendations to be taken up by other areas of Government. The allocation of finance for public sector climate actions are ultimately determined by the MoF, as explained in detail in chapter 4. The Economic Affairs Division and Ministry of Foreign Affairs also have an indirect role to play. This includes coordination on external financing of development projects (including CC) and multilateral agreements that Pakistan is a party to, including the UNFCCC.

Several line ministries and specialist institutions oversee sectors relevant to climate change planning and investment. These include the Ministries of Water and Power, Food Security and Research, Housing and Works, Industries and Production, and others. Attached to these ministries are organizations including AEDB, ENERCON, PARC, and others that participate in climate policy and planning.

Regarding policy instruments and regulation, Pakistan has a National Climate Change Policy (NCCP) that was issued by the MCC in 2012 and subsequently adopted by the Cabinet. Progress on getting the policy off the ground has been weak however, despite an Implementation Framework (FICCP) setting out different timeframes for delivering short, medium and long-term actions outlined in the policy. Attracting sufficient budgetary resources for delivering the NCCP remains challenging for the MCC, given competing interests and investment priorities of the Government.

An NCCP Implementation Committee was activated in 2015 to spur implementation of policy recommendations at federal and provincial levels. Other more recent initiatives to strengthen the institutional arrangements for NCCP delivery include the proposition of a Pakistan National Climate Change Council and a Pakistan Climate Change Authority (PCCA) that are envisaged to be established under the provisions of a Pakistan Climate Change Bill that is currently (in 2017) in Parliament. The Pakistan Climate Change Council is expected to be a high-level forum for mainstreaming climate change concerns into planning of federal and provincial ministries, departments and agencies. The Council is to be chaired by the Prime Minister and will include as members federal ministers for Climate Change, Finance, Food Security and Research, Planning and Development, Water and Power, Petroleum and Natural Resources and Science and Technology, as well as Chief Ministers of all provinces, provincial environment ministers, Chairman NDMA and 20 non-official members including representatives of chambers of commerce, NGOs, scientists and technical experts, with Secretary MCC acting as Secretary to the Council.

The PCCA, on the other hand, is crafted with a mandate to formulate comprehensive adaptation and mitigation policies, plans and programmes to address effects of climate change and meet Pakistan's obligations under international agreements pertaining to climate change, within the guiding framework of the NCCP. It would be responsible for establishing institutional and policy mechanisms for implementation of federal and provincial adaptation and mitigation policies and plans. In addition to a chairperson, the PCCA shall include one member each for adaptation, mitigation, climate finance, and coordination as well as a member from each province to be nominated by the respective provincial government. The authority would manage a proposed Pakistan Climate Change Fund, to be established under the same legislation, which is to be utilized for providing financial assistance to suitable adaptation and mitigation projects and for research in different aspects of climate change.

The GoP's main policy response on CC includes:

- The NCCP, 2012; a comprehensive national climate change policy document to deal with CC challenges;
- The Framework for the Implementation of the Climate Change Policy, Nov 2014;
- Formulation of the draft National Forest Policy, 2016;
- Development of country's Climate Change Adaptation Technology Needs Assessment (TNA) Report March, 2016;
- Development of country's Climate Change Mitigation Technology Needs Assessment (TNA) Report Feb, 2016.

The GoP's main institutional response on CC includes:

- Establishing a Ministry of Climate Change (MCC);
- Proposed establishment of the Pakistan Climate Change Council;
- Proposed establishment of the Pakistan Climate Change Authority.

6.6.2 Implementing and mainstreaming climate change policy and planning

Emergence of the MCC and the NCCP demonstrates growing policy attention to climate change in Pakistan, yet at the same time the government faces challenges in effectively mainstreaming and delivering policy objectives, as discussed in the previous section. This is partly due to government priorities — constituency politics in Pakistan over the last three decades has been shaped by service delivery, and the current government has its politics entrenched in large infrastructure projects and responding to the country's power crisis. Heavily invested in IMF agreements, the issue of balance of payments and the tax-to-GDP ratio also remain a concern. These overriding and present-day concerns form a backdrop to the climate change policy planning and delivery.

More importantly though, policy planning and budgeting remain two disparate domains at a functional level, not least because the institutional arrangement remains divided in different agencies. This becomes further fragmented when it comes to crosscutting issues like climate change. From a review of domestic arrangements to implement climate actions (which are aimed at realizing national policies and strategies), it is evident that this is a highly complex and fragmented space with multiple institutions, actors and channels involved.

Table 6.8 provides a federal-level overview of the main sectoral entry points and links to CC mainstreaming.

Table 6.8: Federal-level overview of main entry points and links to CC mainstreaming

Sector	Explicit link to environment and CC	Ministry/division	Entry points/explicit links for CC mainstreaming at the institutional level
Energy	☑ Alternative energy development support services	MoWP	Houses Alternate Energy Development Board (AEDB), the custodian for the Renewable Energy Policy, 2006. Sizable investments in hydropower projects.
	☑ Promotion of energy and water quality	Ministry of Science and Technology	Houses the Pakistan Council of Renewable Energy Technologies (PCRET).
Transport	☒	Ministry of Communication	One of the two contributors to federal-level mitigation investments.
Water	☑ Water resource management, monitoring and flood mitigation services	MoWP	
	☑ Promotion of energy and water quality	Ministry of Science and Technology	Houses the Pakistan Council of Research and Water Resources (PCRWR).
Disaster Preparedness	☑ To ensure safety and sustainability of human lives during natural disasters.	NDMA (Cabinet Division)	NDMA is the custodian of the NDRRP.
Food Security	Ensure food security through improved agricultural productivity in face of changing climate patterns	Ministry of National Food Security and Research	Promote research on climate-resilience crop varieties through the Pakistan Agricultural Research Council (PARC)

Given the current mix of climate investments (Figures 6.6 and 6.9) at the federal level, both the MoWP and Communications emerge as key institutional partners along with the NDMA.

Exploring stakeholders' opinions[73] of CC as a national priority for implementation and financing, it was noted that at that at the federal level the CC agenda enjoys very limited attention and understanding from key ministries and institutions, and interest is mostly confined to the MCC. This is a major challenge to CC mainstreaming and coordination and climate-relevant decisions continue to be taken in different policy areas without much attention to policy coherence. For instance, the MoWP realizes that its hydropower projects produced clean energy, however such investments are not assessed or accounted in terms of their climate relevance and are instead driven purely by energy generation interests of the government. Similarly the Communication Ministry acknowledged that some of its actions and investments were climate-relevant (e.g. storm proofing, landslide proofing), but there did not appear to be any conscious accounting of such. No conscious effort was noted among line ministries and sectoral decision-makers to align actions and investments with CC policy objectives of the government.

Mainstreaming and integration of climate change concerns across different sectors is expected to strengthen following Pakistan's signing of the Sustainable Development Goals (SDGs). The SDGs are a new, universal set of goals, targets and indicators that UN member states will be expected to use to frame their development agendas over the next 15 years. The SDGs follow, and expand on, the MDGs, comprising of 17 goals covering 169 targets. Goal 13 of the SDGs explicitly requires signatory states to "take urgent action to combat climate change and its impact", with its targets including integration of climate change measures into national policies, strategies and planning; and improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

In the case of strengthening climate budgets for effectively implementing policy and plans, it would be beneficial to initiate role clarification discussions between the MoF, the newly-reinstated MCC and the MPDR. In our discussions, it appeared that climate-proofing and climate relevance were not seen as priority concern and the political leverage of the MCC was very limited. However, it did seem that the MoF and MPDR have had a positive experience with awareness of CDM, NAMAs and the GCF through the MCC, although this may not serve sufficiently for wider CC coordination or mainstreaming that will entail having clearly articulated roles for the MoF and MPDR.

The MCC can coordinate on policy harmonization and coordination, and with appropriate capacity enhancement, on technical backstopping. There is presently a vacuum and further need for dedicated CC streamlining and integration into development strategies; the MCC would be the most appropriate institution for this. Earmarked climate budgeting within sectors, budget tracking, and establishment and monitoring of CC-related KPIs linked with the Medium Term Budgetary Framework (MTBF) would be best served by the MoF.

Equally, if not more important, is a working agreement on post-18th Amendment CC mandates across the federation and provinces. There are other issues which need to be taken up and negotiated both at the federal and provincial levels (chapter 7). Who creates incentives for undertaking a difficult reform and who acts on various components of the process? How are the roles between the civil service and the elected legislative organs at the two tiers to be reinvigorated with the objectives of climate action-leading resilience? CC reform will need to remain sensitive to the various responses to these questions as it shapes up for the next steps to realize the objective of using country systems for climate finance.

73 Interviews were held with federal authorities in 2014 as part of the original CPEIR study in Pakistan

6.7 Findings and conclusions

- During the last four years, the share of federal current expenditures (which includes sizeable interest payments on domestic and foreign debt) in total federal expenditures varied in the range of 79–90 percent, indicating the tight fiscal space available to the Federal Government to spend on development activities.
- Pakistan remains a resource-constrained (rupee and foreign exchange) economy dependent on foreign flows in the shape of loans, foreign investment, aid or grants. External resources varied dramatically over the last four years. For example, external resources for development varied between 43 and 92 percent of the annual development budget (2011/12–2014/15) suggesting a precarious base for long-term development programmes/thematic funding.
- Total federal climate-relevant expenditure (development + current budget) was estimated to be between 5.7 and 8.1 percent of total federal expenditure in the four studied years.
- The number of climate-relevant development projects and the proportion of climate-relevant projects within each Government institution varied widely across the studied financial years. For example, the percentage of climate-relevant projects ranged from 97 percent in the Ministry of Communications (2013/14) to a low of 18 percent in the Ministry of Federal Education (2013/14).
- The highest percentage of climate-relevant projects tended to be in the MCC, the Water and Power Division and the Kashmir Affairs and Gilgit-Baltistan Division.
- In terms of absolute expenditure, 60–80 percent of the total climate-relevant actual investment expenditure during the four years is split between two ministries, the MoWP (including WAPDA) and the Cabinet Division (including the AEC).
- Actual climate expenditure is more than 100 percent of budgeted climate-relevant expenditure in 6 of 12 ministries under review. This budget variance between budgeted and actual expenditure is same across the total federal budget, suggesting that climate-relevant projects tend to have similar budget variance.
- In terms of the typology themes of climate response, a majority of the expenditure is related to mitigation (63 percent). Adaptation is the second largest contributor (36 percent) with smaller contributions from supporting activities (1 percent) (all for 2014/15).
- Energy was the dominant climate task in expenditure terms, accounting for 57 percent of the total climate budget. Further significant contributions were from the transport (10 percent, adaptation and mitigation), health and social services (16 percent, adaptation), water resources (11 percent, adaptation) and disaster preparedness (5 percent, adaptation).
- The mitigation response consisted of energy and transport tasks as did 99 percent of expenditure in the joint A/M theme. The adaptation response was formed from a wider range of tasks: health and social services (35 percent of adaptation expenditure), water resources (30 percent), disaster preparedness (19 percent) and transport (14 percent).
- The NCCP and Framework for Implementation are in place, but challenges remain in prioritizing actions and converting them into budgeted agendas and implementation plans.
- Planning and budgeting still remain two disparate domains because the institutional arrangement remains divided in different agencies. This weak linkage becomes further fragmented when it comes to crosscutting issues like CC.
- Mainstreaming CC is somewhat limited and may well remain so until there is a clearer working agreement on post-18th Amendment mandates across the MCC, MoF and MPDR. The same applies to the provinces.

CHAPTER 7 – KHYBER PAKHTUNKHWA: CLIMATE CHANGE BUDGET AND INSTITUTIONAL ASSESSMENT

7.1 Provincial budget overview

KP, like the other three provinces, obtains a major portion of its resources from the Federal Divisible Pool under the paradigm of fiscal federalism followed in Pakistan. A brief overview of provincial finances for the last four years is presented, followed by a more detailed analysis of CC budget and allocations to adaptation and mitigation-related tasks.

The KP budgetary profile is based on the KP Finance Department's publication, the "Annual Budget Statement" for four years and is detailed in table 7.1. Focusing on revised total budgetary expenditures (development and current), the size of the budget increased from PKR 260.1 billion to PKR 397.7 billion at an average annual growth of 15.2 percent.[74] Expenditures witnessed a substantial jump of 21.1 percent in 2011/12, the second year of the 18th Amendment, tapering off in the remaining three years to a range of 14–21 percent. This growth in nominal expenditures is higher than the average national inflation rate of8.1 percent recorded during the same period. Comparing budgeted expenditure with revised expenditure (RE), the latter exceeded the former by PKR 11 billion only in 2011/12, and was lower than the budgeted in three of four years.

Table 7.1: KP – Macro-view of budgeted and revised expenditures, 2011/12–2014/15

Year	Budgeted Expenditures (BE) (PKR millions)	Percentage changes in Budgeted Expenditures	Revised Expenditures (RE) (PKR millions)	Percentage changes in Revised Expenditures
2011/12	249,151	19.6	260,143	21.1
2012/13	303,000	21.6	297,073	14.2
2013/14	344,000	13.5	341,847	15.1
2014/15	404,805	17.7	397,737	16.3

During the last four years, the share of provincial current expenditures out of total provincial expenditures was in the range of 66–70 percent, indicating *greater fiscal space available to the Government of KP relative to the Federal Government to spend on development activities*. However, the AAGR of development expenditures[75] or ADP (as it is popularly labelled in the context of the provinces) was 16.8 percent, in tandem with the corresponding rate of current expenditure increase at 14.4 percent during the last four years. Table 7.2 gives a summary breakdown of the percentage share of revised estimates of federal expenditures under broad expenditure heads.

74 The above totals of budget expenditure is not exactly comparable with totals in ABS as it does not include "Net Current Capital Expenditure (Account-II)" consisting mainly of i) State Trading in Food and ii) Debt Servicing (Floating).

75 Based on revised expenditure (RE)

Table 7.2: KP – Share of main expenditure heads in revised provincial budget

	2011/12	2012/13	2013/14	2014/15
Current Expenditure				
General Public Service	59	60	24	27
Public Order and Safety Affairs	15	14	16	15
Economic Affairs	6	6	7	7
Health	3	4	9	9
Education	5	5	32	33
Social Protection	3	3	4	4
Loan Repayments and Servicing costs	8	7	6	3
Current expenditure as percentage of total expenditure	68	70	69	66
Annual development programme as percentage of total expenditure	32	30	31	34

A majority of the current expenditure falls under the label of "general public service". This is related mainly to salaries and pensions of the provincial bureaucracy.[76] Historically, it moved in the narrow range of 59–60 percent, but decreased 2013/14 onwards when the provincial government, newly elected that year, raised the current expenditure on education.[77] Similarly, the share of current expenditure on health doubled from a range of 3–4 percent during 2011/12 to 9 percent in 2014/15. Loan repayments and servicing costs between 3 and 8 percent are relatively low as compared to the corresponding costs incurred by the Federal Government. A noticeable fall in loan repayments and servicing costs in 2014/15 reflects a throw forward of factors in the previous years. The share of KP in the federal divisible pool of taxes increased after the Seventh NFC award. The outstanding dues on account of profits from hydro power generation were reimbursed partially and the province's own limited capacity to spend reduced the historical need for loans from the Federal Government. Expenditure on other activities remained relatively stable during the four -year period.

7.1.1 The financing of the ADP

It is useful to examine provincial budget financing as nearly 30 percent of it is spent on development or investment activities. In a stylistic sense, the Government of KP allocates its entire share of the federal divisible pool to current expenditure, and finances investments from provincial revenues collected internally. The contribution of various heads in table 7.3 brings this out more clearly.

The share of internal resources in ADP financing ranged from 67 to 84 percent during 2012–2015, although it declined from a high of 84 percent in 2011/12 to 67 percent in 2013/14. Correspondingly, the dependence of investment expenditures on external resources, after doubling from 16 to 33 percent during 2012–2014, decreased to 23 percent in 2014/15, suggesting a move towards more sustainable dependence of external resources in the KP budget. Between 2013/14 and 2014/15, the absolute increase in external resources financed only 3.6 percent of the absolute increase in the KP budget; the absolute increase in external grants constituted 1.7 percent of the absolute increase in the size of the ADP compared to the corresponding percentage of 88.3 between 2012/13 and 2013/14. In terms of

76 In ABS, following are the 5 sub-categories of expenditure under this account; Executive and legislative organs financial and fiscal affairs external affairs, transfers, general services, administration of general services and general public services not elsewhere classified.

77 In absolute amounts the current expenditure under the general public service dropped from PKR 85 billion in 2010/11 to PKR 57.5 billion in 2013/14. In contrast the expenditures in education jumped from PKR 6 billion in 2010/11 to PKR75 billion in 2013/14. Given that between 2012/13 and 2013/14, the total size of current budget increased by only PKR 29 billion, a possible shift of expenditure heads between "General Public Service" and "Education" may have taken place.

Table 7.3: KP – Sources of ADP financing

	2011/12	2012/13	2013/14	2014/15
Percentage of Internal Resources:				
Provincial Contribution	95	94	96	93
Federal Assistance	5	6	4	7
Percentage of External Resources:				
Loans	9	20	16	20
Grants	91	80	84	80
Share of Internal Resources in Total Resources	84	76	67	77*
Share of External Resources in Total Resources	16	24	33	23
***Includes PKR 54.4 billion of Unspent Balances/Savings from past ADP allocations**				

percentages, the share of provincial contribution (94–96 percent) and federal assistance (4–7 percent) in internal resources remained stable. This was unlike at the federal level where external loans constitute a considerable portion of external resources. The grants component in external resources in KP is dominant, thereby keeping the servicing costs manageable. The grants component ranged from 80 to 91 percent during 2012–2015, partly reflecting development partners' recognition of the province's role as a frontline state in the "war on terror", as well as on account of the manmade and natural disasters faced by the province over the last decade.

KP's revenue sources are presented in table 7.4. Resource transfers from the Federal Government under the NFC Award increased from PKR 188.6 billion in 2011/12 to PKR 260.0 billion in 2014/15. The province's dependence on federal transfers ranged from 79 to 85 percent of its total revenue receipts, an increasing trend in the last four years.

The provincial capacity to generate internal resources shows a fluctuating trend. After rising to PKR 59.7 billion in 2013/14, it has fallen to PKR 47.2 billion in 2014/15. The increase in tax revenue could not offset the steep decline in non-tax revenues during 2014/15. The growth in provincial tax revenue was almost flat in first three years, with a 57 percent increase only in 2014/15. Provincial non-tax revenues decreased at an annual average rate of -10.12.7 percent in the first four years, but declined by 42 percent in 2014/15. The share of provincial revenues has followed a declining trend since 2011/12. In essence, the poor and uncertain law and order and security environment has taken its toll on the province's economic activity and shrunk the tax base.

The geophysical location of KP near three mountain ranges make it particularly vulnerable to gradual rising temperatures; this creates the need for fiscal space for an effective climate response. If the provincial government's current expenditures continue to move in step with federal transfers, as in the business as usual scenario, only a radical departure backed by political will (as demonstrated by shifting resources to education and health in 2013/14) will create fiscal space to boost human capacity and allied infrastructure to face CC in a sustained manner.

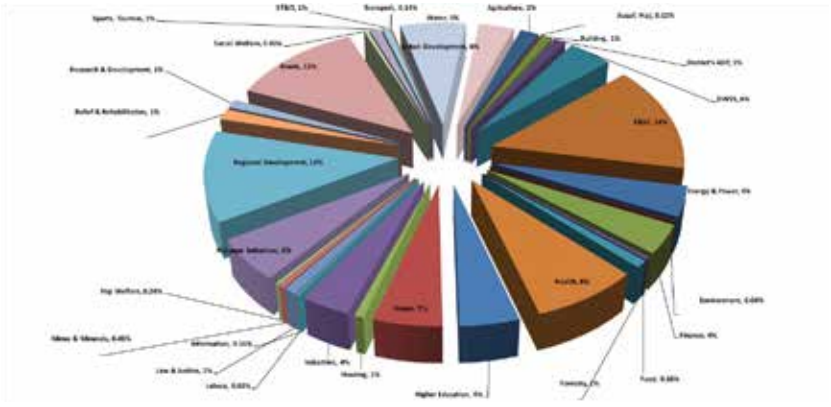
If, as in the past, development expenditures continue to be financed out of provinces' internally-generated resources, climate-related investments can only continue to grow at a respectable rate, if the provincial revenue base, continues to expand. A fluctuating revenue base will not only impact the implementation of climate-related investments but may also introduce uncertainty in overall planning and disbursement of ADP funds. Resorting to external financing, whether foreign loans or Federal Government loans, runs the risk of creating debt for future generations.

Table 7.4: KP – Federal transfers and provincial revenues (PKR millions)				
	2011/12	**2012/13**	**2013/14**	**2014/15**
A. Federal Transfers	188,581	199,782	235,048	260,170
Tax Revenue	172,621	181,281	207,318	237,310
Non-Tax Revenue	15,960	18,501	27,730	22,860
B. Provincial Revenues	50,395	46,144	59,674	47,205
Tax Revenue	12,572	8,165	12,638	19,832
Non-Tax Revenue	37,823	37,979	47,036	27,373
Total Revenue Receipts	238,976	245,926	294,721	307,375
Percentage of Federal Transfers:				
Tax Revenue	92	91	88	91
Non-Tax Revenue	8	9	12	9
Percentage of Provincial Revenues:				
Tax Revenue	25	18	21	42
Non-Tax Revenue	75	82	79	58
Federal transfers as percentage of total revenue receipts	79	81	80	85
Provincial Revenues as a percentage of total revenue receipts	21	19	20	15

7.1.2 ADP sector allocation

The current Government in KP came with an agenda for reform. Its politics of change needed to be delivered as reform: specifically, better management, transparency, local government, education and health. Notably, the Government has also designated a high-level champion for steering provincial Green Growth Strategy and plans that include attention to CC response. The ADP covers a diverse range of sectors (Figure 7.1).

Figure 7.1: KP – Overall ADP sector allocation for 2014/15



7.2 Climate programmes and budgets

The methodology and steps involved in selecting climate-related programmes and projects in the development budget of KP is similar to the one adopted by the Federal Government. However, unlike the multiple sources of data used for federal analysis, the source for the KP budget and revised estimates and actual expenditure data is the CGA. Table 7.5 gives a department-wise summary of percentage of climate-related projects out of total projects financed by the Government of KP in each of the four years.

The main observations from the summary are:

- Overall, the percentage of climate-related projects in total projects ranged from 75.4 to 82.6 percent during the four years. It is *comparable to the percentage at the Federal level, which ranged from 47.8 to 63 percent*. In many of the 19 departments under review, the percentage of climate-related projects exceeds 50 percent of total projects and remained consistently high across the four years.
- The following departments consistently show climate-related projects of less than 50 percent of the total: Minority Affairs; Pⅅ Sports, Culture and Youth Affairs; and Science, Technology and Information.
- The variability in percentage of climate projects across ministries and years is relatively less than that observed at the federal level.

Table 7.5: KP – Climate-relevant projects

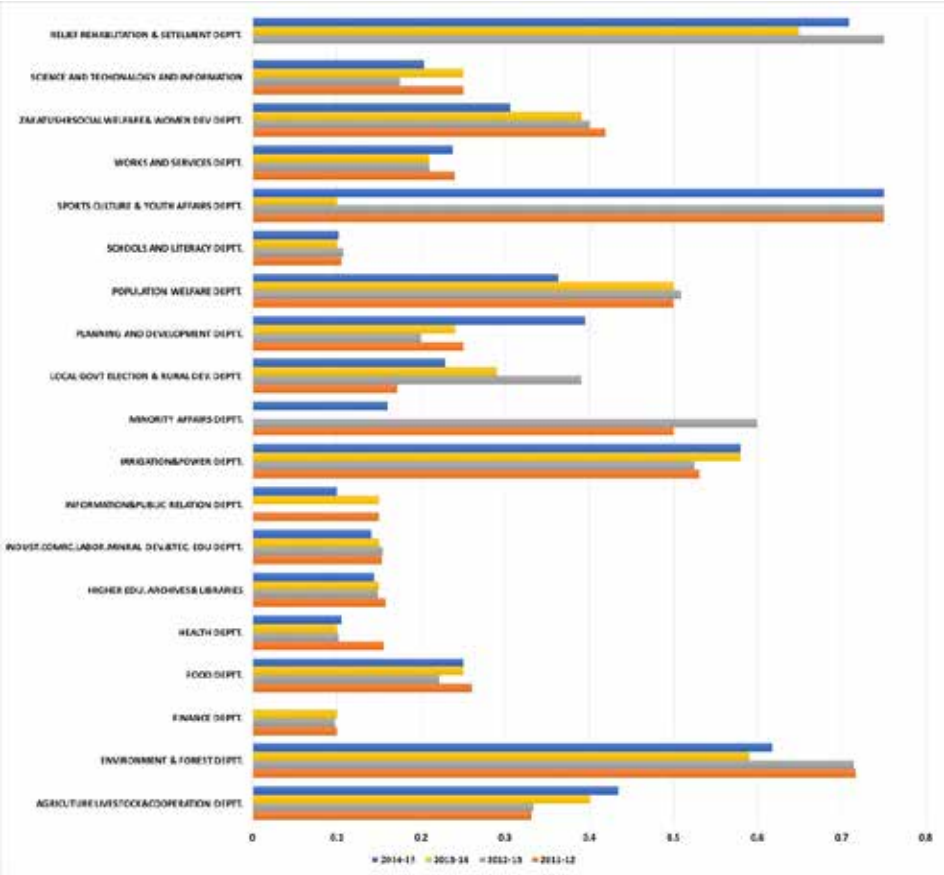
#	KPK Ministries/Divisions	2011/12			2012/13			2013/14			2014/15		
		Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%
1	AGRICUTURE LIVESTOCK & COOPERATION DEPT	232	230	99.1%	141	127	90.1%	132	130	98.5%	330	329	100%
2	ENVIRONMENT AND FOREST DEPARTMENT	53	53	100.0%	55	49	89.1%	45	40	88.9%	119	114	96%
3	FINANCE DEPARTMENT	50	49	98.0%	51	51	100.0%	39	13	33.3%	100	0	0
4	- FOOD DEPARTMENT	9	9	100.0%	9	9	100.0%	9	9	100.0%	39	39	100%
5	- HEALTH DEPARTMENT	196	195	99.5%	171	167	97.7%	167	161	96.4%	272	270	99%
6	- HIGHER EDUCATION ARCHIVES AND LIBRARIES	140	137	97.9%	99	94	94.9%	92	86	93.5%	201	192	96%
7	- INDUSTCOMRCLABRMINRAL DEV.&TEC. EDU D	50	31	62.0%	47	26	55.3%	44	28	63.6%	135	63	47%
8	INFORMATION AND PUBLIC RELATION DEPT.	14	1	7.1%	Nil	Nil	0.0%	4	2	50.0%	6	1	17%
9	IRRIGATION AND POWER DEPARTMENT	65	62	95.4%	64	61	95.3%	59	55	93.2%	293	282	96%
10	LOCAL GOVT ELECTION & RURAL DEV. DEPTT	105	43	41.0%	77	33	42.9%	76	11	14.5%	385	213	55%
11	MINORITY AFFAIRS DEPTT.	20	10	50.0%	18	5	27.8%	Nil	Nil	0.0%	54	9	17%
12	PLANNING AND DEVELOPMENT DEPTT.	8	1	12.5%	21	10	47.6%	29	13	44.8%	74	30	41%
13	POPULATION WELFARE DEPARTMENT	51	48	94.1%	54	53	98.1%	30	29	96.7%	47	47	100%
14	SCHOOLS AND LITERACY DEPARTMENT	224	212	94.6%	285	277	97.2%	253	241	95.3%	820	804	98%
15	SPORTSCULTURE & YOUTH AFFAIRS DEPTT.	43	1	2.3%	41	1	2.4%	43	1	2.3%	99	1	1%
16	WORKS AND SERVICES DEPARTMENT	268	193	72.0%	250	167	66.8%	231	134	58.0%	833	540	65%
17	ZAKATUSHRSOCIAL WELFARE & WOMEN DEV DEP	47	31	66.0%	49	25	51.0%	52	35	67.3%		65	86
18	SCIENCE AND TECHONALOGY AND INFORMATION	7	1	14.3%	9	2	22.2%	9	1	11.1%	40	15	38%
19	RELIEF REHABLITATION & SETELMENT DEPART	Nil	Nil	0.0%	1	1	100.0%	5	5	100.0%	24	24	100%
	TOTAL	1582	1307	82.6	1442	1158	80.3	1319	994	75.4	3957	3038	76.8

One tentative explanation of the aforementioned trends is that the number of departments at the KP level remained consistent in spite of the 18th Amendment. Most likely, the functions of the devolved ministries at the federal level were merged into existing provincial departments. In addition, the large number of projects in some ministries (Agriculture, Livestock and Cooperation, Health, Higher Education, Irrigation and Power, Schools and Literacy and Works and Services) represents similar projects under an identical scheme executed at the district, sub-district (*tehsil*) and union council level in the province.

Figure 7.2 shows the average climate relevance of each department for the four years. The average is the sum of climate relevance weight assigned to the investment of each climate-relevant project divided by the number of projects/programmes in each ministry. As a summary measure, it also profiles the departments that undertake projects with strong, significant and weak climate dimensions, and how that strength has varied over the four-year period. Except for a few departments, the average relevance weight is fairly similar across the period. Mean relevance weight varies relatively more in Minority Affairs, Local Government Elections and Rural Development, P&DD, Sports, Culture and Youth Affairs, Finance and Relief and Rehabilitation Department. Fluctuations in the mean relevance weight may occur due to the occasional execution of odd projects or the uneven nature of projects, especially in departments in which the CC-relevant programmes are few and the total CC expenditure is meagre.

Projects in the Environment and Forestry Department, Irrigation and Power, Minority Affairs, Population Welfare and Relief and Rehabilitation Department, score highly in climate relevance. The investments by Agriculture, Food, P&DD, Works and Services, *Zakat* and *Ushr* and Science and Technology Departments are considered to be of medium relevance. The projects in the remaining eight departments have low climate relevance.

Figure 7.2: KP – Climate relevance in relation to institutions



Figures 7.3 and 7.4 represent the climate-related development expenditures of departments using two indicators. The first is the percentage share of climate-related actual development expenditure of each department, out of the overall climate-related actual development expenditure for all departments. The second indicator is the percentage of climate-related development expenditure of each department with respect to each department's total BEs. This latter percentage will be applied to actual current expenditure of each department to obtain an estimate of climate-relevant actual current expenditure.

The highlights of the two indicators are:

- In three of four years, 55–60 percent of total climate-related investments are undertaken by two departments, namely Irrigation and Power and the Works and Services Department.
- In 2012/13, 60 percent of total climate-related investments were shared by four departments, namely Food, Health, Irrigation and Power and Relief, Rehabilitation and Settlement.
- Except for 2012/13, the percentage share of individual departments in total climate-related investment was stable for three years.
- In relation to the total budget of individual departments, the share of climate-related expenditure was greater than 50 percent for the Irrigation and Power Department (three out of four years), Environment and Forestry (three out of four years), and the Population Welfare Department (in two of four years).

Figure 7.3: KP – CC-weighted actual expenditure as a percentage of total sum CC-weighted actual expenditure

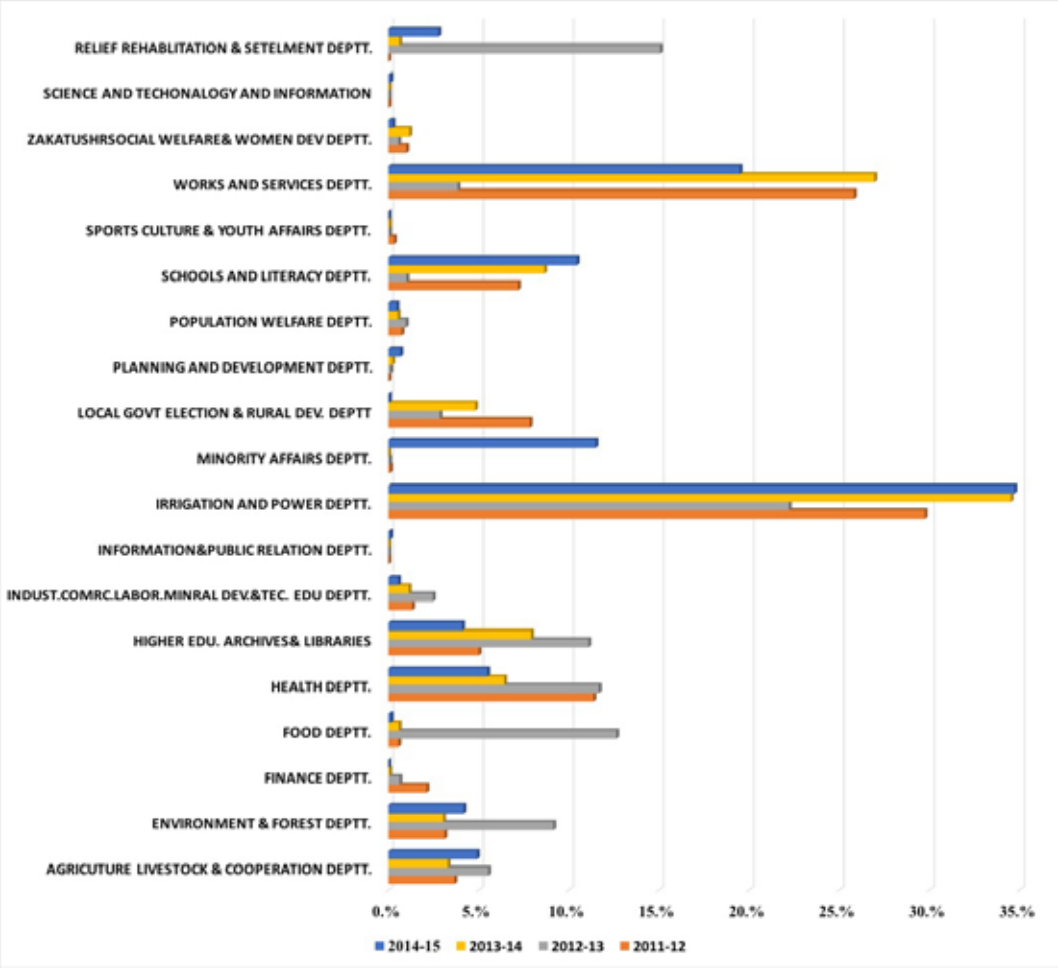
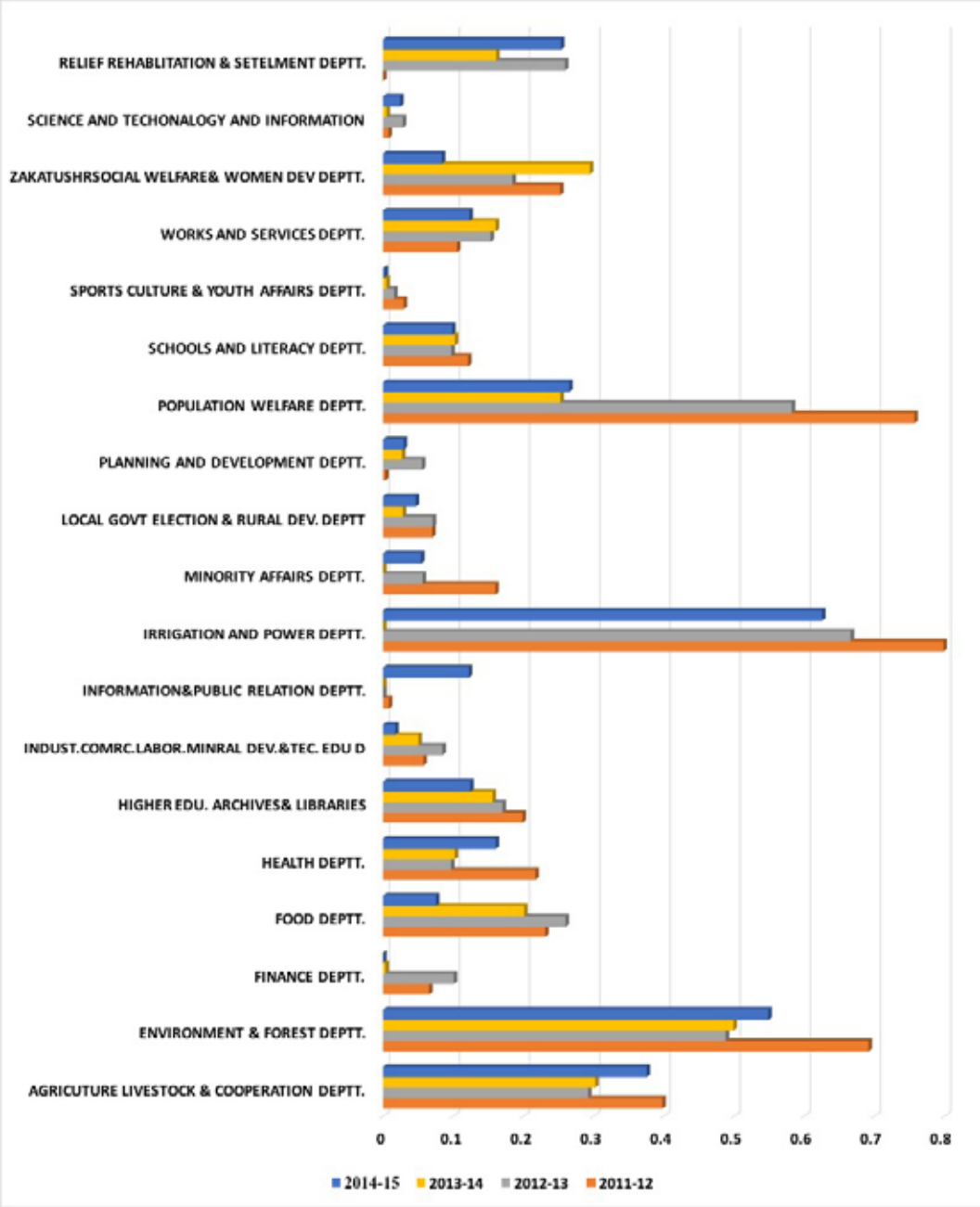


Figure 7.4: KP – CC-weighted actual expenditure as a percentage of department's total budgeted expenditure



7.3 Climate-relevant expenditure in development and current budget

Based on the aforementioned profile of the number of climate-related projects and their associated investments, a summary trend analysis of climate-relevant expenditure in the current and development budget is presented in table 7.6. Similar to the analysis of the federal response to CC, aggregate investment (development) and current expenditures on projects with a climate dimension in each of the four years is profiled in absolute terms as well as in three key ratios. The three indicators are a) climate-relevant investment expenditure as a ratio of development budget (BEs), b) climate-relevant current expenditure as a ratio of total current expenditure budget, and c) climate-relevant total (development + current) expenditure as a percentage of total provincial budget (development + current).

Investment in projects that have CC spinoffs increased with a fluctuating trend from PKR 12.1 billion in 2011/12 to PKR 18.7 billion in 2014/15 at an average annual rate of 15.5 percent, as compared to the corresponding increase of 16.8 percent in the total development budget.

The ratio of CC-relevant development expenditures to total development varies from a high of 14.4 percent in 2011/12 to a low of 10.2 percent in 2013/14. Across the four years, this ratio is far more stable for KP as compared to the corresponding ratio for federal CC investments.

Derived climate-relevant current expenditures increased steadily from PKR 6.7 billion in 2011/12 to PKR 19.9 billion in 2014/15, an average annual increase of 43.6 percent, outstripping the average annual growth of 14.4 percent in the current budget. The ratio of climate-relevant current expenditure to total current budget trended higher from 3.8 percent in 2011/12 to 7.6 percent in 2014/15, except a slight dip to 3.0 percent in 2012/13. Three out of four years, ratios and levels of current expenditure reflect the three-year profile of climate-relevant development expenditures.

The aggregate (investment + current) climate-related budget shows an increasing trend from PKR 18.8 billion in 2011/12 to PKR 38.6 billion in 2014/15, an increase of nearly 105 percent over the four-year period. Climate-related expenditures are between 5.25 and 9.7 percent as a percentage of total provincial budget.

Table 7.6: KP – Four-year summary analysis

Development Expenditures (PKR millions)	2011/12	2012/13	2013/14	2014/15
CC weighted Actual Development Expenditure (a)	12138.40	9367.34	10715.78	18726.54
Revised Annual Development Programme (ADP) (b)	84474.00	88131.00	104847.00	134738.00
Ratio- (a)/(b)	**0.1437**	**0.1063**	**0.1022**	**0.1390**
Current Expenditure (PKR millions)				
CC Weighted Actual Current Expenditure- c	6714.13	6242.12	13708.90	19873.10
Revised Budgetary Current Expenditure- d	175669.00	208942.00	237000.00	263000.00
Ratio- c/d	**0.0382**	**0.0299**	**0.0578**	**0.0756**
Total Expenditures (PKR millions)				
CC weighted Actual Development Expenditure	12138.40	9367.34	10715.78	18726.54
CC Weighted Current Actual Expenditure	6714.13	6242.12	13708.90	19873.10
Total CC Weighted Actual Expenditures- (e)	**18852.53**	**15609.46**	**24424.68**	**38599.64**
Revised Annual Development Programme (ADP)	84474.00	88131.00	104847.00	134738.00
Revise Budgetary Current Expenditure	175669.00	208942.00	237000.00	263000.00
Total Revise Budgetary Expenditure- (f)	**260143.00**	**297073.00**	**341847.00**	**397738.00**
Ratio- (e)/(f)	**7.25%**	**5.25%**	**7.14%**	**9.70%**

7.3.1 Department-wise climate-relevant expenditures

Table 7.7 presents department-wise breakdown of CC-related total actual expenditures in absolute values and as a share of the total. Out of total of 19 departments, the share of CC expenditures of only four departments namely health, education, irrigation and power and works and services are in double digits; together they account for 70 percent of total CC expenditures. The shares of remaining 15 departments are in single digits and range from 0 to 6.4 percent. At the province level, a major share of current expenditures (in form of salaries) is devoted to basic health and primary and secondary education. Thus in spite of low CC relevance (between 10-15 percent, see Fig 7.2 above) of development projects in these two sectors, the CC relevance of current expenditures outweighs their CC importance on the development front.

Table 7.7: KP – Department-wise CC-related total actual expenditure in 2014/15

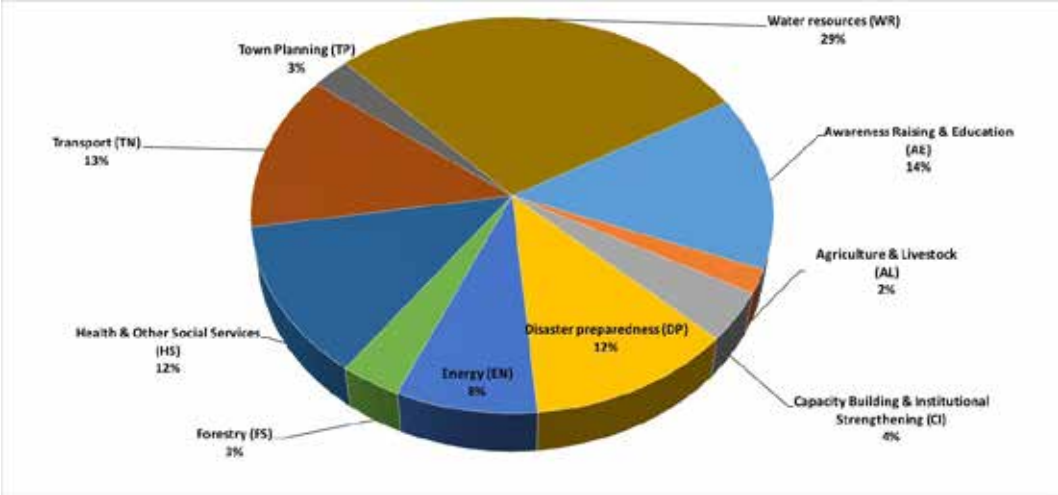
Min/Divisions	CC Total Actual Expenditures 2014/15	Sector-wise Share
N02 - AGRICUTURE LIVESTOCK & COOPERATION DEPT	2418.75	6.27%
N03 - ENVIRONMENT AND FOREST DEPARTMENT	1773.21	4.59%
N06 - FINANCE DEPARTMENT	0.00	0.00%
N07 - FOOD DEPARTMENT	1343.60	3.48%
N08 - HEALTH DEPARTMENT	5087.81	13.18%
N09 - HIGHER EDUCATION ARCHIVES AND LIBRARIES	1414.00	3.66%
N11 - INDUSTCOMRCLABRMINRAL DEV.&TEC. EDU D	152.70	0.40%
N12 - INFORMATION AND PUBLIC RELATION DEPT.	38.95	0.10%
N13 - IRRIGATION AND POWER DEPARTMENT	8640.63	22.39%
N15 - LOCAL GOVT ELECTION & RURAL DEV. DEPTT	2473.30	6.41%
N16 - MINORITY AFFAIRS DEPTT.	10.16	0.03%
N17 - PLANNING AND DEVELOPMENT DEPTT.	132.98	0.34%
N18 - POPULATION WELFARE DEPARTMENT	345.28	0.89%
N21 - SCHOOLS AND LITERACY DEPARTMENT	8758.75	22.69%
N22 - SPORTSCULTURE & YOUTH AFFAIRS DEPTT.	3.83	0.01%
N23 - WORKS AND SERVICES DEPARTMENT	4624.02	11.98%
N24 - ZAKATUSHRSOCIAL WELFARE& WOMEN DEV DEP	100.72	0.26%
N25 - SCIENCE AND TECHONALOGY AND INFORMATION	25.46	0.07%
RELIEF REHABLITATION & SETELMENT DEPART	1255.48	3.25%
Total	**38599.64**	100.00%

7.4 Climate expenditures by theme and task

As outlined in chapter 5, a typology of themes and tasks for CC response activities was developed based on the National Climate Change Policy (NCCP). Each of the ADP development project budget lines with a CC-relevant component were coded to one task type within the typology for 2014/15. This information, in addition to the proportional expenditure of the budget line on the climate-related component, permitted an identification of overall expenditures to each activity type of the typology. This analysis was carried out for KP development expenditures for 2014/15.

The allocation of expenditures to climate-related tasks was broad for the overall ADP of 2014/15 , with water resources (29 percent of climate components of the ADP), awareness-raising and education (14 percent), transport (13 percent), health and social services (12 percent) and disaster preparedness (12 percent) accounting for 80 percent of the climate-relevant investment. There were smaller allocations to a variety of other climate tasks such as energy, forestry, agriculture, town planning and capacity building & institutional strengthening.

Figure 7.5 KP – Complete allocations of 2014/15 development budget expenditure to climate-relevant tasks



The typology also codes the development expenditures under themes: **mitigation, adaptation**, and **supporting** activities which are enablers of the CC response. The 2014/15 climate expenditures by theme were distributed across all three themes (Figure 7.6). Adaptation contributed the most to the climate budget (68 percent) and was followed by supporting activities at 18 percent, suggesting that nearly two-thirds of climate activities in KP had an adaptation component, which is consistent with NCCP which places greater emphasis on adaptation response.

The theme with the lowest allocation was mitigation (14 percent), which was contributed mostly by the energy task (Figure 7.5, 7 percent allocation). The low focus on energy and mitigation is apparent in the differences between the federal and KP theme allocations, as mitigation is the smallest theme with 14 percent in KP. The corresponding figure for the federal budget was 57 percent.

The analysis permitted a detailed breakdown of tasks associated with each of the themes outlined above. Adaptation, the dominant theme in terms of expenditure, was formed mainly from tasks in water resources (42 percent), disaster preparedness (17 percent), health and social services (18 percent) and transport (18 percent). Forestry, vulnerable ecosystems and biodiversity tasks contributed <4 percent each (Figure 7.7a). The theme with the smallest budgetary allocation i.e. mitigation, was related mainly to energy and town planning tasks, with carbon sequestration contributing small amounts as well (Figure 7.7b). After adaptation, the supporting theme was the second-largest, and in this case, contributed predominately by awareness raising & education (Figure 7.7c), though with a small contribution from capacity building and institutional strengthening.

Figure 7.6: KP – Allocation of expenditure to climate-relevant themes in the ADP, 2014/15

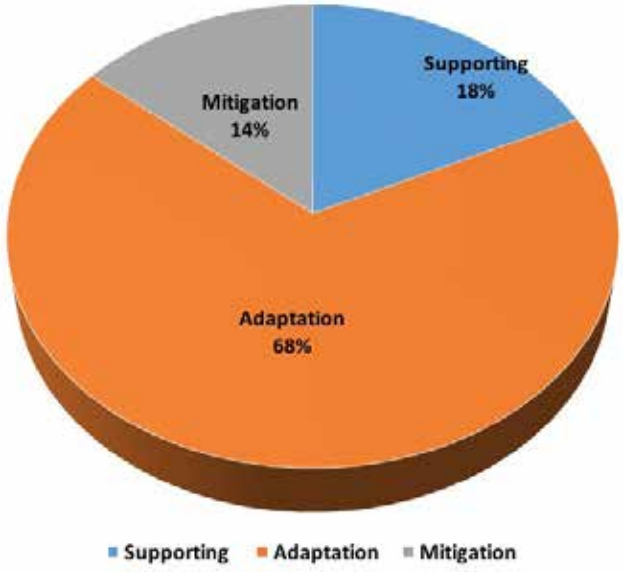


Figure 7.7a: KP – Allocation of climate-relevant expenditure in 2014/15 development budget (adaptation theme)

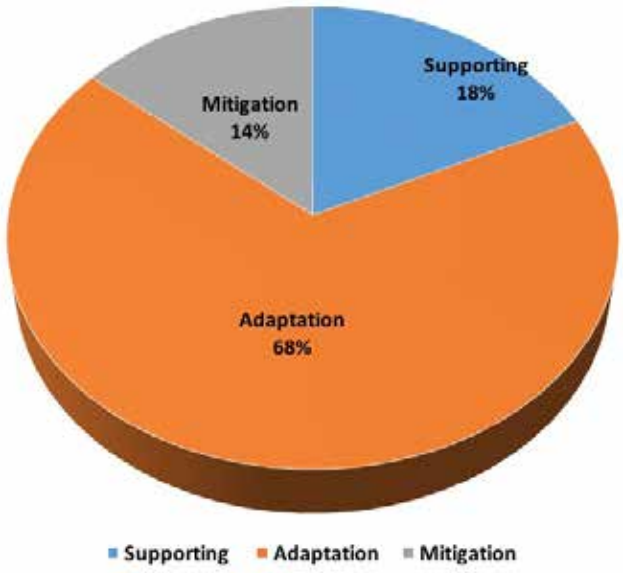


Figure 7.7b: KP – Allocation of climate-relevant expenditure in 2014/15 development budget (mitigation theme)

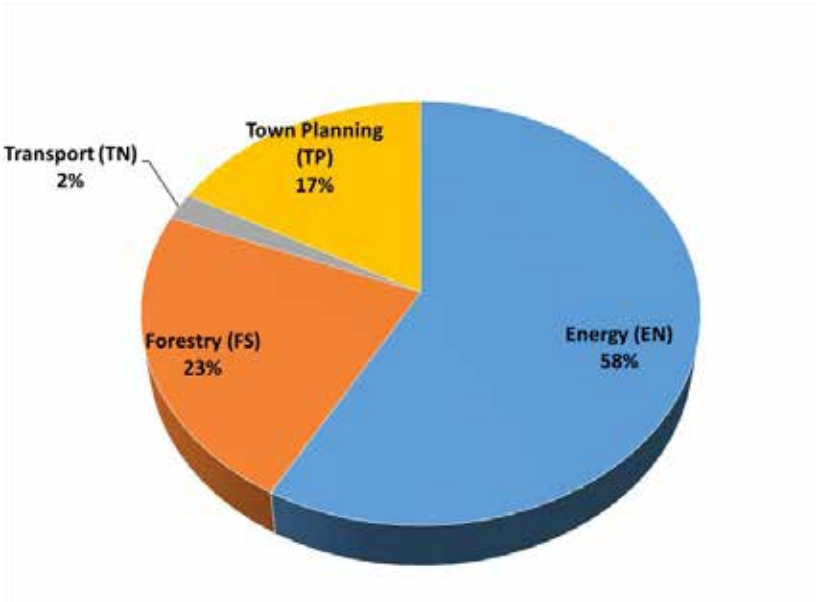
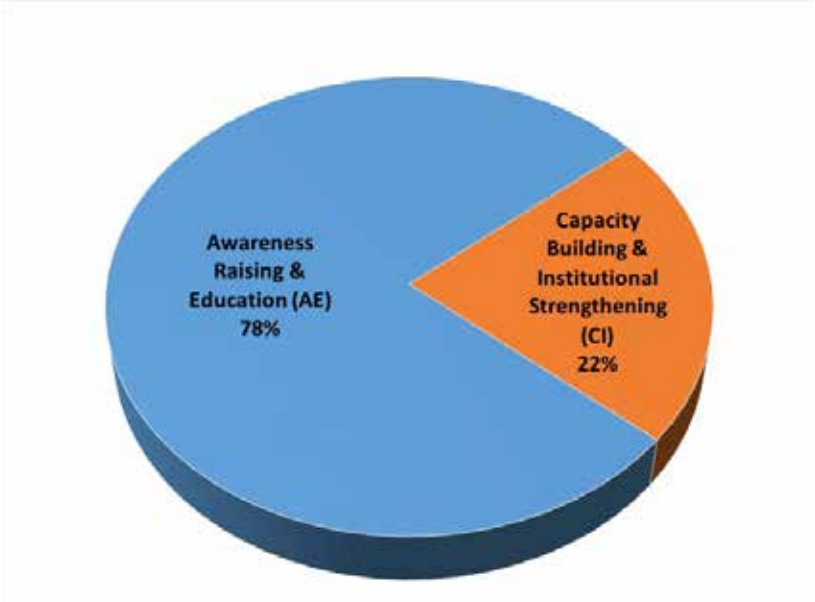
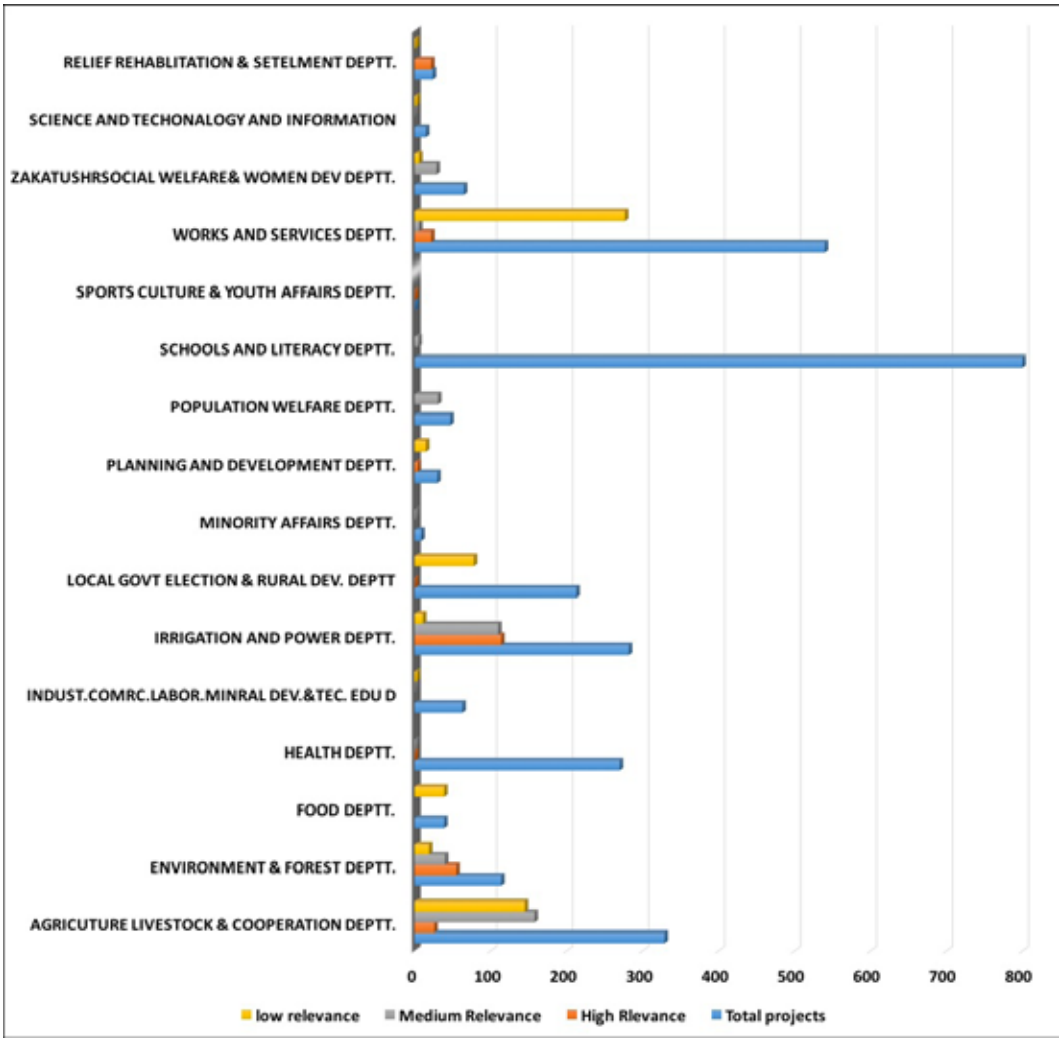


Figure 7.7c: KP – Allocation of climate-relevant expenditure in 2014/15 development budget (supporting areas theme)



When viewed from a CC-weighted lens, nine departments have at least one project weighted at 0.75 or more (Figure 7.8). These included the Irrigation and Power; Environment and Forest; Agriculture, Livestock and Cooperatives; Relief, Rehabilitation and Settlement; Works and Services; Planning and Development; Local Government and Rural Development; Sports, Culture and Youth Affairs and Health Departments.

Figure 7.8: KP – Distribution of climate-relevant investment expenditures in relevant institutions



7.5 KP provincial institutional assessment

7.5.1 Policy instruments and mechanisms

The main *policy measures* introduced in recent years by the Government of KP in response to the climate challenge include:

- Promulgation of the Provincial Environmental Protection Act, 2014, which covers climate change.
- Preparation of a draft Provincial Climate Change Policy – the first to be produced by any province in Pakistan. The draft policy, currently under review, follows from the National Climate Change Policy (NCCP) of Pakistan and provides a broad framework for crafting further provincial climate change strategies and action plan.
- Launch of a Green Growth Initiative (GGI) for KP in 2014, a pioneering government-led programme. Pursuing 5-year environmental targets across six sectors (of which four sectors are prioritized for the pilot phase – Forestry, Protected Area/National Parks, Clean Energy, Climate Resilience),

implementation of the KP GGI is underway with flagship projects that are allocated sizeable government funds in the ADPs for 2014/15 and 2015/16.

While the Provincial CC Policy and the GGI remain discrete policy programmes, given the overlap in their objectives and activities a stated ambition of the draft CC Policy is to "mainstream climate change in long term development planning as a vehicle for the implementation of the provincial Green Growth Strategy." A mechanism for enabling such an integrated approach between the programmes is still to be proposed however. At present, the GGI process is steered by an Inter-Ministerial Committee chaired by the Chief Minister of KP; a similar Provincial Implementation Committee is proposed for the CC Policy.

In terms of the *institutional arrangements* in place for steering and delivering CC response in the province, the Government of KP has instituted a Climate Change Cell within the Environment Protection Agency (EPA), an attached entity of the KP Forestry, Environment, and Wildlife Department. Following promulgation of the Provincial Environmental Protection Act, 2014, climate change policy and planning in KP falls under purview of the Climate Change Cell, which has been made fully functional through funding from the provincial ADP. The organizational structure of the Cell comprises of two deputy directors, one each for Climate Change and Multilateral Environmental Agreements (MEAs) and one Assistant Director to deal with Geographic Information System (GIS). The Cell has been involved in the formulation of KP's Climate Change Policy and development of the Provincial MEA and Action Plan.

In addition to the Climate Change Cell, the Planning and Finance Departments are central to CC policy implementation and mainstreaming in KP, given their role in approving and financing the provincial ADP. Similarly, line departments and sectoral stakeholders have a key role in delivering CC targets and activities across relevant sectors. Under the Provincial Environmental Protection Act, the Climate Change Cell is mandated to coordinate with all concerned government agencies and departments regarding mainstreaming of CC considerations into respective policies, strategies and actions.

Generally, the Government of KP's main *coordination measure* for development planning and implementation includes an Integrated Development Strategy (IDS) for KP (2014–2018) which serves as an overarching strategic platform for integrating and coordinating government priorities. While the IDS is not specifically designed for CC planning, it integrates relevant cross-sectoral government priorities under one framework, including incorporation of the targets and activities currently identified for the KP GGI.

Furthermore, the IDS provides a road map for achieving targets agreed in the Strategic Development Partnership Framework which is designed to align external and internal financing and development partners. This forms the basis for the government's provincial budget allocation and is therefore relevant to climate-related public investment and expenditure. The Government of KP has initiated actions to align department-level budgets with the Strategic Development Partnership Framework and the Integrated Development Strategy.

7.5.2 Coordinating and Mainstreaming Climate Change in KP

There has been growing policy attention to climate change issues in KP, as evidenced by the development of a provincial Climate Change Policy, establishing of the Climate Change Cell, and launching of the KP Green Growth Initiative. The lynchpin for a crosscutting issue like CC, quite often, is effective coordination and engagement across a wide range of development issues and sectors. Feedback gathered from provincial stakeholders[78] indicated, however, that CC is still viewed as a "priority just on paper", with very limited awareness and understanding of the issue among sectoral decision-makers and the general population. Other considerations such as poverty reduction, security concerns, and socioeconomic challenges are reportedly deemed more pressing priorities by decision-makers, as a result of which CC response has failed to gain traction as a central policy concern. While government officials acknowledged that CC-relevant projects are being implemented in the province, this was thought largely coincidental rather than planned. The general view was that dedicated public resources for carefully considered and well thought-out CC response measures are lacking, likely due to competing funding priorities such as addressing the shortage of primary schools for girls and other urgencies on the government's immediate horizon.

Even the Green Growth Initiative, which has made reasonable headway in terms of integrating with a key government planning activity (i.e. the Integrated Development Strategy, IDS) and securing funding from the ADP for implementation, was not explicitly highlighted as a CC investment by the subset of

78 National and provincial consultations with stakeholders were conducted in 2014 as part of the initial CPEIR exercise in Pakistan

officials interviewed, although it was clear that some of the initiatives they referenced, including the tree plantation scheme announced by the government, were part of the GGI.

The decision by the Government of KP for planning and investments in any subject, including CC, has to take into account the complex institutional landscape. KP, like other provinces in Pakistan, has a web of departments with 19 currently involved in climate-relevant public expenditures. The relatively high concentration of departments operating in the provincial CC space poses a significant coordination challenge, compounded by the fact that departmental expenditure on CC-related activities are not necessarily reflective of sectoral policy interests and plans. Departments of Education and Population Welfare, for instance, have no policy priority related to CC, yet they come up as high-grossing sectors in terms of CC-related expenditure.

In such a situation, the task of prioritizing, coordinating and indeed, institutionalizing CC, is cut out for the Climate Change Cell and the Provincial Government. While the CC Cell under the EPA is assigned a coordination role generally, additional mechanisms and targeted approaches are required to ensure effective coordination and integration across the wide-ranging sectors and departments involved in climate-relevant planning and expenditure. Measures proposed by the government to this effect so far include establishing a Provincial CC Policy Implementation Committee (as submitted in the draft CC policy) and a Climate Dashboard to track high and medium relevance CC projects within the ADP. It is also important to have strong leadership within government to drive the goals of CC mainstreaming and implementation, as has been observed with the GGI programme that is driven by a dedicated champion allied with the current government.

With regards to climate budgeting, there is a need to link multi-sectoral planning and budgeting with CC policy needs, thus making way for clearer tracking of CC-related budgetary and development implementation investments. This has been demonstrated to an extent by the integration of GGI targets in relevant sectoral plans featured in the KP IDS, and can be further built upon for CC mainstreaming and coordination purposes. Furthermore, an important role clarification must take place between the Finance Department, the EPA and the P&DD. In discussions with stakeholders it appeared that at the provincial level, environment and CC are viewed as the sole prerogative of the Environment Department and its attached institutions. This may serve well for coordination, but not for mainstreaming, which will require the Finance Department and P&DD to have clearly articulated roles. The Climate Change Cell can coordinate on policy and technical backstopping while the P&DD can streamline integration into development strategies and monitor related KPIs. The Finance Department can play a core role in earmarked climate budgeting within sectors and budget tracking.

Equally if not more important, is a working agreement on post-18th Amendment mandates across the federation and provincial departments for CC. There are other issues which need to be taken up and negotiated both at the federal and provincial level. Who creates incentives for undertaking difficult reforms and who acts on various components of the process? How are the roles between the civil service and the elected legislative organs at the two tiers to be reinvigorated with the objectives of climate action? CC reform will need to remain sensitive to the various responses to these questions as it shapes up for the next steps to realize the objective of using country systems for climate finance.

7.6 Summary of main findings

- Total climate-relevant spending from KP's budget increased almost 105 percent over the last four years (from 2011 to 2015, PKR 18.8 billion to PKR 38.6 billion). A major jump in climate-related spending occurred in 2014/15, mainly because of large increase in overall development budget during the year.
- Climate-related expenditures represent between 5.2 and 9.7 percent of the total provincial budget, and between 10 and 14 percent of the provincial development budget. However, annual increase in climate-related development spending was slightly lower than increases to the overall development budget (15.5 percent compared to 16.8 percent) over the studied years.
- The provincial ADP covers development projects in a wide range of sectors. Climate-relevant projects make up 75–82 percent of development expenditure lines (compared to 47–63 percent at the federal level), with over half of the projects in many governments departments being climate-related. This suggests that CC-relevant investments are common and widely spread across the government's portfolio

- The ADP climate expenditure across studied years is relatively stable in terms of average climate relevance of each department and the proportion of climate-related investment per department. In relation to the total budget of individual departments, the share of climate-relevant expenditure was greater than 50 percent for the Irrigation and Power Department (three out of four years), Environment and Forestry (three out of four years), and the Population Welfare Department (in two out of four years).
- The allocation of expenditures to climate-relevant tasks was broad for the overall ADP of 2014/15 , with water resources (29 percent of climate components of the ADP), awareness raising & education (14 percent), transport (13 percent), health & social services (12 percent) and disaster preparedness (12 percent) accounting for 80 percent of the climate-relevant investment .
- Adaptation has been the main theme in KP's climate-relevant budget, accounting for 68 percent of related expenditures in 2014/15. Adaptation-related expenditures in KP's budget were formed mainly by tasks in water resources (42 percent), disaster preparedness (17 percent), health and social services (18 percent) and transport (18 percent). Forestry, vulnerable ecosystems and biodiversity tasks all contributed less than 4 percent each.
- Mitigation-related expenditures, which were dominated by energy tasks, accounted for just 14 percent of the climate budget (2014/15), whereas supporting activities that predominantly included awareness raising and education tasks, accounted for 18 percent of climate-relevant expenditure. The low focus on energy and mitigation highlights differences between the federal and KP theme allocations, as corresponding figure for the mitigation theme in the federal budget was 57 percent.
- Impetus for a provincial CC policy (currently in draft form) is provided under the Provincial Environmental Protection Act, 2014, with the institutional remit for climate change designated to the Climate Change Cell within the EPA. The Climate Change Cell is mandated with interacting with all other government agencies and departments to mainstream CC considerations into their respective policies, strategies and actions.
- The KP IDS for integrating and coordinating government priorities and the KP GGI seeking to link climate to the EIA process and PC-I development proposals, both promote increased opportunities for climate mainstreaming. The overarching policy and integration of climate into planning has the potential to increase the climate sensitivity of the KP ADP. The wide dispersion of climate-relevant funding, presently across 19 KP government bodies, coupled with competing public funding priorities means that proper oversight and coordination is required to push forwards a trend of climate-sensitive budgeting. Institutionally, such a nexus exists at the provincial level, as the Climate Change Cell can harmonize climate-related policy and provide technical backstopping. Additional mechanisms and targeted approaches are required to ensure effective coordination and integration across the wide-ranging sectors and departments involved in climate-relevant planning and expenditure. Measures proposed by the government to this effect so far include establishing a Provincial CC Policy Implementation Committee (as submitted in the draft CC policy) and a Climate Dashboard to track high and medium relevance CC projects within the ADP.

CHAPTER 8 – BALOCHISTAN: CLIMATE CHANGE BUDGET AND INSTITUTIONAL ASSESSMENT

8.1 Provincial budget overview

In terms of area, Balochistan is the largest province of Pakistan, constituting 45 percent of the total area, but the least populous of the four provinces, accounting for only 5.7 percent of the country's population. Despite possessing sizeable gas, coal and mineral resources and a coastline of 771 km, Balochistan remains relatively underdeveloped compared to the other three provinces and AJK. Consequently, its tax base is very small and the province receives a major portion of its resources from the divisible pool of federal revenues under the paradigm of fiscal federalism followed in Pakistan. A brief overview of provincial finances for the last four years is presented, followed by a more detailed climate change budget analysis and allocations to mitigation and adaptation-related activities.

The Balochistan budgetary profile is based on the Balochistan Finance Department's publication, the "Annual Budget Statement" for four years – 2011/12 to 2014/15 – and is detailed in table 8.1. Focusing on revised total budgetary expenditures (development and current), the size of the budget increased from PKR 127.7 billion to PKR 199.6 billion at an average annual growth rate of 16.1 percent.[79] The annual growth in expenditures (budgeted or revised) was in the range of 12–20 percent during the last four years, peaking during the initial year of the 18th Amendment and tapering off to a range of 13–17 percent in the following three years. This growth in nominal expenditures is significantly higher than the national inflation rate of 8.1 percent recorded during the same period. Comparing budgeted expenditure with revised expenditure (RE), the latter exceeded the former in all the four years, the highest variation being PKR 14 billion in 2014/15.

Table 8.1: Balochistan – Macro view of budgeted and revised expenditures, 2011/12–2014/15

Year	Budgeted Expenditures (Be)	Percentage Changes In Budgeted Expenditures	Revised Expenditures (Re)	Percentage Changes In Revised Expenditures
2011/12	118,915		127,702	
2012/13	143,099	20.3	150,406	17.8
2013/14	161,261	12.7	171,031	13.7
2014/15	185,792	15.2	199,647	16.7

During the last four years, the share of provincial current expenditure out of the total provincial expenditures was in the range of 64–70 percent indicating *more fiscal space available to the Government of Balochistan relative to the Federal Government to spend on development activities* (c.f. chapter 6 on federal CPEIR). However, the AAGR of development expenditures, or ADP, as it is popularly labelled in the context of the provinces, was 10.2 percent, slightly more than half of the corresponding rate of current expenditure increase of 19.1 percent during the last four years. Table 8.2 gives a summary breakdown of the percentage shares of the revised estimates of provincial expenditures under broad expenditure heads.

79 The above totals of budget expenditure is not exactly comparable with totals in ABS as it does not include "Net Current Capital Expenditure (Account-II)" consisting mainly of i) State Trading in Food and ii) Debt Servicing (Floating).

Table 8.2: Balochistan – Share of main expenditure heads (percentage) in revised provincial budget

	2011/12	2012/13	2013/14	2014/15
Current Expenditure				
General Administration Depts.	17	21	17	19
Law and Order Dept.	16	15	16	16
Community Services Dept.	9	8	9	9
Social Services Dept.	37	36	37	35
Economic Services	16	18	20	21
Debt Servicing	4	2	1	1
Current Expenditure as Percentage of Total Expenditure	64	70	70	69
Annual Development Programme as Percentage of Total Expenditure	36	30	30	31

Between 35 and 37 percent of the current expenditure is spent on social services, mainly consisting of sub-expenditures on health and education. Another 55 percent of current expenditure is divided in roughly equal proportion among three departments, namely general administration, law and order and economic services. Debt servicing ratio declined consistently during the four years and in 2014/15 it was only one percent as compared to four percent of the current expenditure in 2011/12.

Table 8.3: Balochistan – Sources of financing of the ADP

	2011/12	**2012/13**	**2013/14**	**2014/15**
Percentage of Internal Resources				
Provincial Contribution (Rev. Surplus/Deficit)	70	69	64	56
Provincial Contribution (other Receipts)	18	15	20	29
Federal Assistance	12	16	15	15
Percentage of External Resources				
Loans	52	39	32	7
Grants	48	61	68	93
Share of Internal Resources in Total Resources	96	95	97	95
Share of External Resources in Total Resources	4	5	3	5
Size of ADP as a Percentage of Available Total Resources	69	68	78	83

8.1.1 Financing of the ADP

It is useful to examine provincial budget financing as between 30 and 36 percent of it is spent on development investments and activities. The Government of Balochistan is highly dependent on federal transfers and grants for financing its ADP as nearly 95 percent comes from internal resources. These internal resources in turn consist of surplus generated on revenue account (federal transfers minus current expenditure), other receipts and federal assistance.[80] The contribution of various heads in table 8.3 brings this out more clearly.

The share of internal resources in ADP financing was in a narrow range of 95 to 97 percent during 2012–2015, suggesting that Balochistan was unable to attract any sizeable foreign funding, although relying on internal resources is indicative of prudent fiscal management. This was unlike the federal level where external loans constitute a considerable portion of external resources. In terms of percentages, the share of provincial contribution (84-88 percent) and federal assistance (12–16 percent) in internal resources remained stable. The grants component in external resources in Balochistan (although small in absolute terms) almost doubled in the last four years thereby keeping the servicing costs low by national standards. The grants component increased from 48 to 93 percent during 2011–2015, partly reflecting development partners' recognition of the province's heavy dependence on federal transfers and expected low rate of return (given the underdeveloped economic base) to offset the potential increase in loaning costs.

Balochistan's revenue sources are presented in table 8.4. Resource transfers from the Federal Government under the NFC Award increased from PKR 112.3 billion in 2011/12 to PKR 154.8 billion in 2014/15. The province's dependence on federal transfers and federal grants ranged from 95 to 97 percent of its total revenue receipts.

The province's capacity to generate provincial resources increased from PKR 5.1 billion to PKR 7.8 billion during 2012–2015, at an AAGR of 15.3 percent, although from a small base. The growth in provincial tax and non-tax revenue increased at an annual rate of 28.0 and 9.9 percent respectively in four years. The share of provincial revenues in overall receipts has remained stagnant at 4–5 percent during the four years under study. In essence, while the growth in revenues generated within the province has been impressive from a small base, this growth is in tandem with a growth in federal transfers and grants. The growth in provincial tax revenues however does suggest a potential for enlarging the tax base in the province.

During the last four years, the ADP of Balochistan has ranged from 68–83 percent of available resources (after accounting for current expenditures). In the last two years it has increased to 78 and 83 percent respectively. The surplus resources are used to build cash balances. This trend signifies that the capacity to identify and spend on large development programmes is limited, reflected by the substantive carry forward of previous uncompleted projects and programmes. With climate change expected to exacerbate the growing problems of drought and water scarcity in Balochistan, and heighten the vulnerability of communities and ecologies exposed to a large coastline, the provincial government requires sufficient fiscal space to put in place effective strategies and investments for tackling climate risks and challenges. Considerable coordination and capacity building support also needs to be channelled from the federal level to broaden the options for climate compatible development planning and investment in the province, and to ensure the timely and effective utilization of available funds and resources. At the same time, efforts are needed to enlarge the provincial tax base and reduce dependence for grants on the Federal Government.

80 Other Receipts=Net Capital Receipts + Net Public Accounts Receipts.

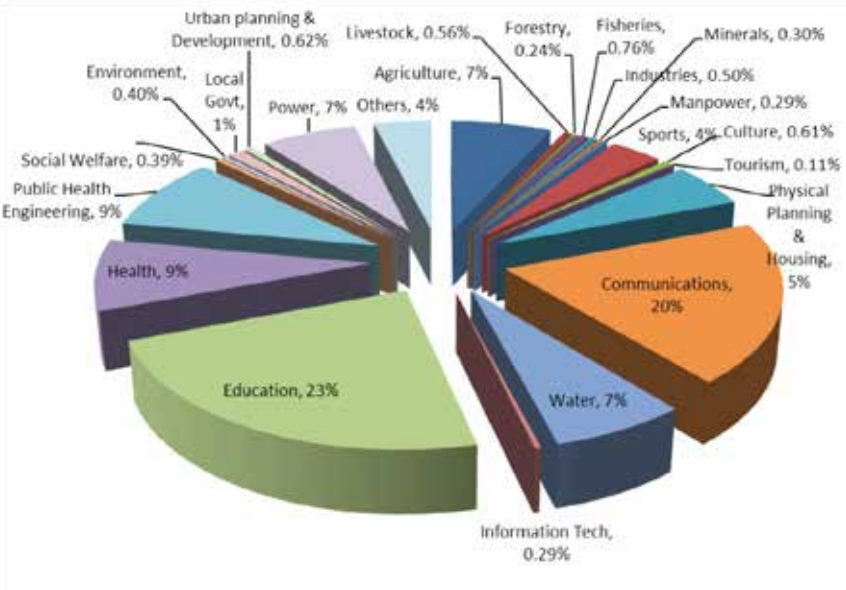
Table 8.4: Balochistan – Federal Transfers and provincial revenues (PKR millions)				
	2011/12	**2012/13**	**2013/14**	**2014/15**
A. Federal Transfers	112,357	130,516	137,755	154,793
Tax Revenue	106,762	125,325	125,934	148,555
Non-Tax Revenue	5,595	5,191	11,821	6,238
B. Federal Grants	12,827	13,018	14,930	15,314
C. Provincial Revenues	5,101	5,398	8,026	7,811
Tax Revenue	1,352	1,217	3,234	2,837
Non-Tax Revenue	3,749	4,181	4,792	4,974
Total Revenue Receipts	130,286	148,932	160,711	177,917
Percentage of Federal Transfers				
Tax Revenue	95	96	91	96
Non-Tax Revenue	5	4	9	4
Percentage of Provincial Revenues				
Tax Revenue	27	23	40	36
Non-Tax Revenue	73	77	60	64
Federal Transfers as Percentage of Total Revenue Receipts	86	88	86	87
Federal Grants as a Percentage of Total Revenue Receipts	10	9	9	9
Provincial Revenues as a Percentage of Total Revenue Receipts	4	4	5	4

8.1.2 ADP sector allocation

The development budget of Balochistan encompasses a broad range of sectors, as shown in Fig 8.1 presenting sector-wise allocations of the ADP for FY 2014/15.[81] A significant share of allocations went towards projects for improved social service delivery, as indicated by a share of 23 percent for education and 9 percent each for health and public health engineering (construction of small water supply and sanitation schemes). Other important sectors for public investment included communications with a share of one-fifth of ADP allocation in 2014/15, followed by water, power and agriculture, each with a share of 7 percent.

81 Management and development of coastal areas, which is very important for Balochistan from the perspective of climate change, is the responsibility of the provincial Coastal Development Authority that works under the Department of Fisheries.

Figure 8.1: Balochistan – Overall ADP sector allocation for 2014/15



8.2 Climate programmes and budgets

The methodology and steps involved in selecting climate-related programmes and projects in the development budget of Balochistan is similar to the one for the federal analysis and other provinces. However, unlike the multiple sources of data used for federal analysis, the source for Balochistan's budget and revised estimates and actual expenditure data is the CGA. At the department level, the classification adopted by the CGA for the ADP and current budget is different from the classification given in ABS publications of Balochistan's Finance Department. Table 8.5 gives a department-wise summary of the percent of climate-related projects out of total projects financed by the Government of Balochistan in each of the four years.

The main observations from the overview are:

- Overall, the percentage of climate-related projects out of total projects ranged from 76 to 82 percent during the four years. This is much higher than the proportion at federal level where it ranged from 47 to 56 percent.
- In 11 out of 18 departments reviewed, the proportion of climate-related projects exceeded 50 percent of total departmental projects and remained consistently high across the four years.
- The following departments consistently showed climate-related projects at less than 50 percent of the departmental total: Planning and Development; Environment; Sports and Youth Affairs; and Social Welfare
- The variability in proportion of climate-related projects across ministries and years is relatively less than that observed at the federal level.

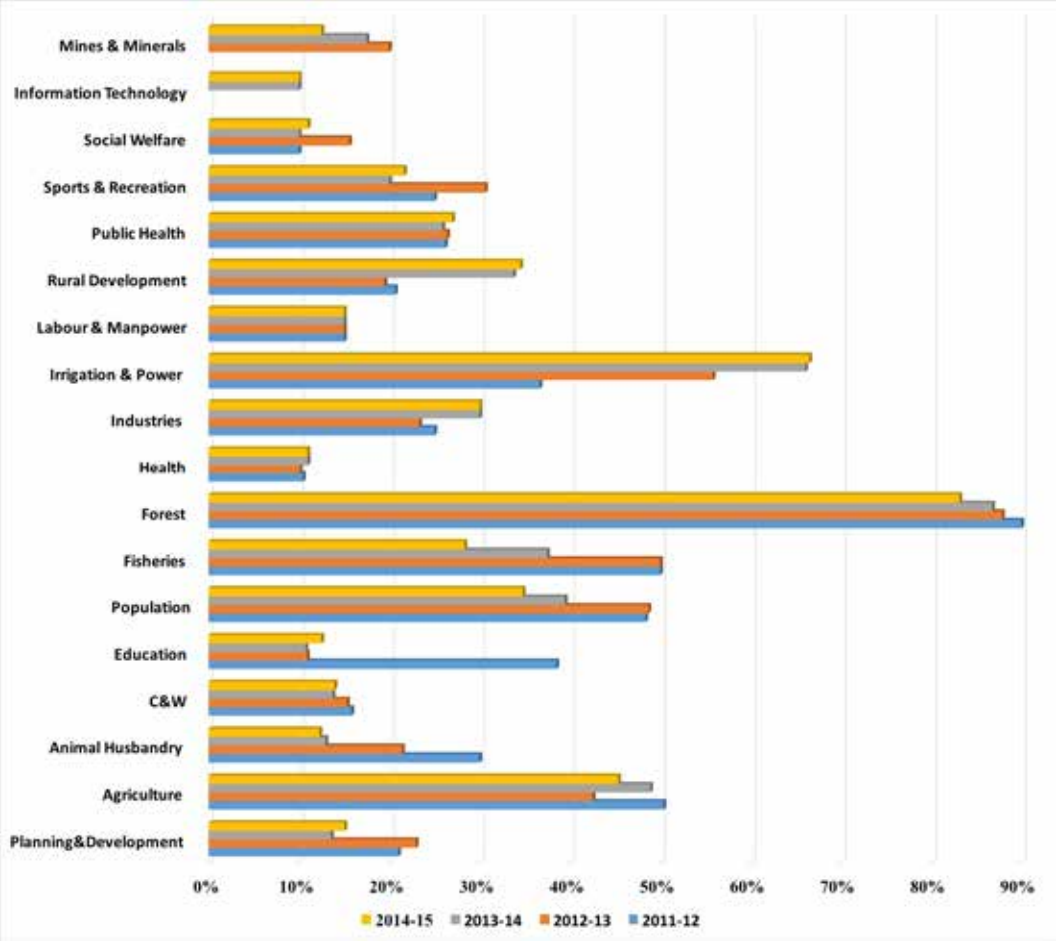
Table 8.5: Balochistan – Climate-related projects

#	Balochistan Ministries/ Divisions	2011/12			2012/13			2013/14			2014/15		
		Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%
1	Planning & Development	87	25	29%	126	39	31%	129	73	57%	276	105	38%
2	Agriculture	85	66	78%	74	59	80%	118	78	66%	106	95	90%
3	Animal Husbandry	4	2	50%	9	7	78%	28	27	96%	24	24	100%
4	C&W	95	91	96%	265	251	95%	212	203	96%	290	280	97%
5	Education	236	225	95%	479	466	97%	590	579	98%	437	413	95%
6	Population	42	40	95%	48	42	88%	156	94	60%	200	148	74%
7	Fisheries	1	1	100%	1	1	100%	2	2	100%	7	6	86%
8	Forest	6	6	100%	22	21	95%	28	28	100%	44	43	98%
9	Health	256	249	97%	191	190	99%	216	200	93%	202	198	98%
10	Industries	18	11	61%	9	3	33%	4	2	50%	9	3	33%
11	Irrigation & Power	163	108	41%	249	148	59%	143	110	77%	292	191	65%
12	Labour & Manpower	4	4	100%	3	3	100%	3	3	100%	3	3	100%
13	Rural Development	283	199	70%	238	158	66%	33	16	48%	81	31	38%
14	Public Health	79	75	95%	156	150	96%	151	145	96%	257	251	98%
15	Sports & Recreation	72	8	11%	40	8	20%	47	2	4%	64	3	5%
16	Social Welfare	37	5	14%	81	17	21%	16	4	25%	19	5	26%
17	Mines and Minerals				2	1	50%	5	4	80%	5	2	40%
18	Information Technology							2	2	100%	6	2	33%
	TOTAL	**1468**	**1115**	**76**	**1993**	**1564**	**78.5**	**1883**	**1572**	**83**	**2322**	**1803**	**77.6**

One tentative explanation of the aforementioned trends is that the number of departments in Balochistan remained consistent in spite of the 18th Amendment. Most likely, the functions of the devolved ministries at the federal level were merged into existing provincial departments. In addition, a number of projects in some ministries (Agriculture, Planning and Development, C&W, Education, Health, Irrigation and Power, Rural Development and Public Health) represent similar projects under an identical scheme executed at the district, sub-district (*tehsil*) and union council level in the province.

Figure 8.2 shows the average climate relevance of each department for the four years. The average is the sum of climate relevance weight assigned to the investment of each climate-relevant project divided by the number of projects/programmes in each ministry. As a summary measure, it also profiles the ministries that undertake projects with strong, significant and weak climate dimensions, and how that strength has varied over the four-year period. Except for a few departments, the average relevance weight is fairly similar across the period. Mean relevance weight varies relatively more in Animal Husbandry, Education, Population, Fisheries, and Irrigation and Power Department. Fluctuations in the mean relevance weight occur due to the occasional execution of odd projects or the size of projects.

Figure 8.2: Balochistan – Climate relevance in relation to institutions



Figures 8.3 and 8.4 represent the climate-relevant development expenditure of departments using two indicators. The first is the percentage share of climate-relevant actual development expenditure of each department in total climate-relevant actual development expenditure of all departments. The second indicator is the percentage of climate-relevant development expenditure of each department with respect to each department's total BEs. This latter percentage will be applied to actual current expenditure of each department to obtain an estimate of climate-relevant actual current expenditure.

The highlights of the two indicators are:

- In several departments, share of CC investments in total CC investments, show no clear trend across four years. These departments include Planning and Development, Communication and Works, Education, Population Welfare, Rural Development and Public Health. This is mainly due to variation in the number of projects in these institutions across the four years (see table 8.5).
- A structural increase in the share of climate-relevant projects is observed from first two years to later two years in for Education, Population Welfare, and Public Health.
- A double-digit share of climate-relevant investments across the four years is consistent for Communication and Works, and Irrigation and Power Departments, and together account for 41–59 percent of total CC expenditure in the four years of the study.
- In relation to the total budget of individual departments, the share of climate-relevant expenditure in the last four years shows a consistent upward trend in Population, Irrigation and Power, Public Health and Social Welfare Departments.
- Notwithstanding the year-to-year variation in the climate-relevant share of individual departments' budgets, it is generally high (in double digits) in Agriculture, Fisheries, Forest, Irrigation and Power, and Public Health.

Figure 8.3: Balochistan – CC-weighted actual expenditure as a percentage of total sum of CC-weighted actual expenditure

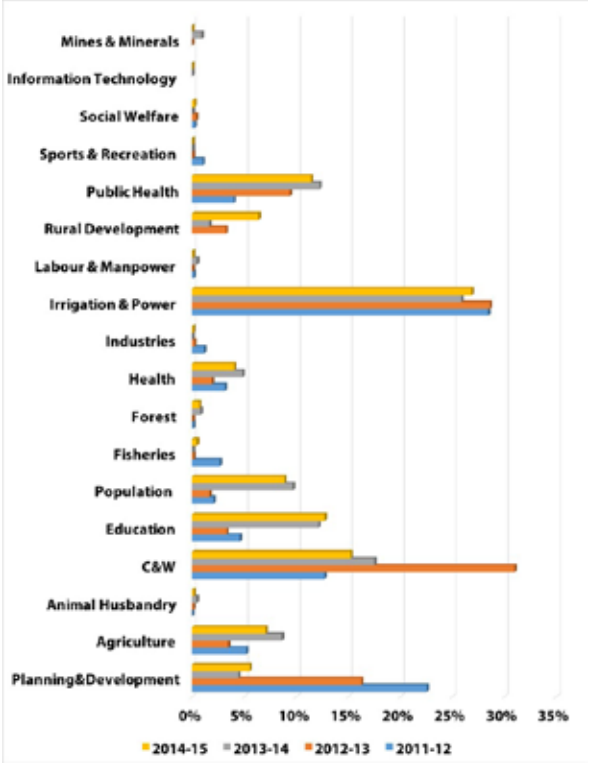
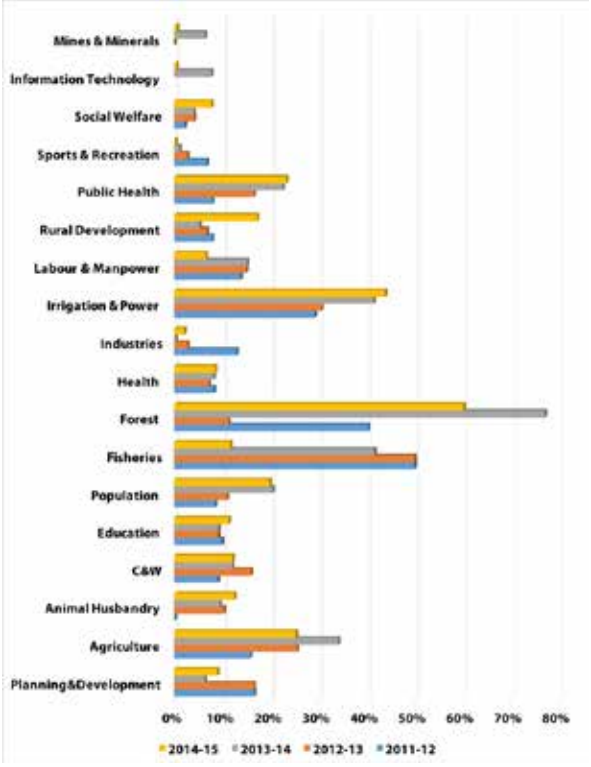


Figure 8.4: Balochistan – CC-weighted actual expenditure as a percentage of department's total budgeted expenditure



8.3 Climate-relevant expenditure in development and current budget

Based on the aforementioned profile of the number of climate-related projects and their associated investment, a summary trend analysis of climate-relevant expenditure in the current and development budget is presented in table 8.6. Similar to the analysis of the federal response to CC, aggregate investment (development) and current expenditures on projects with a climate dimension in each of the four years is profiled in absolute terms as well as in three key ratios. The three indicators are a) climate-relevant investment expenditure as a ratio of development budget (BEs), b) climate-relevant current expenditure as a ratio of total current expenditure budget, and c) climate-relevant total (development + current) expenditure as a percentage of total provincial budget (development + current).

Investment in projects that have CC benefits show a rising trend from PKR 2.8 billion in 2011/12 to PKR 9.2 billion in 2014/15 at an average annual rate of 48.3 percent, as compared to the corresponding increase of 10.2 percent in the total development budget.

The ratio of climate-relevant development expenditure to total development expenditure varies from a high of 15.7 percent in 2012/13 to a low of 6.1 percent in 2011/12. Except for the year 2011/12, this ratio has remained in the range of 13.8 to 15.7 percent over the later three years.

Derived climate-relevant current expenditure increased steadily from PKR 6.6 billion in 2011/12 to PKR 13.4 billion in 2014/15, an average annual increase of 27.0 percent, outstripping the average annual growth of 19.1 percent in the current budget. The ratio of climate-relevant current expenditure to total current budget increased with moderate fluctuations from 8.0 percent in 2011/12 to 9.9 percent in 2014/15.

The aggregate (investment + current) climate-relevant budget shows an increasing trend from PKR 9.4 billion in 2011/12 to PKR 22.6 billion in 2014/15, an increase of nearly 141 percent over the four year period. Climate-relevant expenditures are between 7.3 and 11.3 percent as a percentage of the total provincial budget.

Table 8.6: Balochistan – Four-year summary analysis				
	2011/12	**2012/13**	**2013/14**	**2014/15**
Development Expenditures (PKR millions)				
CC weighted Actual Development Expenditure (a)	2813.66	7171.47	7141.16	9177.221
Revised Annual Development Programme (ADP) (b)	45741.06	45600.58	51764.75	61159.02
Ratio- (a)/(b)	**0.0615**	**0.1573**	**0.1380**	**0.1501**
Current Expenditure (PKR millions)				
CC Weighted Actual Current Expenditure- c	6571.60	8508.72	11867.88	13452.53
Revised Budgetary Current Expenditure- d	81961.01	104805.88	119266.72	138487.99
Ratio- c/d	**0.0802**	**0.0812**	**0.0995**	**0.0971**
Total Expenditures (PKR millions)				
CC weighted Actual Development Expenditure	2813.66	7171.47	7141.16	9177.221
CC Weighted Current Actual Expenditure	6571.60	8508.72	11867.88	13452.53
Total CC Weighted Actual Expenditures- (e)	**9385.26**	**15680.19**	**19009.04**	**22629.75**
Revised Annual Development Programme (ADP)	45741.06	45600.58	51764.75	61159.02
Revised Budgetary Current Expenditure	81961.01	104805.88	119266.72	138487.99
Total Revised Budgetary Expenditure- (f)	**127702.07**	**150406.46**	**171031.47**	**199647.00**
Ratio- (e)/(f)	**7.35%**	**10.43%**	**11.11%**	**11.33%**

8.4 Sector-wise climate-relevant expenditure

From a policy angle it is useful to identify sectors across time that subsume a major share, implicitly or explicitly, of climate-relevant expenditure in the total CC budget. Table 8.7 presents the distribution of climate-relevant expenditure across provincial departments over four years. We note the following:

- Excluding the year 2011/12, the CC expenditure share of three departments, namely Communication and Works (C&W), Education, and Irrigation and Power was consistently in double digits, and together accounted for 54–62 percent of total CC expenditure.
- Out of 18 departments, the share of 7–9 departments was in single digits and the remaining 6–8 departments accounted for less than 1 percent of the total provincial expenditure related to climate change.
- In most departments, there is no consistent trend of increasing or decreasing CC expenditure share over the four-year period.

Table 8.7: Balochistan – Sector-wise distribution of total climate expenditure (PKR millions)

Balochistan Ministries/Divisions	2011/12		2012/13		2013/14		2014/15	
	Total CC Exp[81]	Share	Total CC Exp	Share	Total CC Exp	Share	Total CC Exp	Share
Planning & Development	680.41	7.25%	1230.03	7.84%	349.14	1.83%	573.6	2.53%
Agriculture	725.53	7.73%	1411.77	9.00%	2349.88	12.31%	2030.08	8.97%
Animal Husbandry	2.34	0.02%	187.18	1.19%	200.05	1.05%	261.96	1.16%
C&W	823.99	8.78%	3181.15	20.29%	2146.18	11.25%	2333.66	10.31%
Education	2280.16	24.30%	2612.95	16.66%	3650.41	19.13%	4723.67	20.87%
Population	59.29	0.63%	140.72	0.90%	847.33	4.44%	987.05	4.36%
Fisheries	202.9	2.16%	177.11	1.13%	161.57	0.85%	103.52	0.46%
Forest	222.82	2.37%	72.36	0.46%	699.31	3.66%	592.24	2.62%
Health	716.03	7.63%	776.83	4.95%	1294.61	6.78%	1551.6	6.86%
Industries	83.95	0.89%	34.7	0.22%	3.94	0.02%	24.79	0.11%
Irrigation & Power	2535.9	27.0%	3984.06	25.41%	4868.35	25.51%	5208.74	23.02%
Labour & Manpower	85.68	0.91%	111.48	0.71%	164.52	0.86%	58.91	0.26%
Rural Dev.	562.2	5.99%	476.89	3.04%	392.86	2.06%	1885.76	8.33%
Public Health	338.08	3.60%	1154.75	7.36%	1636.74	8.58%	2039.38	9.01%
Sports & Recreation	41.85	0.45%	12.04	0.08%	8.8	0.05%	5.27	0.02%
Social Welfare	24.14	0.26%	116.16	0.74%	149.89	0.79%	236.08	1.04%
Information Technology					46.19	0.24%	3.67	0.02%
Mines & Minerals					114.36	0.60%	9.77	0.04%

82 Exp= Expenditures

8.5 Climate expenditures by themes and tasks

As outlined in chapter 5, a typology of themes and tasks for CC response activities was developed for this study, based on the themes and classifications given in the National Climate Change Policy. Each project with a climate-relevant component that is accounted in the ADP development budget lines from 2011/12 to 2014/15, was coded to one task type within the typology. This information, in addition to revealing the proportional expenditure of the budget line on the climate-related component, permitted an identification of overall expenditure within each category of the typology. This analysis was carried out for the four years of Balochistan's development expenditure from 2011/12 to 2014/15 and is given in table 8.8.The assigned typology further breaks down the development expenditures into different

Table 8.8: Balochistan – Division of sectors and sub-sectors in the ADP (2011–2015) by CC tasks and themes

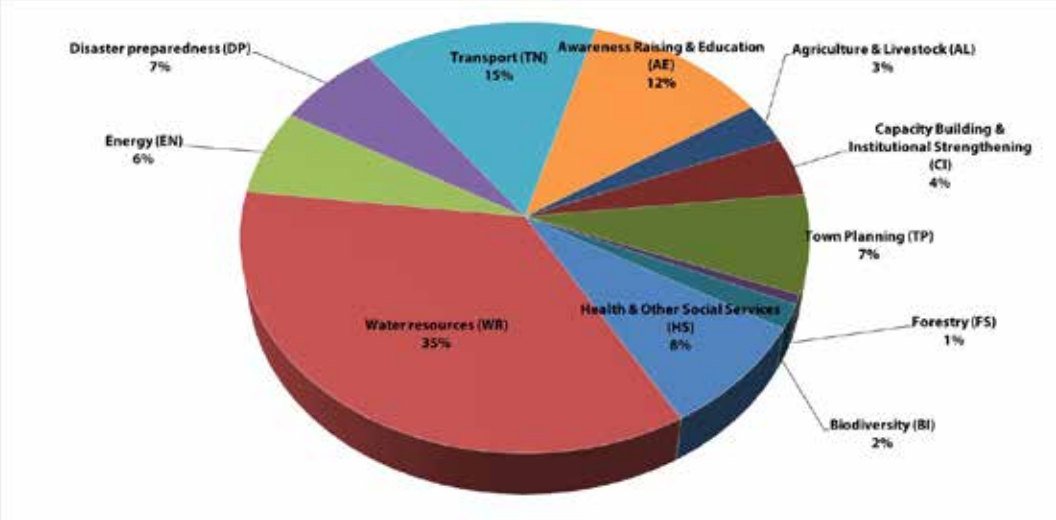
Climate Change Tasks				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Health & Other Social Services (HS)	12%	7%	10%	8%
Water Resources (WR)	35%	32%	36%	35%
Energy (EN)	1%	2%	4%	6%
Disaster Preparedness (DP)	5%	11%	4%	7%
Transport (TN)	32%	40%	17%	15%
Awareness Raising & Education (AE)	5%	3%	12%	11%
Agriculture & Livestock (AL)	6%	2%	8%	3%
Capacity Building & Institutional Strengthening (CI)	0%	1%	5%	4%
Town Planning (TP)	3%	0%	2%	7%
Forestry (FS)	0%	2%	1%	1%
Biodiversity (BI)	1%	0%	0%	2%
Carbon Sequestration & Forestry (CF)	0%	0%	0%	0%
Total	100%	100%	100%	100%
Climate Change Themes				
Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Adaptation	91%	92%	75%	70%
Mitigation	3%	4%	7%	14%
Supporting	5%	4%	18%	16%
Total	100%	100%	100%	100%
Adaptation				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Health & Other Social Services (HS)	13%	13%	13%	12%
Water Resources (WR)	38%	38%	48%	51%
Disaster Preparedness (DP)	6%	6%	5%	9%
Transport (TN)	35%	35%	22%	20%
Agriculture & Livestock (AL)	6%	6%	11%	4%

Forestry (FS)	1%	1%	1%	1%
Biodiversity (BI)	0%	0%	0%	3%
Total	100%	100%	100%	100%

Mitigation				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Energy (EN)	23%	47%	63%	44%
Transport (TN)	0%	2%	4%	4%
Town Planning (TP)	77%	50%	30%	51%
Carbon Sequestration & Forestry (CF)	0%	0%	3%	1%
Total	100%	100%	100%	100%

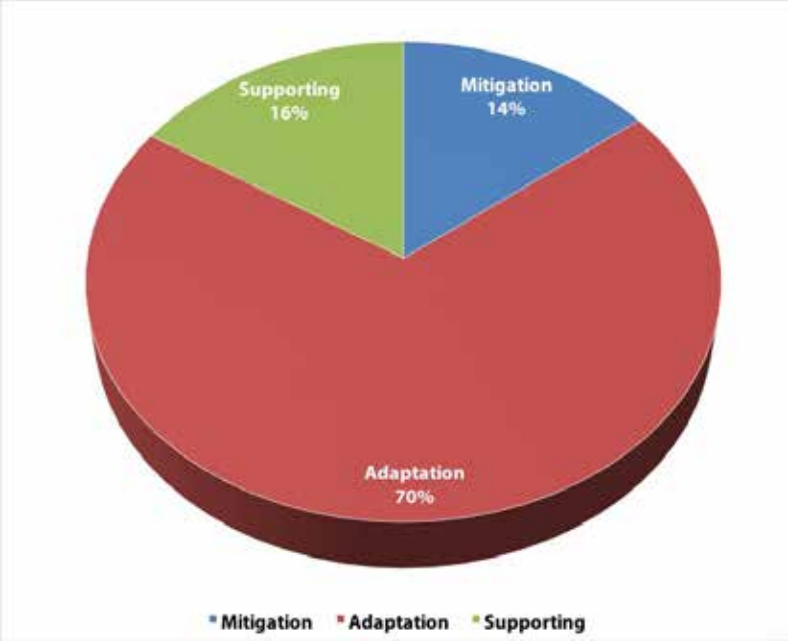
Supporting				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Awareness Raising & Education (AE)	99%	79%	70%	72%
Capacity Building & Institutional Strengthening (CI)	1%	21%	30%	28%
Total	100%	100%	100%	100%

Figure 8.5: Balochistan – Complete allocations of 2014/15 development budget expenditures to climate-relevant tasks



climate change themes, i.e. mitigation, adaptation, and supporting activities. The analysis of the 2014/15 development budget showed that adaptation contributed the most to the climate budget (70 percent of total climate-relevant investment), followed by supporting activities at 16 percent, and mitigation at 14 percent, suggesting that nearly two-thirds of climate-relevant activities in Balochistan had an adaptation component (Figure 8.6).

Figure 8.6: Balochistan – Allocation of expenditure to climate-relevant themes in ADP, 2014/15



Relevant expenditures under the adaptation theme were mainly formed by tasks involving water resources (51 percent of total adaptation response budget), transport (20 percent), health and social services (12 percent) and disaster preparedness (9 percent). Agriculture and livestock, biodiversity and forestry tasks altogether accounted for only 8 percent of the adaptation response investment (Figure 8.7a).

Mitigation-related expenditure received the lowest allocation of around 14 percent from the development budget of 2014/15 (Figure 8.6). This was mostly contributed by activities in town planning (51 percent of the total mitigation response allocation) and energy (44 percent of the total mitigation response allocation), while transport and carbon sequestration and forestry activities contributed just 5 percent towards the total mitigation investments (Figure 8.7b). The low focus on energy and mitigation is an apparent difference between the federal and Balochistan theme allocations, as mitigation was the smallest theme in Balochistan at 14 percent while the corresponding figure for the federal budget was 63 percent.

The CC supporting activities theme emerged as the second largest one, after adaptation, in terms of budgetary allocations in the year 2014/15 (Figure 8.6). Major contribution to this response theme comes from the sub-sector of awareness raising & education (72 percent of the total supporting activities development budget) while the rest is contributed by the sub-sector of capacity building and institutional strengthening (28 percent) (Figure 8.7c).

Figure 8.7a: Balochistan – Allocation of climate-relevant expenditure in 2014/15 development budget (adaptation theme)

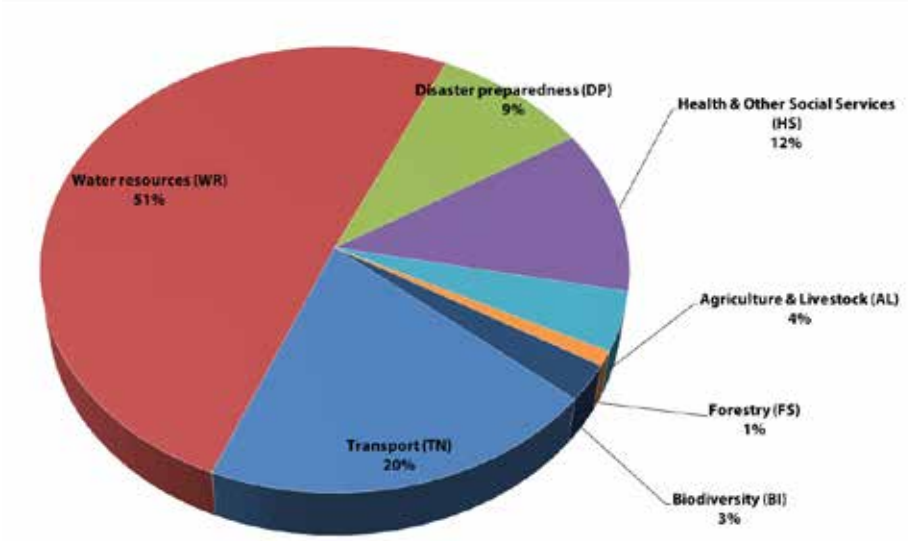


Figure 8.7b: Balochistan – Allocation of climate-relevant expenditure in 2014/15 development budget (mitigation theme)

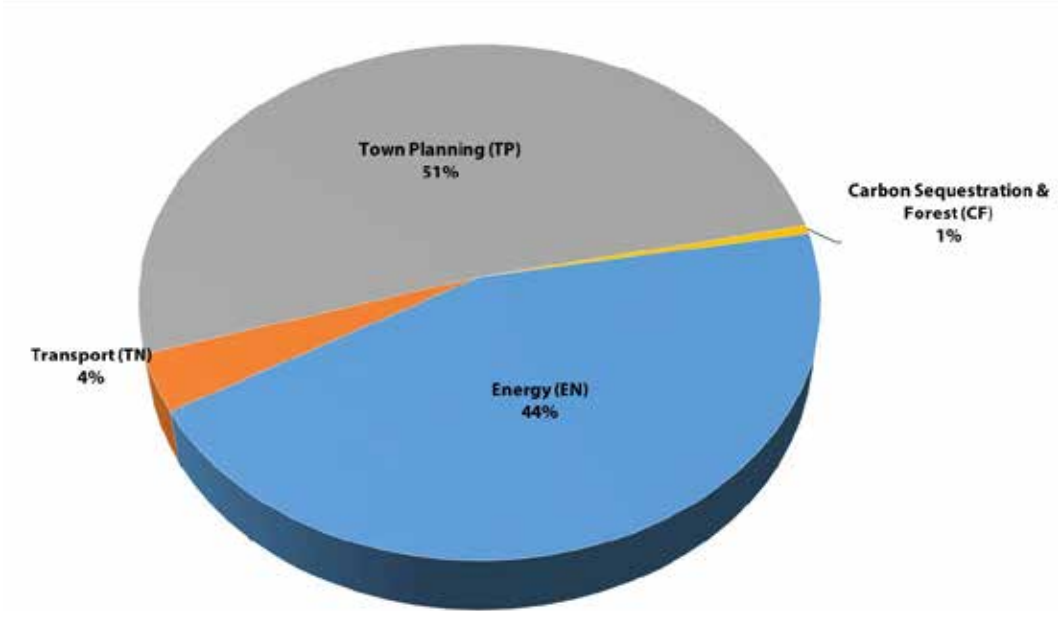
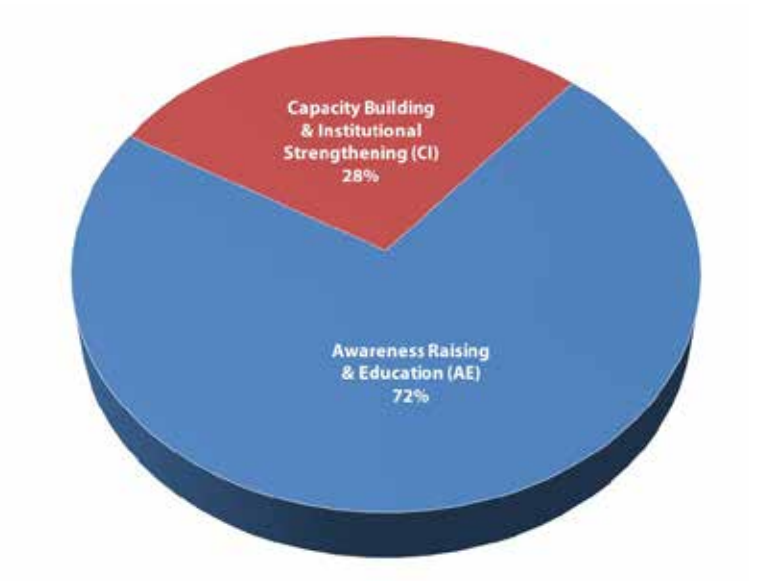


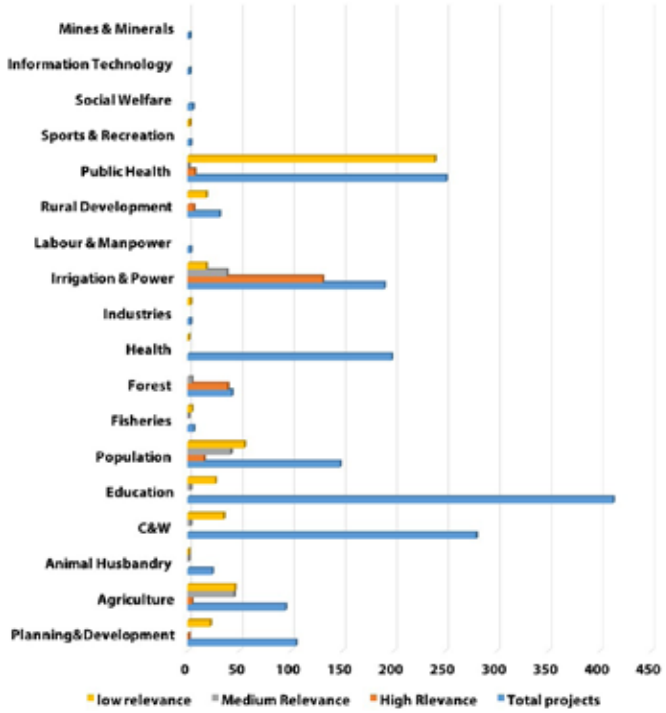
Figure 8.7c: Balochistan – Allocation of climate-relevant expenditure in 2014/15 development budget (supporting actions theme)



For the development budget of year 2014/15, climate-relevant projects were analysed, and then categorized into high (75–100 percent CC weight of a project), medium (50–74 percent CC weight) and low (25–49 percent CC weight) and marginal (>24 percent) relevance.

The result showed that out of 18 departments, seven departments had at least one project weighted at 0.75 or more (Figure 8.8). There were Public Health, Rural Development, Irrigation and Power, Forest, Population, Agriculture, and Planning and Development.

Figure 8.8: Balochistan – Distribution of climate-relevant investment expenditures in relevant government institutions



8.6 Balochistan provincial institutional assessment

8.6.1 Policy instruments and mechanisms

The Balochistan Environment Protection Act, 2012, is the main instrument governing environment and climate change at the provincial level. Unlike other provinces, the government of Balochistan has not indicated plans to develop a provincial climate change policy, and instead, appears committed to follow broad parameters of the National Climate Change Policy, 2012. For its implementation the government has constituted a high level provincial committee headed by the Secretary Environment.

The institutional remit for environment and climate change rests with the Balochistan Environment Protection Agency (BEPA), which is currently placed under the administrative control of the Department of Environment, Sports and Youth Affairs. BEPA is responsible for implementation of environmental laws and regulations in the province and initiating environmental impact assessments and examinations in the formulation of public sector development projects. Sensing a need for more focused policy attention towards local environmental issues, the government has recently notified the establishment of a separate Environment Department that is likely to act as the focal agency for handling provincial climate change matters in future.

Additionally, the Department of Forest and Wildlife in Balochistan also plays a key role in provincial climate change planning and coordination, and represents local interests related to forestry, biodiversity and desertification in climate change dialogue and planning at the national level. The department has had an active role in engaging with the federally administered process of preparing financeable climate proposals for the GCF. At the time of writing, four concept notes submitted by the Balochistan Forest and Wildlife Department had been shortlisted by the MCC for submission to the GCF.

As with other provinces, the P&DD and Finance Departments also play an important function in the institutional landscape of climate change, as regards their role in developing and financing the provincial ADP.

Additionally, several other line departments including Agriculture, Irrigation, Fisheries, Energy, etc. form the institutional landscape of climate governance in Balochistan. The role of Balochistan Coastal Development Authority under the administrative control of the Fisheries Department, especially, is very important and its capacity needs to be strengthened. However there is no evidence to suggest that these institutions are as yet consciously engaging with climate change policy processes in any significant way.

The government of Balochistan has yet to establish a dedicated Climate Change Cell for handling climate change planning and coordination at the provincial level, however this appears to be in the offing. It was unclear at the time of writing this report whether the anticipated Climate Change Cell would be housed within the provincial P&DD or the newly notified Environment Department

8.6.2 Coordinating and mainstreaming climate change in Balochistan

Existing arrangements for coordinating climate change policy response in Balochistan appear fragmented, with the associated role and responsibilities divided between certain departments (Environment, Forest, and P&D). This is made apparent by the nomination of the Chief Conservator Forests as Balochistan's representative on the Implementation Committee of the NCCP, whereas the Department of Environment, Youth, and Sports that houses the provincial EPA is tasked with environment and climate change governance in the province. The establishing of a dedicated Climate Change Cell in the province could potentially reduce this fragmentation and provide for stronger and clearer CC coordination arrangements.

With regards to climate change mainstreaming and integration, there are strong entry points evident in sectors like agriculture, irrigation and coastal development for linking to adaptation and mitigation objectives. Water management is a particularly significant adaptation area in Balochistan as addressing the challenges of persistent drought conditions and falling levels of underground water tables in the

region is a high priority agenda for the provincial government. However, mechanisms and platforms needed to connect provincial development priorities with climate change policy processes and financing are lacking and the mainstreaming goal remains unmet.

Improving CC coordination and mainstreaming in Balochistan requires serious attention to developing a provincial climate change strategy and action plan as well as building local capacities for climate compatible planning and communication. Efforts required towards this end range from putting in place a provincial climate change strategy and action plans, to establishing a dedicated Climate Change Cell and evolving platforms for multi-sectoral communication and integrated climate planning. Moreover, as is the case with other provinces, cooperation from the P&D and Finance Departments is essential for mainstreaming climate change concerns into provincial development plans and programmes. The P&D Department has a key role in issuing and monitoring rules and practices that ensure climate change concerns are adequately addressed during the project formulation stage of the public sector development projects funded under the provincial ADP. Serious engagement, sensitization, and requisite capacity building is required with P&D and relevant line departments involved in formulating public sector development projects to enable such practices. As the government of Balochistan shifts the focus of public development investment towards funding mega-projects, an opportunity is provided to introduce rules and procedures for incorporating climate risk and impact assessments into the design of larger, more significant projects in the region.

During discussion with provincial authorities, a shortage of technical skills and understanding to design viable climate change proposals for the Green Climate Fund and other international financial resources was also highlighted. More effective channels of communication and coordination are needed between concerned provincial authorities and the federal Ministry of Climate Change to facilitate provincial stakeholders in tapping technical support available at the federal level, and aligning local climate change plans and interests with national and international processes and requirements.

8.7 Findings and conclusions

- Total climate-relevant spending in Balochistan increased 141 percent over the last four years (from PKR 9.4 billion in 2011 to PKR 22.6 billion in 2015). Climate-relevant expenditure represents between 7.3 and 11.3 percent of the total provincial budget.
- Between 6 and 15 percent of Balochistan's development budget is climate-related. Over the studied years, the rate of annual increase in climate-related development investment was much higher than that of the overall development budget (48.3 percent compared to 10.2 percent).
- The provincial ADP covers development projects in a wide range of sectors. Climate-related projects make up 76–82 percent of development expenditure lines (compared to 47.8–63 percent at the federal level), with over half the projects at several government institutions deemed climate-relevant. This suggests that climate-relevant projects and investments are common and widely spread across the provincial government's portfolio
- The ADP climate expenditure across studied years is relatively stable in terms of average climate relevance of each department and the proportion of climate-related investment per department. In most of the studied years, Irrigation and Power, and Communication and Works spent 41–59 percent of their budgets on climate-relevant investments
- The allocation of expenditure to climate-related tasks was broad for the overall ADP of 2014/15, with water resources (35 percent of total climate component of the ADP), transport (15 percent), awareness raising & education (12 percent), health & social services (8 percent), disaster preparedness and town planning (7 percent each), and energy (6 percent), accounting for 90 percent of the total climate-relevant investment.
- Analysis of the 2014/15 development budget shows "adaptation" to be the dominant theme in Balochistan's CC budget, making-up 70 percent of the total climate-relevant investment. Adaptation expenditure mainly constituted tasks involving water resources (51 percent of total adaptation response budget), transport (20 percent), health & social services (12 percent) and disaster preparedness (9 percent).
- The theme of "CC supporting activities" emerged as the second most significant, after adaptation, in terms of budgetary allocations in the year 2014/15. Major contribution to this response theme was from the sub-sector of awareness raising & education (72 percent of the total supporting activities in development budget) while the rest was contributed by the sub-sector of capacity building and institutional strengthening (28 percent)
- "Mitigation" related expenditure received the lowest allocation of around 14 percent from the development budget of 2014/15. This was mostly contributed by activities in town planning (51 percent of the total mitigation response allocation) and energy (44 percent of the total mitigation response allocation), while transport and carbon sequestration & forestry activities contributed just 5 percent towards the total mitigation investments
- The Balochistan Environment Protection Act, 2012, is the main instrument governing environment and climate change at the provincial level, while the institutional remit for environment and climate change rests with the Balochistan Environment Protection Agency (BEPA). A Climate Change Cell is likely to be established in future within the P&DD or the Environment Department.
- Existing arrangements for coordinating climate change policy response in Balochistan appear fragmented, with the associated role and responsibilities divided between certain departments (Environment, Forest, P&DD). For climate change mainstreaming and integration, water management is a particularly significant area as addressing the challenges of persistent drought conditions and falling levels of underground water tables in the region is a high priority for the provincial government. Mechanisms and platforms are needed to effectively connect provincial development priorities with climate change policy processes and financing at all levels.

CHAPTER 9 – PUNJAB CLIMATE CHANGE BUDGET AND INSTITUTIONAL ASSESSMENT

9.1 Provincial budget overview

In terms of population, the province of Punjab is the largest in Pakistan, accounting for around 56 percent of the country's total population. Among the provinces, it is also the leading agriculture producing region in the country, accounting for a major share of cotton, wheat, rice and sugarcane produce. However the province's own tax base remains small — tax on agriculture income is a provincial subject and compliance is weak. In the last 25 years industrial and services sectors have expanded notably, but similar to other provinces, Punjab continues to rely on resources from the divisible pool of federal revenues under the paradigm of fiscal federalism followed in Pakistan. As the mechanism for sharing the federal revenues is predominantly based on provinces' population shares, Punjab receives the lion's share of federal divisible resources. A brief overview of provincial finances for the last four years is presented, followed by a more detailed climate change budget analysis and an examination of allocations to mitigation and adaptation-related activities.

The Punjab budgetary profile is based on the Punjab Finance Department's publication, the Annual Budget Statement for four years – 2011/12 to 2014/15 – and is detailed in table 9.1. Focusing on revised total budgetary expenditures (development and current), the size of the budget increased from PKR 876 billion to PKR 1,215 billion at an AAGR of 11.5 percent. The annual growth in expenditures (budgeted or revised) was in the range of 8.6–15.1 percent during the last three years. The average annual growth in nominal expenditures is higher than the average national inflation rate of 8.1 percent recorded during the same period. Comparing budgeted expenditure with revised expenditure, the latter was lower than the former in all the four years, the highest variation being PKR 135 billion in 2014/15.

Table 9.1: Punjab – Macro view of budgeted and revised expenditures (PKR millions) 2011/12 to 2014/15

Year	Budgeted Expenditures (BE)	Percentage changes in Budgeted Expenditures	Revised Expenditures (RE)	Percentage changes in Revised Expenditures
2011/12	960,978		875,898	
2012/13	1,051,383	9.4	998,442	14.0
2013/14	1,210,216	15.1	1,118,621	12.0
2014/15	1,349,404	11.5	1,214,526	8.6

During the last four years, the share of provincial current expenditure out of the total provincial expenditures was in the range of 76–83 percent similar to the percentage spent by the Federal Government. In other words the most populated province of Pakistan also faces as tight a fiscal space to spend on development activities as the Federal Government. However, the AAGR of development expenditures (RE), or the ADP, as it is popularly labelled in the context of the provinces, was 20.6 percent, more than double of the corresponding rate of current expenditure increase of 9.2 percent during the last four years. Table 9.2 gives a summary breakdown of the percentage shares of the revised estimates of provincial expenditures under broad expenditure heads.

Table 9.2: Punjab – Share of main expenditure heads in revised provincial budget

	2011/12	2012/13	2013/14	2014/15
Current Expenditure:				
General Administration Depts.	38	38	39	43
Law and Order Depts.	11	10	10	11
Economic Affairs	7	7	6	7
Health	4	5	5	5
Education	5	5	4	4
Others (Social Protection, Housing, Recreation, Environment)	1	2	2	4
Debt Servicing (Federal + Commercial Bank Loans)	13	16	16	8
State Trading (Food +Misc.)	21	18	19	18
Current expenditure as percentage of total expenditure	**81**	**83**	**80**	**76**
Annual development programme as percentage of total expenditure	**19**	**17**	**20**	**24**

Between 38 and 43 percent of the current expenditure (revenue and capital) is spent on administration of the province, including transfers to district governments and local councils. Subsidies on agriculture produce and debt servicing charges were 34–35 percent in the first three years of the study, dropping off to 26 percent in 2014/15, mainly due to decline in debt servicing. This expenditure profile leaves meagre resources (unlike the case in KP and Balochistan) for main social sectors such as health and education sectors as only 9–10 percent of the total current expenditure are spent on these sectors. If this decline in debt servicing for 2014/15 can be made a sustainable trend, more resources can be channelled into social sector programmes including climate change.

9.1.1 Financing of the ADP

During 2012–2015, 17–24 percent of the provincial budget was spent on investments activities or annual development programme. From its share of the divisible pool (internal resources) after meeting current expenditure, the province generated surpluses that were equivalent to 108–129 percent of the annual ADP. However most of these surpluses were offset by deficits on capital account (Other Receipts) leading to dependence on foreign funding to the tune of 7–13 percent for financing ADP.[83] Unlike the composition of external resources in KP and Balochistan, all the external resources in Punjab are accrued in the form of loans. The contribution of various heads in table 9.3 brings this out more clearly.

Punjab's revenue sources are presented in table 9.4. Resource transfers from the Federal Government under the NFC Award increased from PKR 533.8 billion in 2011/12 to PKR 746.0 billion in 2014/15. They have increased at an average annual rate of 11.8 percent during the four year period. The province's dependence on federal transfers ranged from 77 to 80 percent of its total revenue receipts, lower than the corresponding figures in Balochistan and KP. Note that in case of Punjab, unlike in KP and Balochistan, no federal transfers are made under non-tax revenue and grants.

The province's capacity to generate provincial resources increased from PKR 133.6 billion to PKR 215.7 billion during 2012–2015, at an AAGR of 17.3 percent. The growth in provincial tax and non-tax revenue increased at an annual rate of 12.2 and 24.4 percent respectively in four years. The share of provincial revenues in overall receipts has remained stagnant at 20–23 percent during the four years under study. In

83 Other Receipts=Net Capital Receipts + Net Public Accounts Receipts

Table 9.3: Punjab – Sources of ADP financing

	2011/12	2012/13	2013/14	2014/15
Percentage of Internal Resources				
Provincial Contribution (Rev. Surplus/Deficit)	129	121	116	108
Provincial Contribution (other Receipts)	-29	-21	-16	-8
Percentage of External Resources:				
Loans	100	100	100	100
Share of Internal Resources in Total Resources	93	89	87	89
Share of External Resources in Total Resources	7	11	13	11
Size of ADP as a percentage of available total resources	100	106	87	100

essence, the growth in revenues generated within the province is nearly 50 percent higher as compared to growth in federal transfers and it has mainly come from doubling of non-tax revenues. The share of tax revenues has consistently fallen from 61 to 53 percent during the last four years. There is still need for a "big push" to enlarge the tax base, by exploiting the potential of tax revenues and channel the additional resources towards much needed investments in health and education for instance.

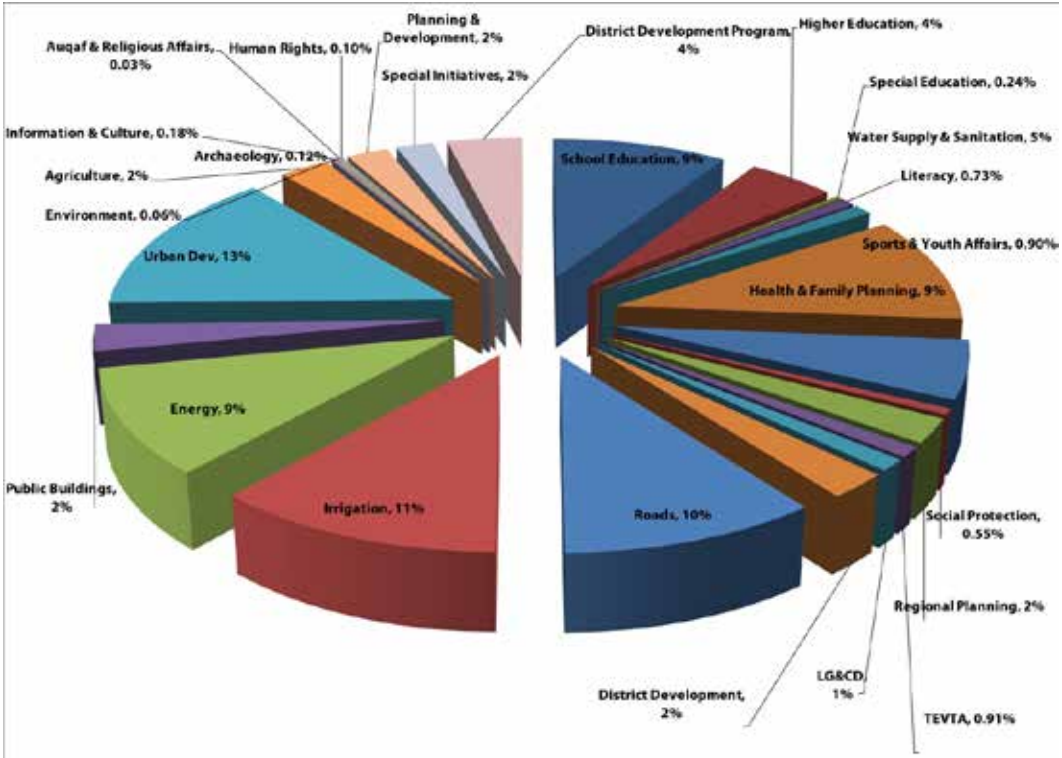
Table 9.4: Punjab – Federal transfers and provincial revenues (PKR millions)

	2011/12	2012/13	2013/14	2014/15
A. Federal Transfers	533,831	568,770	650,390	746,029
Tax Revenue	533,831	568,770	650,390	746,029
B. Provincial Revenues	133,611	151,008	194,779	215,749
Tax Revenue	80,863	90,475	111,789	114,250
Non-Tax Revenue	52,748	60,533	82,990	101,499
Total Revenue Receipts	667,442	719,778	845,169	961,778
Percentage of Federal Transfers				
Tax Revenue	100	100	100	100
Percentage of Provincial Revenues				
Tax Revenue	61	60	57	53
Non-Tax Revenue	39	40	43	47
Federal transfers as percentage of total revenue receipts	80	79	77	78
Provincial revenues as a percentage of total revenue receipts	20	21	23	22

9.1.2 ADP sector allocations

The development budget of Punjab encompasses a broad range of sectors, as shown in Fig 9.1 presenting sector-wise allocations of the ADP for FY 2014/15. Out of a total allocation of PKR 330 billion, a significant share of allocations went towards projects for improved social service delivery, as indicated by a share of 14 percent for education, 9 percent for health and family planning and 5 percent for water supply and sanitation. Other important sectors for public investment included urban development, with a share of 13 percent, irrigation (11 percent), roads (10 percent) and energy (9 percent) in ADP allocation for 2014/15.

Figure 9.1: Punjab – Overall ADP sector allocation for 2014/15



* TEVTA-Technical Eduaction & Vocational Traning Authority, LG&CD-Local Governmnet & Community Development

9.2 Climate programmes and budgets

Ministry/department-wise four-year profile and shares of climate-related projects and programmes filtered from the total number of projects and programmes given in CGA data base are presented in table 9.5. The methodology for identifying climate-related projects and programmes is similar to the one adopted at the federal and for other provinces. The source for Punjab's budget, revised estimates and actual expenditure data is the CGA. At the department level, the classification adopted by the CGA for the ADP and current budget is different from the classification given in ABS publications of Punjab's Finance Department.

The main findings are:

- Overall, the percentage of climate-relevant projects out of total projects ranged from 66 to 73 percent during the four years. This is higher compared to the proportion at the federal level that ranged from 47.8 to 56.4 percent, but slightly lower than the proportions observed in Balochistan and KP.
- In 19 out of 26 departments reviewed, the proportion of climate-relevant projects exceeded 50 percent of total departmental projects and remained consistently high across the four years. Also the

proportion of climate-relevant projects exceeding 75 percent of the total was in the range of 13–17 out of 25 departments during the four years.

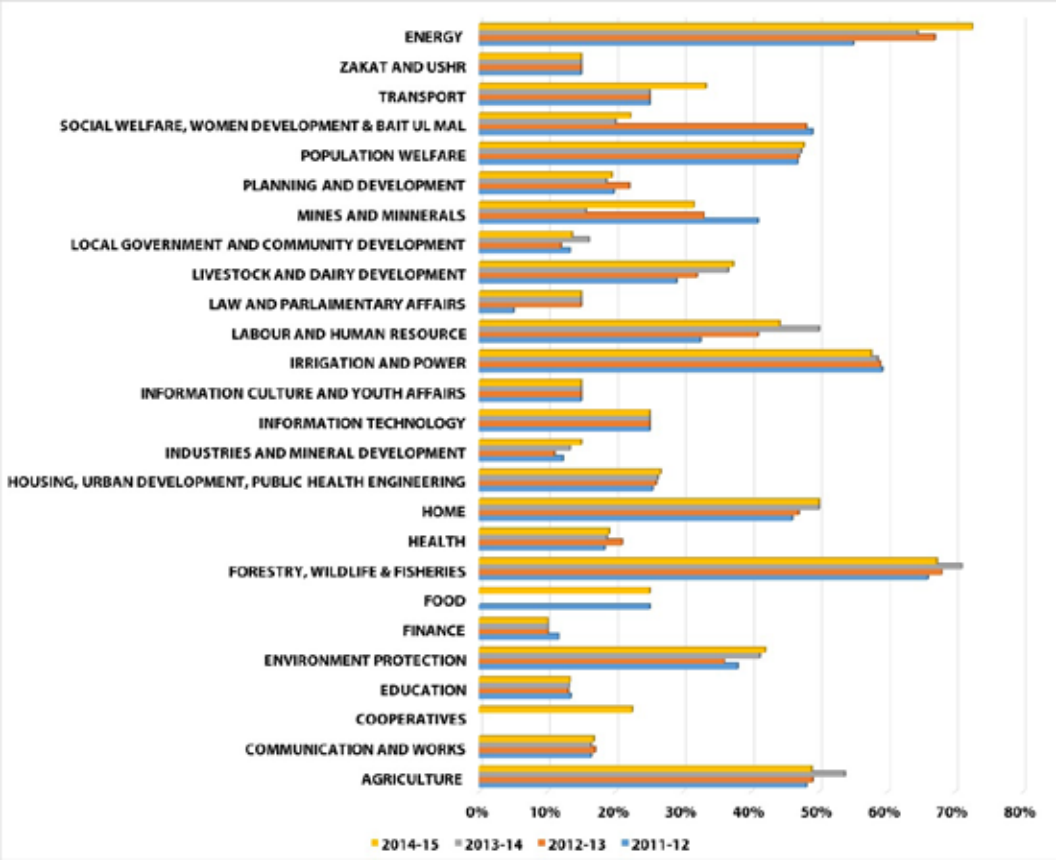
- The following departments consistently showed climate-relevant projects at less than 50 percent of the departmental total in three or more years during 2012–2015: Industries and Mineral Development, Culture and Youth Affairs; Local Government and Rural Development and Transport.
- The variability in proportion of climate-relevant projects across ministries and years is relatively less than that observed at the federal level.

Figure 9.2 shows the average climate relevance of each department for the four years. The average is the sum of climate relevance weight assigned to the investment of each climate-relevant project divided by the number of projects/programmes in each ministry. As a summary measure, it also profiles the ministries that undertake projects with strong, significant and weak climate dimensions, and how that strength has varied over the four-year period. Out of 26 departments, mean relevance weight varies relatively more in only four departments, namely Law and Parliamentary Affairs, Mines and Minerals, Social Welfare, Women Development and Bait ul Mal, and Energy. A stylistic comparison between the mean relevance of departments across the three provinces indicates that the fluctuation in this indicator is less compared to corresponding fluctuations in other provinces. Fluctuations in the mean relevance weight occur due to the occasional execution of odd projects or the size of projects.

Table 9.5: Punjab – Climate-relevant projects

	Punjab Minisitries/Divisions	2011-12			2012-13			2013-2014			2014-15		
		Total # of Projects	Total # of CC related Projects	%	Total # of Projects	Total # of CC related Projects	%	Total # of Projects	Total # of CC related Projects	%	Total # of Projects	Total # of CC related Projects	%
1	AGRICULTURE	163	141	87%	110	93	85%	86	86	100%	119	119	100%
2	COMMUNICATION AND WORKS	1,709	1,171	69%	1475	832	56%	1803	1055	59%	2474	1586	64%
3	COOPERATIVES										4	4	100%
4	EDUCATION	335	320	96%	311	304	98%	310	304	98%	301	294	98%
5	ENVIRONMENT PROTECTION	17	15	88%	11	10	91%	9	8	89%	12	10	83%
6	FINANCE	167	160	96%	150	146	97%	151	145	96%	155	144	93%
7	FOOD	5	2	40%							4	1	25%
8	FORESTRY, WILDLIFE & FISHERIES	228	192	84%	164	139	85%	179	154	86%	236	202	86%
9	HEALTH	229	223	97%	190	188	99%	228	222	97%	358	354	99%
10	HOME	12	10	83%	14	12	86%	18	16	89%	14	9	64%
11	HOUSING, URBAN DEVELOPMENT, PUBLIC HEALTH ENGINEERING	1,551	1,017	66%	602	443	74%	451	364	81%	1026	797	78%
12	INDUSTRIES AND MINERAL DEVELOPMENT	23	11	48%	32	4	13%	30	3	10%	19	2	11%
13	INFORMATION TECHNOLOGY	1	1	100%	2	1	50%	1	1	100%	2	2	100%
14	INFORMATION CULTURE AND YOUTH AFFAIRS	27	1	4%	5	1	20%	7	1	14%	14	1	7%
15	IRRIGATION AND POWER	183	178	97%	137	131	96%	136	127	93%	273	257	94%
16	LABOUR AND HUMAN RESOURCE	13	4	31%	8	4	50%	4	2	50%	10	6	60%
17	LAW AND PARLAIMENTARY AFFAIRS	3	3	100%	3	2	67%	1	1	100%	1	1	100%
18	LIVESTOCK AND DAIRY DEVELOPMENT	45	45	100%	27	27	100%	24	22	92%	42	35	83%
19	LOCAL GOVERNMENT AND RURAL DEVELOPMENT	1,219	476	39%	341	230	67%	671	271	40%	1894	689	36%
20	MINES AND MINNERALS	6	5	83%	10	9	90%	10	8	80%	14	13	93%
21	PLANNING AND DEVELOPMENT	113	89	79%	84	51	61%	127	85	67%	144	97	67%
22	POPULATION WELFARE	176	176	100%	171	171	100%	172	171	99%	196	196	100%
23	SOCIAL WELFARE, WOMEN DEVELOPMENT AND BAIT UL MAL	68	68	100%	57	56	98%	19	18	95%	30	25	83%
24	TRANSPORT	17	2	12%	15	3	20%	15	2	13%	12	3	25%
25	ZAKAT AND USHR	5	5	100%	2	2	100%	4	3	75%	1	1	100%
26	ENERGY	3	3	100%	13	10	77%	20	17	85%	27	20	74%
	TOTAL	**6,318**	**4,318**	**68.3**	**3,934**	**2,869**	**72.9**	**4,476**	**3,086**	**68.9**	**7,382**	**4,868**	**65.9**

Figure 9.2: Punjab – Percentage of climate-relevant projects per provincial department



Figures 9.3 and 9.4 represent the climate-relevant development expenditure of departments using two indicators. The first is the percentage share of climate-relevant actual development expenditure of each department in total climate-relevant actual development expenditure of all departments. The second indicator is the percentage of climate-relevant development expenditure of each department with respect to each department's total BEs. This latter percentage will be applied to actual current expenditure of each department to obtain an estimate of climate-relevant actual current expenditure.

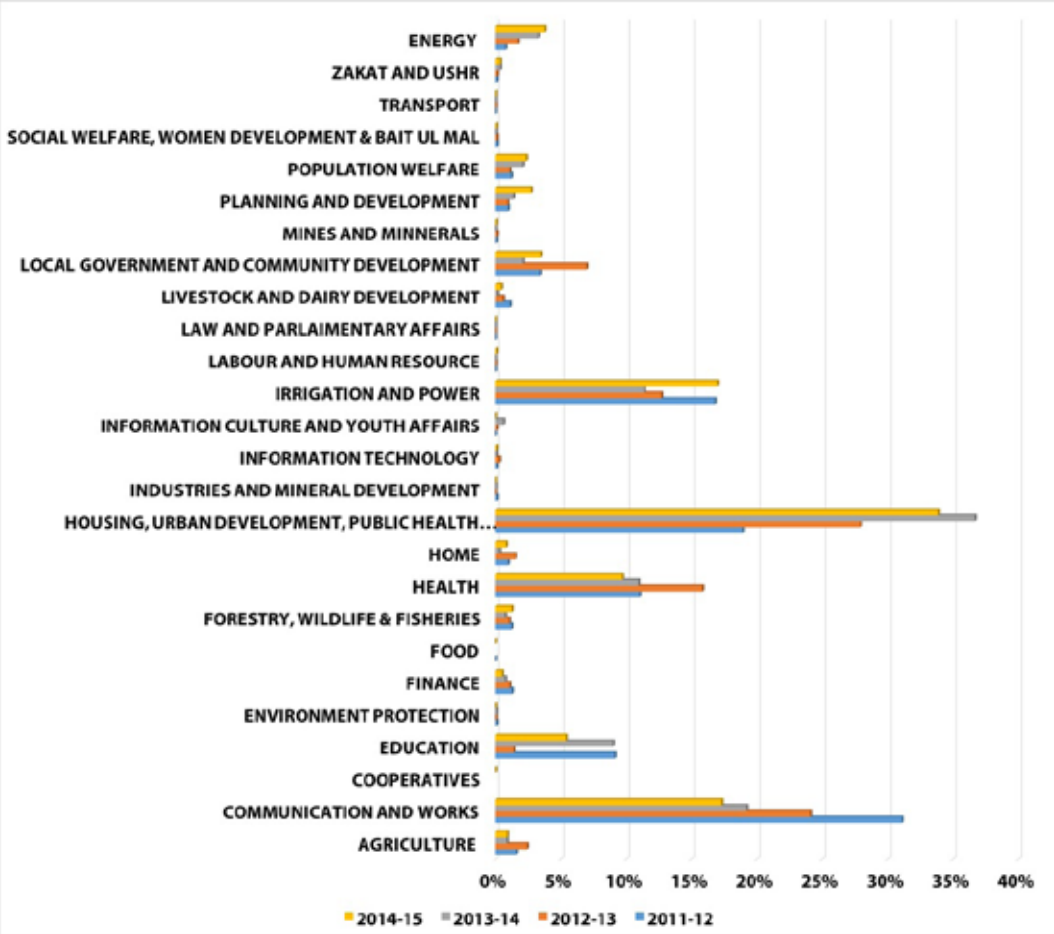
The highlights of the two indicators are:

- With regards to department-wise share in the total provincial climate-relevant expenditure, most departments do not show a clear trend across the four years, except for the departments of Housing, Urban Development and Public Health Engineering (HUD) and Energy.
- Only five Departments namely, Communication and Works, Health (in three out of the four years), Home, HUD and Irrigation and Power have a double-digit share in the province's total climate-relevant expenditure. These together account for nearly 48 to 93 percent of the total climate-relevant investment. However, out of the remaining 21 departments, while four show a consistent annual single-digit share, the rest have less than 1 percent share over most of the four years.
- A structural increase in the share of climate-relevant projects is observed through the four years in HUD, Population Welfare, Zakat and Ushr and Energy. A similar downward shift is observed in other departments namely: Agriculture, Information Technology and Mines and Minerals.
- In relation to the total budget of individual departments, the share of climate-relevant expenditure in the last four years fluctuates but shows no upward or downward trend.

- Extreme fluctuations in the climate-relevant expenditure (in relation to the total budget) of some departments can be explained by lumpiness of investments and nature of projects in the overall development budget of the department.

Notwithstanding the year-to-year variation in the climate-relevant share of individual departments' budgets, it is generally high (in double digits) in Forestry, Health, Home, HUD and Irrigation and Power.

Figure 9.3: Punjab – CC-weighted actual expenditure as a percentage of total sum of CC-weighted actual expenditure

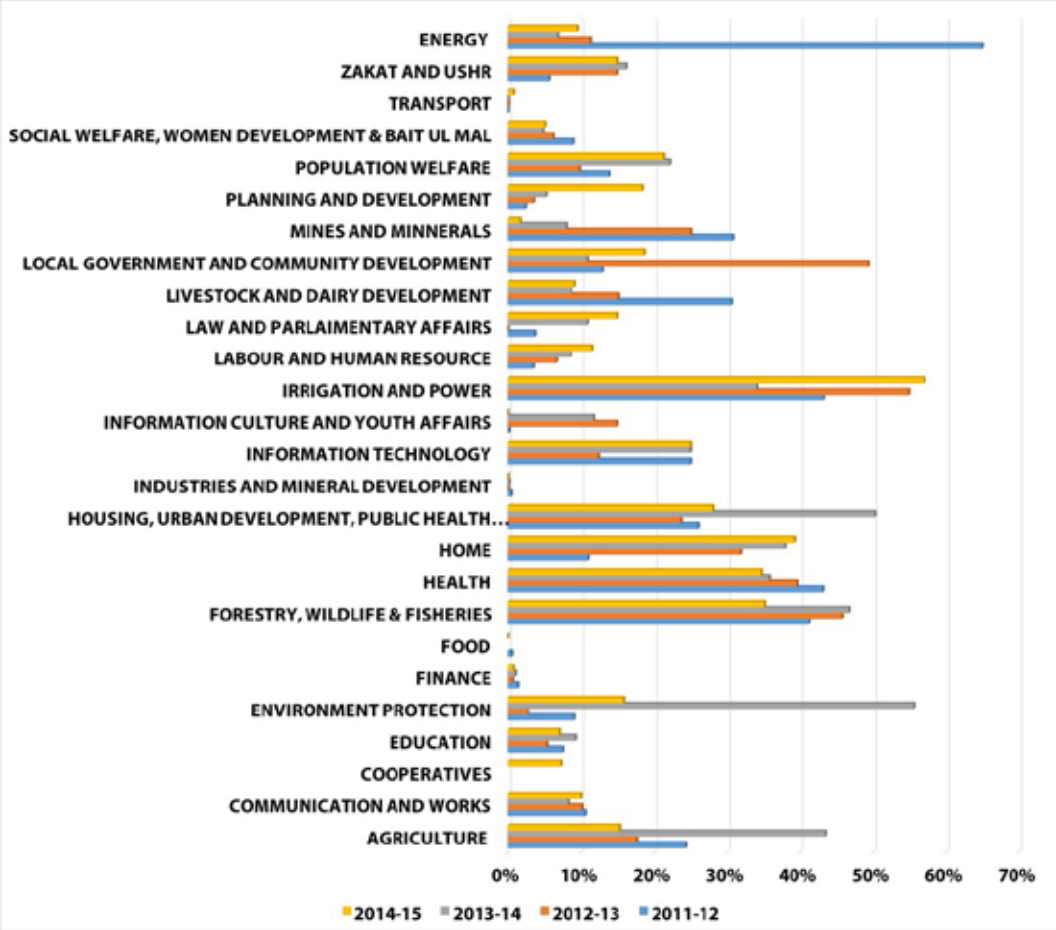


9.3 Climate-relevant expenditure in development and current budget

A summary trend analysis of climate-relevant expenditure in the current and development budget, based on the aforementioned profile of the number of climate-related projects and their associated investment, is presented in table 9.6. Similar to the federal, KP and Balochistan analyses, aggregate investment (development) and current expenditures with a climate dimension in each of the four years is profiled in absolute terms as well as in three key ratios. The three indicators are a) climate-relevant investment expenditure as a ratio of development budget (BEs), b) climate-relevant current expenditure as a ratio of total current expenditure budget, and c) climate-relevant total expenditure (development + current) as a percentage of total provincial budget (development + current).

Investment in projects that have CC benefits show a rising trend from PKR 22.5 billion in 2011/12 to PKR 43.4 billion in 2014/15, at an average annual rate of 24.5 percent, as compared to the corresponding increase of 20.6 percent in the total development budget.

Figure 9.4: Punjab – CC-weighted actual expenditure as a percentage of department's total budgeted expenditure



The ratio of climate-relevant development expenditure to total development expenditure moves in the narrow range of 12.8–14.9 percent during the four years.

Derived climate-relevant current expenditure increased steadily from PKR 31.9 billion in 2011/12 to PKR 69.3 billion in 2014/15, an average annual increase of 29.5 percent, outstripping the average annual growth of 9.1 percent in the current budget. The ratio of climate-relevant current expenditure to total current budget increased steadily from 4.5 percent in 2011/12 to 7.5 percent in 2014/15.

The aggregate (investment + current) climate-relevant budget shows an increasing trend from PKR 54.4 billion in 2011/12 to PKR 112.7 billion in 2014/15, an increase of nearly 107 percent over the four year period. Climate-relevant expenditures are between 6.2 and 9.3 percent as a percentage of the total provincial budget.

Table 9.6: Punjab – Four-year summary analysis				
	2011/12	2012/13	2013/14	2014/15
Development Expenditures (PKR millions)				
CC weighted Actual Development Expenditure (a)	22,490.78	21,334.41	29,070.16	43,400.25
Revised Annual Development Programme (ADP) (b)	165,512.00	166,858.00	224,115.00	290,363.00
Ratio- (a)/(b)	**0.1359**	**0.1279**	**0.1297**	**0.1495**
Current Expenditure (PKR millions)				
CC Weighted Actual Current Expenditure- c	31,876.28	49,585.21	62,140.30	69,303.26
Revised Budgetary Current Expenditure- d	710,386.00	831,584.00	894,506.00	924,163.00
Ratio- c/d	**0.0449**	**0.0596**	**0.0695**	**0.0750**
Total Expenditures (PKR millions)				
CC weighted Actual Development Expenditure	22,490.78	21,334.41	29,070.16	43,400.25
CC Weighted Actual Current Expenditure	31,876.28	49,585.21	62,140.30	69,303.26
Total CC Weighted Actual Expenditures- (e)	**54,367.06**	**70,919.62**	**91,210.46**	**112,703.52**
Revised Annual Development Programme (ADP)	165,512.00	166,858.00	224,115.00	290,363.00
Revised Budgetary Current Expenditure	710,386.00	831,584.00	894,506.00	924,163.00
Total Revised Budgetary Expenditure- (f)	**875,898.00**	**998,442.00**	**1,118,621.00**	**1,214,526.00**
Ratio- (e)/(f)	**6.21%**	**7.10%**	**8.15%**	**9.28%**

9.4 Department-wise climate-relevant expenditure

From a policy angle it is useful to identify departments across time that subsume a major share, implicitly or explicitly, of climate-relevant expenditure in the total climate-relevant budget. Table 9.7 presents the distribution of climate-relevant expenditure across provincial departments over four years. We note the following:

- The CC expenditure share of 5 out of 26 departments, namely Communication and Works, Health, Home, HUD and Irrigation and Power was mostly in double digits.
- Out of 26 departments, the share of 7 to 8 departments was in single digits in most years and the remaining departments accounted for less than 1 percent of the total provincial expenditure related to climate change.

In most departments, there is no consistent trend of increasing or decreasing CC expenditure share over the four-year period.

Table 9.7: Punjab – Department-wise distribution of total climate expenditure (PKR millions)

	Punjab Minisitries/Divisions	2011-12		2012-13		2013-14		2014-15	
		Total CC Expenditures	% Share	Total CC Expenditures	% Share	Total CC Expenditures	% Share	Total CC Expenditures	% Share
1	AGRICULTURE	1,486.33	2.73	1,307.96	1.84	2,721.84	2.98	1,276.62	1.13
2	COMMUNICATION AND WORKS	7,563.26	13.91	5,816.21	8.20	6,197.38	6.79	8,381.61	7.44
3	COOPERATIVES							21.38	0.02
4	EDUCATION	4,023.44	7.40	2,163.82	3.05	5,468.79	6.00	4,832.08	4.29
5	ENVIRONMENT PROTECTION	34.36	0.06	14.03	0.02	119.75	0.13	41.33	0.04
6	FINANCE	1,394.86	2.57	749.68	1.06	1,361.64	1.49	1,101.59	0.98
7	FOOD	401.79	0.74	0.00	0.00	0.00	0.00	0.00	0.00
8	FORESTRY, WILDLIFE & FISHERIES	1,339.11	2.46	1,487.25	2.10	1,627.47	1.78	1,680.93	1.49
9	HEALTH	14,240.91	26.19	15,808.08	22.29	17,720.31	19.43	19,976.81	17.73
10	HOME	7,424.39	13.66	22,108.46	31.17	29,455.91	32.29	34,388.24	30.51
11	HOUSING, URBAN DEVELOPMENT, PUBLIC HEALTH ENGINEERING	4,910.42	9.03	7,086.83	9.99	12,338.68	13.53	18,384.75	16.31
12	INDUSTRIES AND MINERAL DEVELOPMENT	58.47	0.11	7.71	0.01	16.15	0.02	4.07	0.00
13	INFORMATION TECHNOLOGY	25.38	0.05	62.56	0.09	19.85	0.02	41.20	0.04
14	INFORMATION CULTURE AND YOUTH AFFAIRS	1.65	0.00	950.53	1.34	304.48	0.33	0.00	0.00
15	IRRIGATION AND POWER	8,399.46	15.45	8,914.29	12.57	8,705.59	9.54	15,129.49	13.42
16	LABOUR AND HUMAN RESOURCE	9.97	0.02	18.43	0.03	28.18	0.03	63.58	0.06
17	LAW AND PARLAIMENTARY AFFAIRS	46.14	0.08	0.00	0.00	1,422.76	1.56	247.20	0.22
18	LIVESTOCK AND DAIRY DEVELOPMENT	870.96	1.60	491.26	0.69	266.07	0.29	482.34	0.43
19	LOCAL GOVERNMENT AND RURAL DEVELOPMENT	1,079.49	1.99	2,768.98	3.90	889.88	0.98	2,009.52	1.78
20	MINES AND MINNERALS	81.93	0.15	86.53	0.12	26.66	0.03	28.79	0.03
21	PLANNING AND DEVELOPMENT	229.02	0.42	220.60	0.31	432.88	0.47	1,325.48	1.18
22	POPULATION WELFARE	407.42	0.75	356.07	0.50	929.43	1.02	1,355.19	1.20
23	SOCIAL WELFARE, WOMEN DEVELOPMENT AND BAIT UL MAL	63.79	0.12	58.66	0.08	51.27	0.06	63.79	0.06
24	TRANSPORT	0.93	0.00	6.74	0.01	3.42	0.00	33.29	0.03
25	ZAKAT AND USHR	31.33	0.06	51.48	0.07	129.20	0.14	175.78	0.16
26	ENERGY	242.25	0.45	383.45	0.54	972.86	1.07	1,658.47	1.47
	TOTAL	**54,367.06**	**100.00**	**70,919.62**	**100.00**	**91,210.46**	**100.00**	**112,703.52**	**100.00**

9.5 Climate expenditures by themes and tasks

As outlined in Chapter 5, a typology of themes and tasks for CC response activities was developed for this study, based on the themes and classifications given in the National Climate Change Policy. Each project with a climate-relevant component that is accounted for in the ADP development budget lines from 2011/12 to 2014/15, was coded to one task type within the typology. This information, in addition to revealing the proportional expenditure of the budget line on the climate-related component, permitted an identification of overall expenditure within each category of the typology. This analysis was carried out for the four years of Punjab's development expenditure from 2011/12 to 2014/15 and is given in table 9.8.

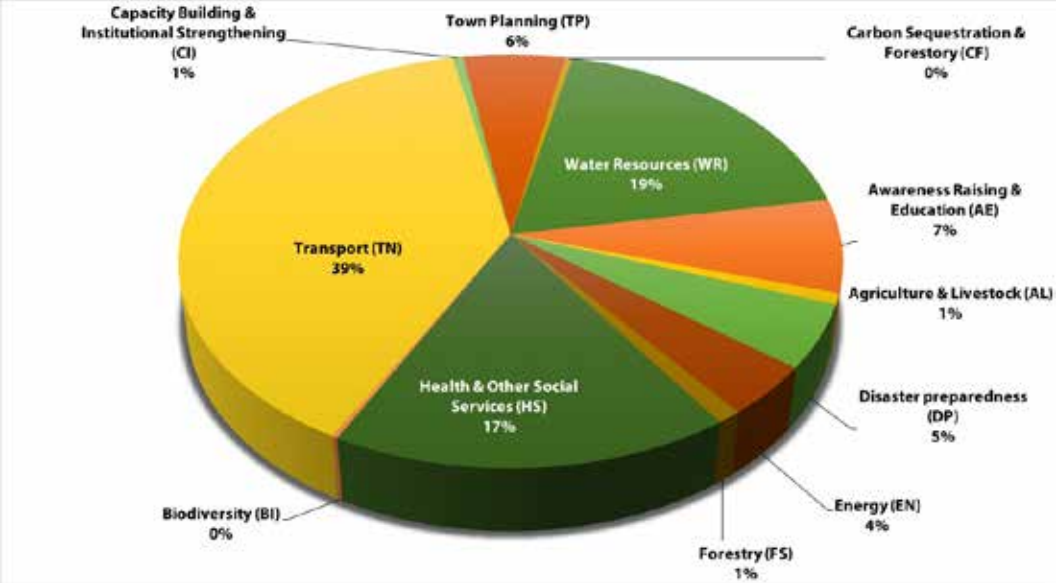
Table 9.8: Punjab – Division of sectors and sub-sectors in the ADP (2011–2015), according to CC tasks and themes

Climate Change Tasks				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Awareness Raising & Education (AE)	8%	3%	9%	7%
Agriculture & Livestock (AL)	2%	3%	1%	1%
Biodiversity (BI)	0%	0%	0%	0%
Carbon Sequestration & Forestry (CF)	1%	1%	1%	0%
Capacity Building & Institutional Strengthening (CI)	2%	1%	1%	1%
Disaster Preparedness (DP)	6%	5%	5%	5%
Energy (EN)	1%	2%	3%	4%
Forestry (FS)	0%	0%	0%	1%
Health & other Social Services (HS)	20%	28%	19%	17%
Transport (TN)	32%	33%	45%	39%
Town Planning (TP)	10%	10%	4%	6%
Water Resources (WR)	19%	14%	12%	19%
Vulnerable Ecosystem (VE)	0%	0%	0%	0.03%
Total	100%	100%	100%	100%
Climate Change Themes				
Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Adaptation	76%	69%	61%	63%
Mitigation	14%	27%	29%	30%
Supporting	10%	4%	10%	8%
Total	100%	100%	100%	100%

Adaptation				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Agriculture & Livestock (AL)	3%	5%	2%	1%
Biodiversity (BI)	1%	1%	0%	0%
Disaster Preparedness (DP)	8%	7%	7%	8%
Forestry (FS)	0%	0%	0%	2%
Health & other Social Services (HS)	26%	40%	31%	28%
Transport (TN)	38%	27%	40%	31%
Water Resources (WR)	25%	20%	20%	30%
Vulnerable Ecosystem (VE)	0%	0%	0%	0.05%
Total	100%	100%	100%	100%
Mitigation				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Carbon Sequestration & Forestry (CF)	5%	3%	2%	1%
Energy (EN)	6%	7%	12%	14%
Transport (TN)	21%	54%	72%	66%
Town Planning (TP)	68%	37%	14%	19%
Total	100%	100%	100%	100%
Supporting				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Awareness Raising & Education (AE)	82%	84%	89%	93%
Capacity Building & Institutional Strengthening (CI)	18%	16%	11%	7%
Total	100%	100%	100%	100%

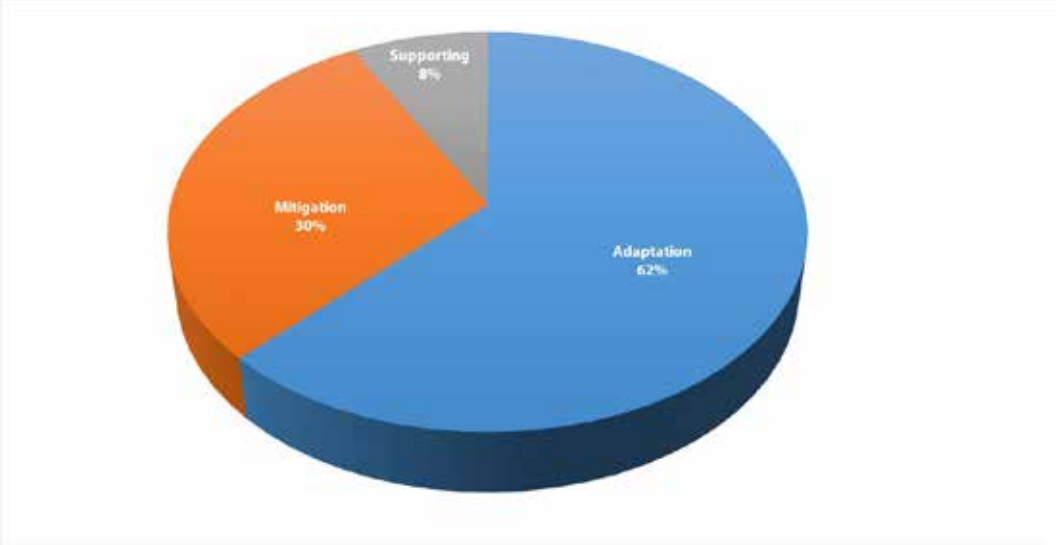
The allocation of expenditures to climate-related tasks was broad for the overall ADP of 2014/15, with transport sector (39 percent of total climate component of the ADP), water resources (19 percent), health & other social services (17 percent), awareness raising & education (7 percent), town planning (6 percent), and disaster preparedness (5 percent), accounting for over 90 percent of the total climate-relevant investment. There were other smaller allocations of around 1–4 percent to a variety of other climate-relevant tasks, including energy, capacity building and institutional strengthening, agriculture and livestock, whereas biodiversity and carbon sequestration and forestry were less than (1 percent) as highlighted in figure 9.5.

Figure 9.5: Punjab – Complete allocations of 2014/15 development budget expenditures to climate-relevant tasks



The assigned typology further breaks down the development expenditures into different climate change themes — mitigation, adaptation, and supporting activities — that are enablers of CC response. The analysis of the 2014/15 development budget showed that adaptation contributed the most to the climate budget (62 percent of the total climate-relevant investment), followed by mitigation activities at 30 percent, and supporting at 8 percent, suggesting that nearly two-thirds of climate-relevant activities in Punjab had an adaptation component (Figure 9.6).

Figure 9.6: Punjab – Allocation of expenditure to climate-relevant themes in ADP, 2014/15



Relevant expenditures under the adaptation theme were mainly formed by tasks involving transport and water resources (31 and 30 percent respectively of total adaptation response budget), health and social services (28 percent) and disaster preparedness (8 percent). Forestry, agriculture and livestock, and biodiversity tasks altogether accounted for only around 3 percent of the adaptation response investment (Figure 9.7a).

Mitigation-related expenditure made up 30 percent of the climate-relevant component of the development budget for 2014/15 (Figure 9.6). This was mostly contributed by activities in transport (66 percent of the total mitigation response allocation), town planning (19 percent) and energy (14 percent), while carbon sequestration and forestry activities contributed just 1 percent towards the total mitigation investments (Figure 9.7b). The focus on mitigation theme allocations varies widely among the federal and provincial budgets, as mitigation was the largest theme in federal budget at 63 percent while the corresponding figure in Punjab is at 30 percent, and the lowest was observed in KP and Balochistan at 14 percent for each.

The CC supporting activities theme has emerged as the lowest one in terms of budgetary allocations in the year 2014/15 (Figure 9.6). Major contributions to this response theme came from the sub-sector of awareness raising and education (93 percent of the total supporting activities in development budget) while the rest was contributed by the sub-sectors of capacity building and institutional strengthening (7 percent) (Figure 9.7c).

Figure 9.7a: Punjab – Allocation of climate-relevant expenditure to tasks in 2014/15 development budget (adaptation theme)

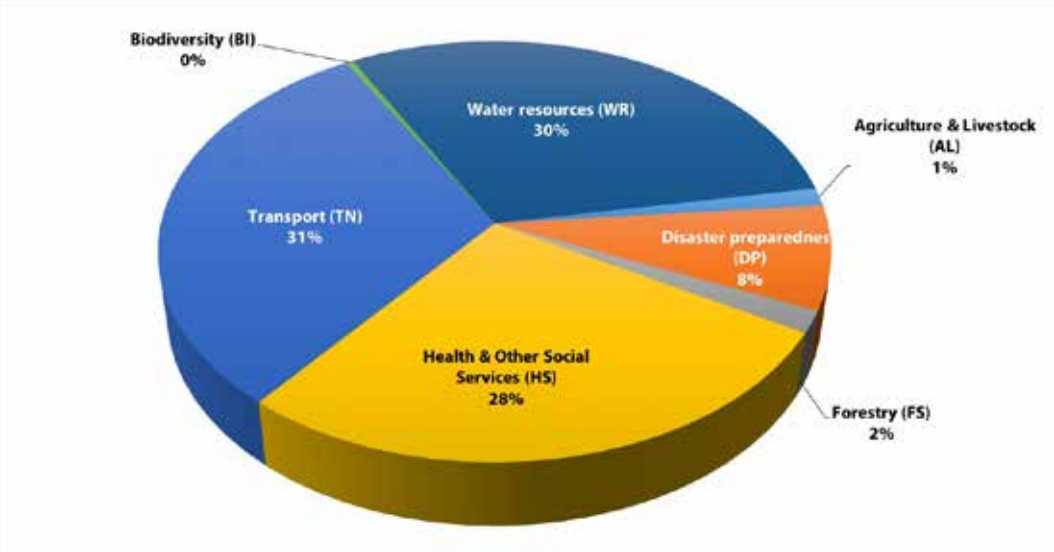


Figure 9.7b: Punjab – Allocation of climate-relevant expenditure to tasks in 2014/15 development budget (mitigation theme)

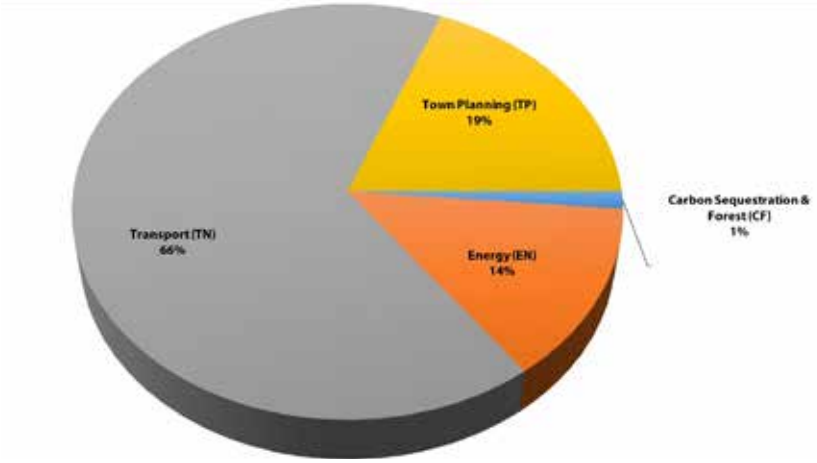
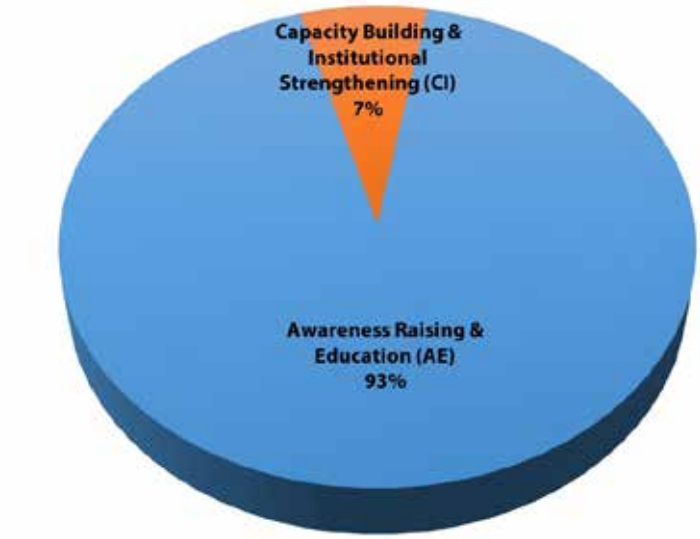
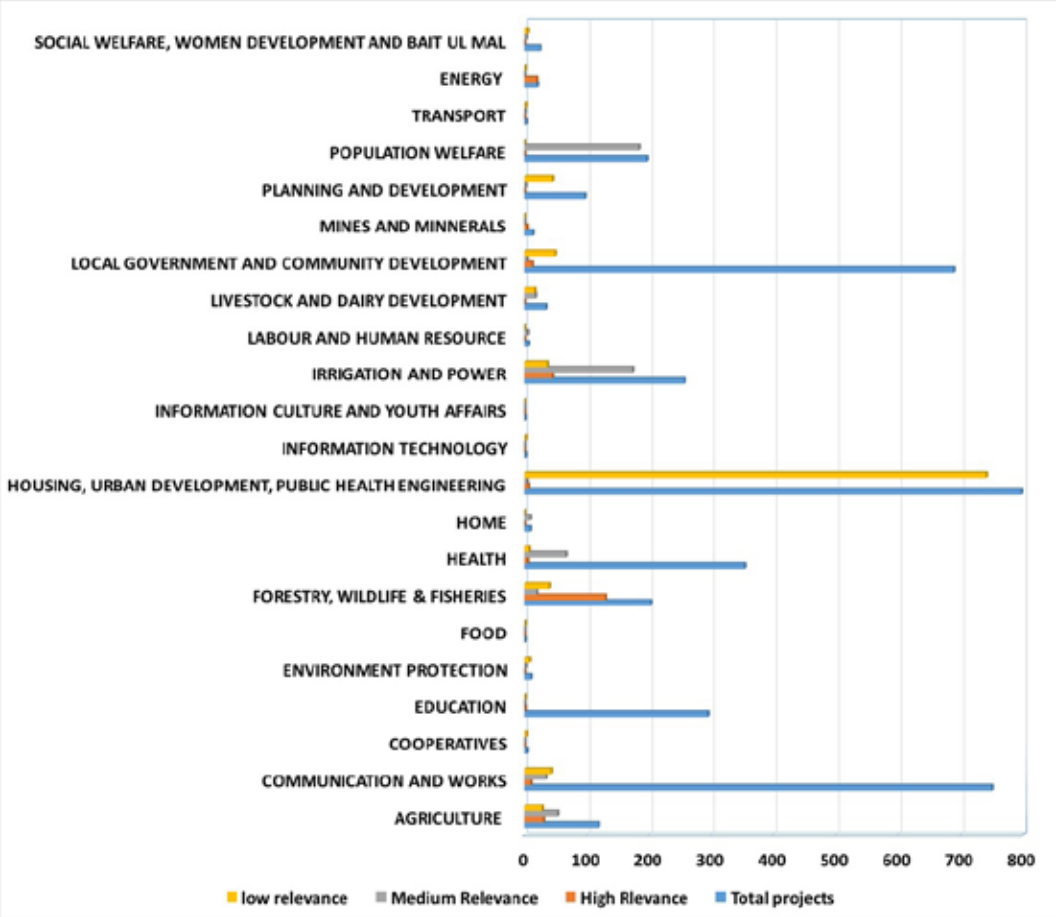


Figure 9.7c: Punjab – Allocation of climate-relevant expenditure in 2014/15 development budget (supporting actions theme)



For the development budget of 2014/15, climate-relevant projects were analysed, and then categorized into high (75–100 percent CC weight of a project), medium (50–74 percent CC weight), low (25–49 percent) and marginal (>24 percent) relevance. The result, when viewed from CC weight lens, showed that out of 26 departments, 10 departments had at least one project at 75 percent or more CC relevance (Figure 9.8). This includes Energy, Mines and Minerals, Local Government and Rural Development, Irrigation and Power, Forestry, HUD, Communication, Education, Health and Agriculture Departments.

Figure 9.8: Punjab – Distribution of climate-relevant investment expenditures in relevant government institutions



9.6 Punjab provincial institutional assessment

9.6.1 Policy instruments and mechanisms

The Punjab Environment Protection Act, 1997, which was amended in 2012, provides the legislative framework for environment protection and climate change at the provincial level. The Punjab Environment Policy, 2015 is the main policy directive on environmental issues and their management in the province, and covers issues of climate change and ozone depletion under the wider umbrella of environment protection. On the basis of the recommendations of the Punjab Environment Policy, a Punjab Climate Change Policy and Action Plan is under formulation, in-sync with objectives of the National Climate Change Policy, 2012. A Steering Committee, chaired by the Planning and Developing (P&D) Department and constituting membership from concerned line departments, has been set-up to guide the development of Punjab's Climate Change Policy.

The institutional mandate for environment and climate change rests with the Punjab EPA that is currently under the administrative control of the Environment Protection Department. The Punjab EPA is responsible for implementing environmental laws and regulations in the province and initiating environmental impact assessments and examinations in the formulation of public sector development projects. Currently, the EPA is guided by the older Federal Review of IEE and EIA Regulations 2000, although efforts are underway to enact the newer 2016 Regulations, which are in sync with the amended Punjab Environment Protection Act.

In addition to the Environment Protection Department, Punjab's P&D Department also plays an important role in coordinating provincial climate change processes. As mentioned, the P&D Department is steering development of Punjab's Climate Change Policy in collaboration with the EPA, and has also established a Climate Change Cell to facilitate CC-related coordination and planning. The P&D Department has also created a position for Member Climate Change to oversee working of the CC Cell.

As with other provinces, the P&D and Finance Departments play an important role in enabling provincial climate action and investment, given their role in developing and financing the provincial ADP.

In addition, several sectoral departments including Agriculture; Irrigation; Energy; and Forest, Wildlife & Fisheries etc. are important actors in terms of provincial climate action and governance. While some of these institutions have started highlighting climate change risks and vulnerabilities in their respective policy documents (e.g. Agriculture Policy of Punjab), and have also contributed to national calls for GCF and INDC submissions, more active and meaningful engagement on a climate change adaptation and mitigation agenda at a sectoral level is still lacking. Generally, the Punjab Growth Strategy 2018 serves as an overarching platform for highlighting and aligning cross-sectoral development plans and priorities of the provincial government under one framework. Focusing mainly on the promotion of inclusive economic growth and improving social services, the Punjab Growth Strategy does touch upon the issue of climate change, albeit quite lightly and in the context of safeguarding agricultural productivity alone.

9.6.2 Coordinating and mainstreaming climate change in Punjab

Existing arrangements for coordinating climate change policy response in Punjab appear to be divided between the P&D and Environment Protection Department (EPD). While the P&D Department is steering development of the provincial Climate Change Policy, the EPD is mandated to serve as a focal point for facilitating Punjab's engagement with the Green Climate Fund (GCF) and other national and international climate mechanisms. As such, the EPD is responsible for arranging provincial systems and capacities needed to access global climate finance and effectively participate in wider international processes. However, considering that the EPD has historically remained occupied with the promotion of environmental standards and regulations at the provincial level and has very limited experience with climate change planning and financing, the institution is considerably constrained in its capacity to deliver the said functions. But fortunately EPD fully realised its capacity gaps and working on a comprehensive plan to enhance its technical and professional capacity in the area of climate change. Thus, in the future it should be able to provide needed assistance and guidance to other sectoral departments and institutions to understand and more importantly integrate this multidimensional challenge into their programmes.

Extensive involvement of the P&D Department in climate change policy planning can provide impetus for mainstreaming climate change concerns in central provincial planning, particularly in the formulation of public sector development projects under the provincial ADP. This is already being attempted in the case of Sustainable Development Goals (SDGs) that are also administered through the P&D Department in Punjab. Additional fields have been added to the ADP project formulation format (PC-I) to link proposed projects with respective objectives of the SDGs and Punjab's Growth Strategy. Similar steps could be attempted by the newly established Climate Change Cell to link climate change concerns with investment plans and programmes across concerned line departments.

Another development that spurred provincial policy action on climate change was the establishment of a Climate Change Commission in September 2015 on the directive of Lahore High Court to ensure effective uptake of the NCCP 2012, and the Framework for Implementation of Climate Change Policy in the province. The 21-member Commission is headed by Advocate Dr Pervaiz Hasan and its members include secretaries of federal Ministries of Climate Change Water and Power, Finance, Planning and Development, Director General (DG) of NDMA, DG of International Organization/Climate Change at

the Ministry of Foreign Affairs. Provincial secretaries of irrigation, agricultural, food, forest, health and environment protection departments and Director of Provincial Disaster Management Authority, are also included as members along with some non-government members. This platform has played a significant role in driving cross-sectoral participation in provincial climate change policy planning, and bringing key departments and agencies on the table. A provincial steering committee on climate change has been presenting recommendations to the provincial government to redress the threats posed by climate change, based on deliberations with local experts from academia, civil society, concerned officials from government line departments, media and local communities.

9.7 Findings and conclusions

- Total climate-relevant spending in Punjab increased from PKR 54.4 billion in 2011/12 to PKR 112.7 billion in 2014/15, an increase of nearly 107 percent. Climate-relevant expenditure represents between 6.2 and 9.3 percent of the total provincial budget.
- Between 13 and 15 percent of Punjab's development budget is climate-related. Over the studied years, the rate of annual increase in climate-related development investment was marginally higher than that of the overall development budget (24.5 percent compared to 20.6 percent).
- The provincial ADP covers development projects in a wide range of sectors. Climate-relevant projects make up 66–73 percent of development expenditure lines (compared to 47.8–63 percent at the federal level), with over half the projects at several government institutions deemed climate-relevant. This suggests that climate-relevant projects and investments are common and widely spread across the provincial government's portfolio.
- ADP climate expenditure across the studied years is relatively stable in terms of average climate relevance of each department. However, the proportion of climate-related investment per department fluctuates in most of the departments. In most of the studied years, Forestry, Health and Irrigation and Power, spent 24–57 percent of their budgets on climate-relevant investments
- The allocation of expenditure to climate-relevant tasks was broad for the overall ADP of 2014/15, with transport (39 percent of total climate component of the ADP), water resources (19 percent), health and social services (17 percent), awareness raising & education (7 percent), disaster preparedness (5 percent), energy (4 percent), accounting for 97 percent of the total climate-relevant investment.
- Analysis of the 2014/15 development budget shows "adaptation" to be the dominant theme in Punjab's CC budget, making-up 62 percent of the total climate-relevant investment. Adaptation expenditure mainly constituted tasks involving transport and water resources (31 and 30 percent respectively of total adaptation response budget). While remaining budget involves health and social services (28 percent), disaster preparedness (8 percent), and forestry, agriculture and livestock and biodiversity together 3 percent.
- The "Mitigation" theme emerged as the second most significant, in terms of budgetary allocations in the year 2014/15. The major contribution to this theme came from the transport sub-sector (representing 66 percent of the total mitigation activities in the development budget) while the rest was contributed by town planning (19 percent) and energy (14 percent).
- "Supporting activities" expenditure received the lowest allocation of around 8 percent from the development budget of 2014/15. This was mostly contributed by activities in awareness raising and education (93 percent of the total supporting response allocation) and capacity building and institutional strengthening (7 percent of the total supporting theme).
- A Punjab Climate Change Policy and Action Plan is under formulation, as per recommendation of the Punjab Environment Policy, 2015 which remains the main policy directive on environmental issues (including climate change) in the province.
- Supplementing the EPD's role as provincial climate change planner and coordinator, Punjab's P&D Department provides stewardship on climate change policy planning and mainstreaming at the provincial level and has established a provincial Climate Change Cell to facilitate the process.
- Once the implementation of UNDP proposed climate change financing framework gets underway, it is recommended that next editions of climate expenditure reviews should begin to address the issues of a) adequacy of CC funding, b) allocative efficiency across CC themes and c) assess efficiency and effectiveness in the use of public resources in different sub-sectors. In the context of climate change, instruments to measure adequacy for funding need to be developed/programmed and KPIs for

inputs, output, impact and outcome are required to monitor the projects/programmes and assess their efficiency and effectiveness over the medium to long-run. In this regard, the under formulation Punjab Climate Change Policy can guide in assessing adequacy and developing a checklist of KPIs.

- A comprehensive study be undertaken to assess the carbon footprints of Public sector climate negative activities at federal and provincial levels.
- As with the efforts made by the P&D Department to mainstream Sustainable Development Goals (SDGs) and targets of the Punjab Growth Strategy into ADP project formulation format (PC-I), involvement of the P&D Department in climate change planning and coordination can provide impetus for mainstreaming climate change goals and targets in central development planning processes.

CHAPTER 10 – SINDH CLIMATE CHANGE BUDGET AND INSTITUTIONAL ASSESSMENT

10.1 Provincial budget overview

The province of Sindh is the most urbanized and second-largest province of Pakistan in terms of population. Karachi, its capital, is the largest city in the country, contributing 10 percent of the total population. Sindh is also the commercial and industrial hub of the country situated on the Arabian Sea with two sea ports. This natural and historic advantage allows Sindh to generate a majority of revenues in the shape of custom duties and income tax. As the mechanism for sharing the federal revenues is predominantly based on population shares of the province, Sindh receives the second highest share of federal divisible revenues. A brief overview of provincial finances for the four years under study is presented, followed by a more detailed climate change budget analysis and an examination of allocations to mitigation and adaptation-related activities.

The Sindh budgetary profile is based on the Sindh Finance Department's publication, the "Annual Budget Statement" for four years — 2011/12 to 2014/15 — and is detailed in table 10.1. Focusing on revised total budgetary expenditures (development and current), the size of the budget increased from PKR 549.6 billion to PKR 676.6 billion at an AAGR of 7.1 percent. The annual growth in expenditures (budgeted or revised) was in the range of 4.4–25.2 percent during the last three years. The average annual growth in nominal expenditures is below the average national inflation rate of 8.1 percent recorded during the same period. Comparing budgeted expenditure with revised expenditure (RE), the latter was lower than the former in three out of the four years. The trend for revised expenditures is more stable than the trend for budgeted expenditures and suggest a tendency of overestimation for the first round of expenditure estimates.

Table 10.1: Sindh – Macro view of budgeted and revised expenditures (PKR millions) 2011/12–2014/15

Year	Budgeted Expenditures (BE)	Percentage changes in Budgeted Expenditures	Revised Expenditures (RE)	Percentage changes in Revised Expenditures
2011/12	522,138		549,649	
2012/13	653,671	25.2	591,155	7.6
2013/14	703,561	7.6	637,732	7.9
2014/15	734,573	4.4	676,632	6.1

During these four years, the share of provincial current expenditure out of the total provincial expenditures was in the range of 72–77 percent, slightly lower than the percentage spent by the Federal Government. Sindh has slightly more fiscal space to spend on development activities as compared to the Federal Government or Punjab province. In contrast, the AAGR of development expenditures (RE), or ADPs, was -0.3 percent, almost stagnant in the last four years as compared to the corresponding rate of current expenditure increase of 9.8 percent during the last four years. Table 10.2 gives a summary breakdown of the percentage shares of the revised estimates of provincial expenditures under broad expenditure heads.

Table 10.2: Sindh – Share of main expenditure heads in revised provincial budget

	2011/12	2012/13	2013/14	2014/15
Current expenditure				
General Administration Depts.	32	22	23	27
Law and Order Depts.	11	12	13	14
Economic Affairs	9	10	8	11
Health	6	8	7	8
Education	14	24	22	24
Others (Soc. Protection, Housing, Recreation, Environ)	1	2	2	3
Debt Servicing (Federal + Commercial Bank Loans)	2	3	4	2
Financial Transfers and Investments	5	1	2	3
State Trading (Food +Misc.)	19	19	18	9
Current expenditure as percentage of total expenditure	72	76	76	77
Annual development programme as percentage of total expenditure	28	24	24	23

Between 22 and 32 percent of the current expenditure (revenue and capital) is spent on administration of the province, including transfers to district governments and local councils. It declined by five percentage points during the four year period. Subsidies on agriculture produce and debt servicing charges were 21-22 percent in the first three years of the study, halving to 11 percent in 2014/15, mainly due to decline in federal dues on food subsidies. Though, health expenditures' stagnated, the expenditures on Education witnessed a structural upward shift of nearly 10 percentage points from 2012/13 onwards. If the savings in General Administration and State Trading can be sustained, more resources can be channelled into social sector programmes including health and climate change.

10.1.1 Financing of the ADP

During 2012–2015, 23–28 percent of the provincial budget was spent on investments activities or annual development programme. From its share of the divisible pool (internal resources) after meeting current expenditure, the province generated surpluses that were equivalent to 79–102 percent of the annual ADP size. However these surpluses were offset by deficits on capital account (Other Receipts) in two of the four years, leading to dependence on federal grants plus foreign funding to the tune of 20–37 percent for financing ADP.[84] Similar to Punjab, all the external resources in Sindh are accrued in the form of loans. The contribution of various heads in table 10.3 brings this out more clearly.

Sindh's revenue sources are presented in table 10.4. Resource transfers from the Federal Government under the NFC Award increased from PKR 313.5 billion in 2011/12 to PKR 413.5 billion in 2014/15. They have increased at an average annual rate of 9.7 percent during the four year period. The province's dependence on federal transfers ranged from 73 to 76 percent of its total revenue receipts, higher than the corresponding figures of Punjab. Note that similar to KP and Balochistan, federal transfers are made to Sindh under non-tax revenue and grants, the former as Natural Gas and Petroleum charges.

84 Other Receipts=Net Capital Receipts + Net Public Accounts Receipts

Table 10.3: Sindh – Sources of ADP financing

	2011/12	2012/13	2013/14	2014/15
Percentage of Internal Resources				
Provincial Contribution (Rev. Surplus/Deficit)	79	91	102	84
Provincial Contribution (other Receipts)	13	-2	-11	7
Federal Assistance (Development Grants)	-	11	9	8
Percentage of External Resources				
Loans	-	100	100	100
Share of Internal Resources in Total Resources	80	84	87	81
Share of External Resources in Total Resources	0	26	17	12
Share of Cash Balances to Total Resources	20	-10	-5	6
Size of ADP as a percentage of available total resources	93	113	112	110

The province's capacity to generate provincial resources increased from PKR 85.5 billion to PKR 128.0 billion during 2012–2015, at an AAGR of 15.7 percent. The growth in provincial tax and non-tax revenue increased at an annual rate of 19.7 and -0.8 percent respectively in four years. The share of provincial revenues in overall receipts has remained stagnant at 20–23 percent during the four years under study similar to Punjab. In essence, the growth in revenues generated within the province is nearly 30 percent higher as compared to growth in federal transfers and it has mainly come from 40 percent growth in tax revenues. The share of tax revenues increased from 73-78 percent range to 86-89 percent range in the last two years. Given that Karachi is the largest city and commercial hub of Pakistan, a considerable potential exists for increasing non-tax revenues through equitable user charges and financing health, social protection, housing and climate change.

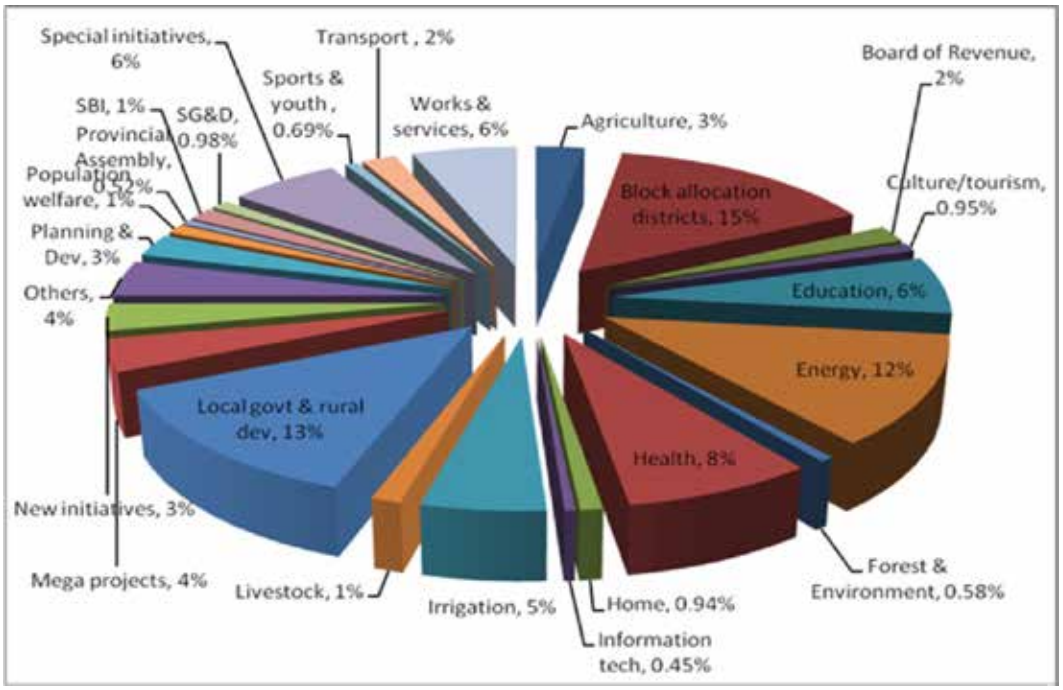
Table 10.4: Sindh – Federal transfers and provincial revenues (PKR millions)

	2011/12	2012/13	2013/14	2014/15
A. Federal Transfers	313,475	325,777	380,342	413,511
Tax Revenue	267,839	278,075	315,741	361,951
Non-Tax Revenue	45,636	47,703	64,602	51,560
B. Federal & Foreign Grants	19,915	24,490	19,118	26,754
C. Provincial Revenues	82,500	100,712	100,079	127,975
Tax Revenue	64,043	73,296	89,220	109,940
Non-Tax Revenue	18,458	27,416	10,859	18,035
Total Revenue Receipts	415,891	450,980	499,539	568,241
Percentage of Federal Transfers:				
Tax Revenue	85	85	83	88
Non-Tax Revenue	15	15	17	12
Percentage of Provincial Revenues:				
Tax Revenue	78	73	89	86
Non-Tax Revenue	22	27	11	14
Federal transfers as percentage of total revenue receipts	75	73	76	73
Federal & Foreign Grants as a % of total revenue receipts	5	5	4	5
Provincial Revenues as a percentage of total revenue receipts	20	22	20	23

10.1.2 ADP sector allocations

The development budget of Sindh encompasses a broad range of sectors, as shown in Fig 10.1 presenting sector-wise allocations of the ADP for FY 2014/15. Out of a total allocation PKR 168 billion, a significant share of allocations went towards projects for rural development (13 percent), energy (12 percent) and social service delivery including health and education (8 percent and 6 percent, respectively. Other important sectors for public investment included block allocations for district development projects at 14 percent, special initiatives (6 percent), works and services (6 percent) and irrigation (5 percent).

Figure 10.1: Sindh – Overall ADP sector allocation for 2014/15



10.2 Climate programmes and budgets

A four-year profile and shares of climate-related projects and programmes by ministry and department is filtered from the total number of projects and programmes given in CGA database and presented in table 9.5. The methodology for identifying all climate-related projects and programmes in the development budget is similar to the one adopted at the federal level for CC-related projects belonging to exempt/ self-accounting entities calculated from data in PSDP. The source for Sindh's budget, revised estimates and actual current expenditure data is CGA. The actual development expenditure calculated from Sindh's PSDP documents used the following approach. The formula was the difference of "actual expenditure till the end of the fiscal year *t*" minus the "actual expenditure till the end of the fiscal year *t-1"* from two consecutive PSDP publications. This was calculated and treated as actual expenditure in year *t*. The Sindh department of finance official indicated that the actual expenditure till the end of the fiscal year *t* is an estimate as it is an extrapolation on nine-month actual expenditure. This renders the actual expenditure calculated from PSDP source during the year also an estimate. However it is close to actual expenditures in many cases. Allocations during the year against each project are considered equivalent to BEs.

The main findings from the summary table 10.5 are:-

- Overall, the percentage of climate-relevant projects out of total projects ranged from 82 to 88 percent during the four years. This is higher compared to the proportion at the federal level that ranged from 47.8 to 56.4 percent, and also higher than observed in Punjab, but slightly lower than the proportions observed in Balochistan and KP.
- In 12 out of 25 departments reviewed, the proportion of climate-relevant projects exceeded 80 percent of total departmental projects and remained consistently high across the four years. Also the proportion of climate-relevant projects exceeding 50 percent of the total was in the range of 16–19 out of 25 departments during the four years.
- Industry and Information Science and Technology consistently showed climate-relevant projects at less than 50 percent of the departmental total in all the four years. The climate-relevant projects in Fuel and

Energy and Women Development were less than 50 percent of the departmental total in two out of four years.

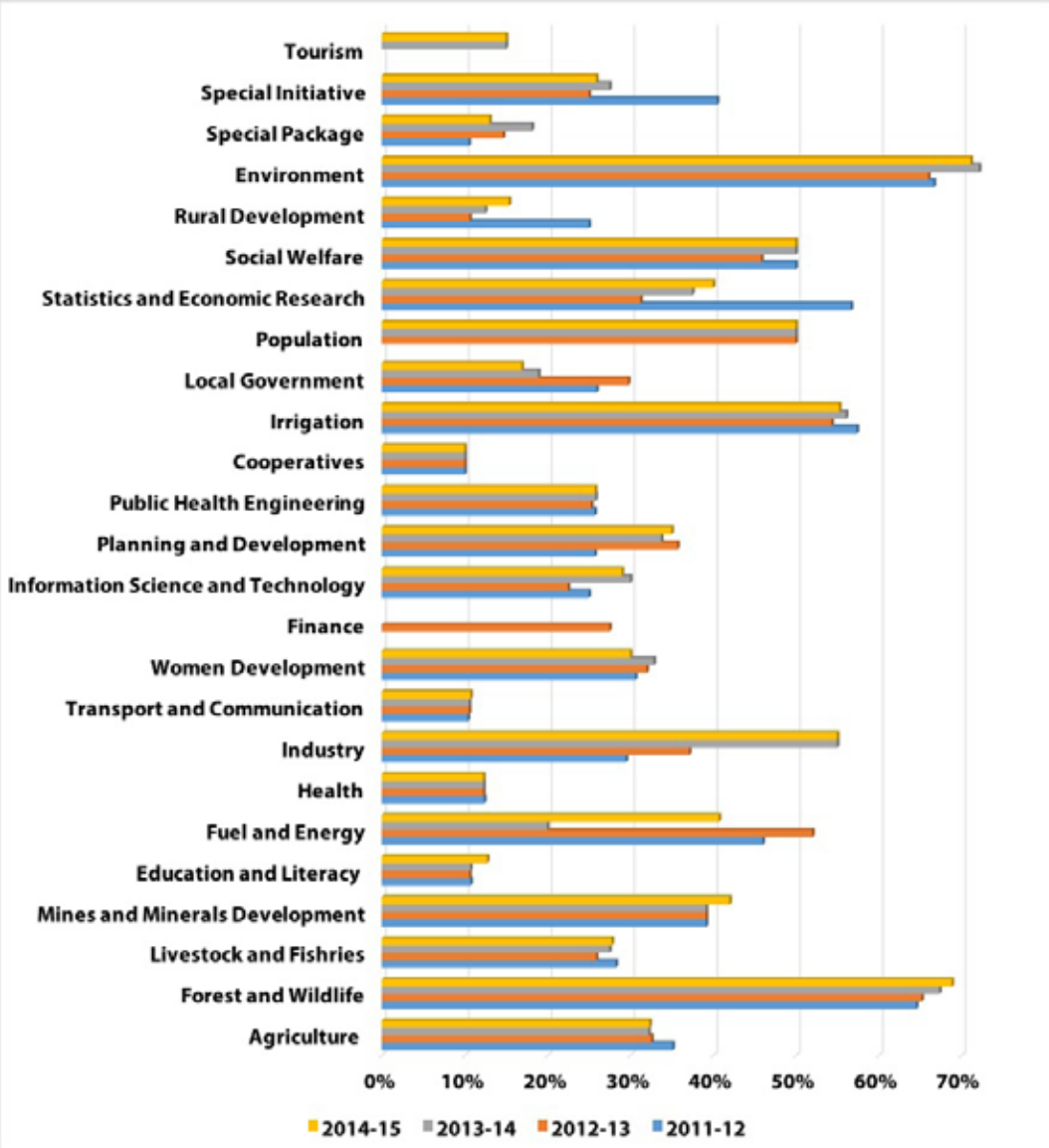
- The variability in proportion of climate-relevant projects across ministries and years is relatively less than that observed at the federal level and at other three provinces.

Figure 10.2 shows the average climate relevance of each department for the four years. The average is the sum of climate relevance weight assigned to the investment of each climate-relevant project divided by the number of projects/programmes in each ministry. As a summary measure, it also profiles the ministries that undertake projects with strong, significant and weak climate dimensions, and how that strength has varied over the four-year period. Out of 24 departments, mean relevance weight varies relatively more in only four departments, namely Fuel and Energy, Industry, Statistics and Research, and Special Initiatives. A stylistic comparison between the mean relevance of departments across the three provinces indicates that the fluctuation in this indicator is less compared to corresponding fluctuations in other provinces. Fluctuations in the mean relevance weight occur due to the occasional execution of non-normal projects or the size of projects.

Table 10.5: Sindh – Climate-relevant projects

	Sindh Ministries/Divisions	2011/12			2012/13			2013/14			2014/15		
		Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%	Total # of Projects	Total # of CC-related Projects	%
1	Agriculture	42	39	93%	41	39	95%	39	36	92%	33	30	91%
2	Forest and Wildlife	22	22	100%	28	27	96%	17	17	100%	13	13	100%
3	Livestock and Fisheries	30	29	97%	28	28	100%	28	28	100%	26	25	96%
4	Mines and Minerals Development	10	6	60%	13	6	46%	10	6	60%	8	5	63%
5	Education and Literacy	104	97	93%	158	149	94%	152	143	94%	379	356	94%
6	Fuel and Energy	24	10	42%	35	20	57%	24	10	42%	37	21	57%
7	Health	122	116	95%	155	146	94%	181	176	97%	210	203	97%
8	Industry	33	10	30%	25	7	28%	6	1	17%	11	1	9%
9	Transport and Communication	600	598	100%	1012	1006	99%	761	740	97%	705	690	98%
10	Women Development	20	8	40%	20	10	50%	16	7	44%	16	9	56%
11	Finance				4	2	50%						
12	Information Science and Technology	20	4	20%	25	6	24%	9	3	33%	16	5	31%
13	Planning and Development	11	7	64%	15	7	47%	20	12	60%	14	9	64%
14	Public Health Engineering	158	84	53%	223	117	52%	233	120	52%	123	58	47%
15	Cooperatives	1	1	100%	1	1	100%	1	1	100%	1	1	100%
16	Irrigation	110	91	83%	162	147	91%	219	205	94%	309	296	96%
17	Local Government	18	16	89%	22	21	95%	220	133	60%	253	183	72%
18	Population				5	4	80%	3	2	67%	3	1	33%
19	Statistics and Economic Research	8	6	75%	6	4	67%	32	6	19%	54	6	11%
20	Social Welfare	9	8	89%	13	12	92%	8	7	88%	8	7	88%
21	Rural Development	7	4	57%	12	8	67%	9	6	67%	22	14	64%
22	Environment	6	6	100%	10	10	100%	14	14	100%	9	9	100%
23	Special Package	20	20	100%	51	43	84%	97	56	58%	34	30	88%
24	Special Initiative	15	10	67%	6	4	67%	11	10	91%	11	11	100%
25	Tourism							11	1	9%	15	1	7%
	Total	1,390	1,192	86%	2070	1824	88%	2121	1740	82%	2310	1984	86%

Figure 10.2: Sindh – Percentage of climate-relevant projects per provincial department



Figures 10.3 and 10.4 represent the climate-relevant development expenditure of departments using two indicators. The first is the percentage share of climate-relevant actual development expenditure of each department in total climate-relevant actual development expenditure of all departments. The second indicator is the percentage of climate-relevant development expenditure of each department with respect to each department's total BEs. This latter percentage will be applied to actual current expenditure of each department to obtain an estimate of climate-relevant actual current expenditure.

The highlights of the two indicators are:

- With regards to department-wise share in the total climate-relevant expenditure, most departments do not show a clear trend across the four years. This indicates weak prioritization of climate-related investment expenditures, across years and sectors.
- Only Irrigation Department has a double-digit share in all the four years in the province's total climate-relevant expenditure. The others with double-digit shares are: Fuel and Energy (one year), Health, Transport and Communications (2 years) and Special Initiatives (3 years). Irrigation account for nearly 21 to 39 percent of the total climate-relevant investment. However, out of the remaining 20 departments, while four show a consistent annual single-digit share, the rest have less than 1 percent share over most of the four years.
- In relation to the total budget of individual departments, the share of climate-relevant expenditure in the last four years fluctuates on a yearly basis and shows no upward or downward trend.
- Extreme fluctuations in the climate-relevant expenditure (in relation to the total budget) of some departments can be explained by lumpiness of investments and nature of projects in the overall development budget of the department.

Notwithstanding the year-to-year variation in the climate-relevant share of individual departments' budgets, it is generally high (in double digits) in Forestry and Wildlife, Health, Irrigation and Social Welfare.

Figure 10.3: Sindh – CC-weighted actual expenditure as a percentage of total sum of CC-weighted

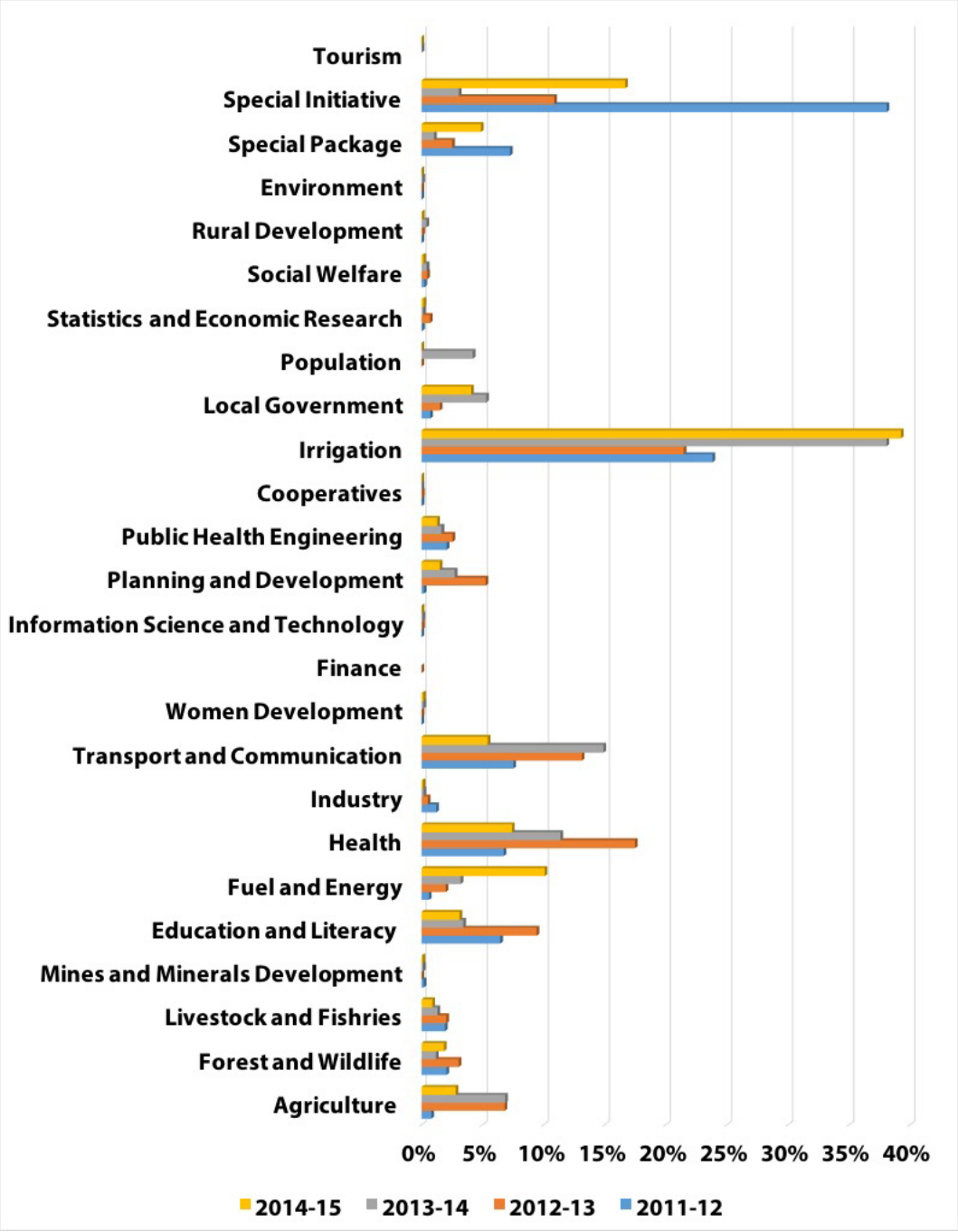
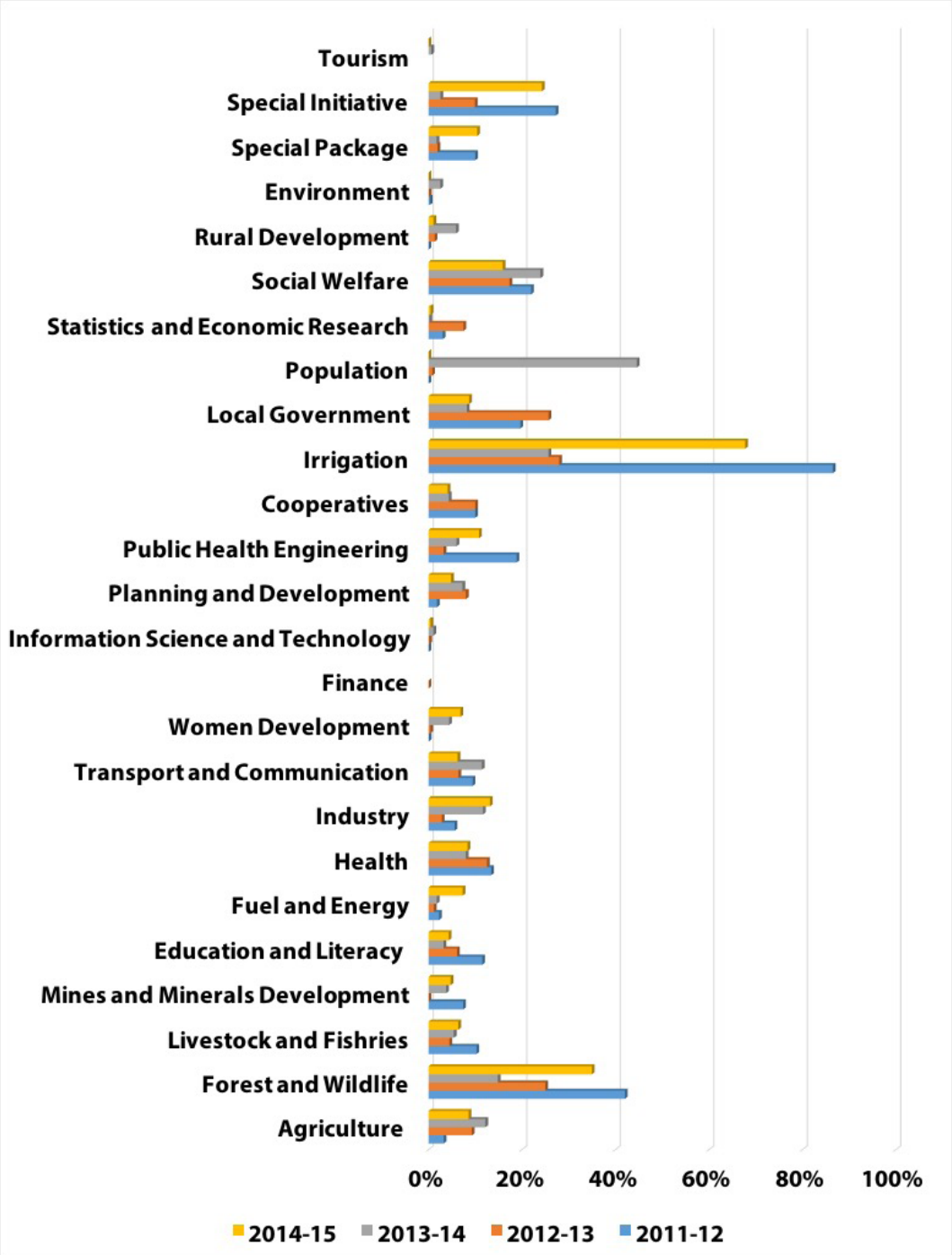


Figure 10.4: Sindh – CC-weighted actual expenditure as a percentage of department's total budgeted estimates



10.3 Climate-relevant expenditure in development and current budget

A summary trend analysis of climate-relevant expenditure in the current and development budget, based on the aforementioned profile of the number of climate-related projects and their associated investment, is presented in table 10.6. Similar to the federal analysis and those for the other three provinces, aggregate investment (development) and current expenditures with a climate dimension in each of the four years is profiled in absolute terms as well as in three key ratios. The three indicators are a) climate-relevant investment expenditure as a ratio of development budget (BEs), b) climate-relevant current expenditure as a ratio of total current expenditure budget, and c) climate-relevant total expenditure (development + current) as a percentage of total provincial budget (development + current).

Investment in projects that have CC benefits show a rising trend from PKR 13.8 billion in 2011/12 to PKR 15.4 billion in 2014/15, at an average annual rate of 3.8 percent, as compared to the corresponding decrease of -0.3 percent in the total development budget.

The ratio of climate-relevant development expenditure to total development expenditure moves in the range of 5.6 – 10.0 percent during the four years.

Derived climate-relevant current expenditure declined marginally from PKR 24.2 billion in 2011/12 to PKR 23.4 billion in 2014/15, an average annual decrease of 1.1 percent, in contrast to average annual growth of 9.9 percent in the current budget. The ratio of climate-relevant current expenditure to total current budget decreased steadily from 6.2 percent in 2011/12 to 3.1 percent in the next two years before rising to 4.5 percent in 2014/15.

The aggregate (investment + current) climate-relevant budget shows a marginal rising trend from PKR 38.0 billion in 2011/12 to PKR 38.8 billion in 2014/15, an increase of 2.1 percent over the four year period.

Climate-relevant expenditures are between 4.2 and 6.9 percent as a percentage of the total provincial budget. Relative to latter three years, a higher share of CC-related both development and current expenditures can be explained as spending on damaged irrigation systems due to floods of 2010 that affected Sindh more than other provinces.

Table 10.6: Sindh – Four year summary analysis				
	2011/12	**2012/13**	**2013/14**	**2014/15**
Development Expenditures (PKR millions)				
CC weighted Actual Development Expenditure (a)	13795.51	7985.96	11895.56	15413.24
Revised Annual Development Programme (ADP) (b)	155860.09	143278.21	152013.37	154588.10
Ratio- (a)/(b)	**0.0885**	**0.0557**	**0.0783**	**0.0997**
Current Expenditure (PKR millions)				
CC Weighted Actual Current Expenditure- c	24253.48	17621.49	15116.07	23433.60
Revised Budgetary Current Expenditure- d	393789.04	447876.52	485718.40	522043.59
Ratio- c/d	**0.0616**	**0.0393**	**0.0311**	**0.0449**
Total Expenditures (PKR millions)				
CC weighted Actual Development Expenditure	13795.51	7985.96	11895.56	15413.24
CC Weighted Current Actual Expenditure	24253.48	17621.49	15116.07	23433.60
Total CC Weighted Actual Expenditures- (e)	**38048.98**	**25607.45**	**27011.63**	**38846.83**
Revised Annual Development Programme (ADP)	155860.09	143278.21	152013.37	154588.10
Revised Budgetary Current Expenditure	393789.04	447876.52	485718.40	522043.59
Total Revise Budgetary Expenditure- (f)	**549649.13**	**591154.72**	**637731.77**	**676631.69**
Ratio- (e)/(f)	**6.92%**	**4.33%**	**4.24%**	**5.74%**

10.4 Department-wise climate-relevant expenditure

Table 10.7 presents the distribution of climate-relevant absolute expenditure and shares across provincial departments over the four years. We note the following:

- The CC expenditure share of 3 out of 25 departments, namely Education and Literacy, Health, and Irrigation was mostly in double digits.
- Out of 25 departments, the share of 7 to 10 departments was in single digits in most years and the remaining departments accounted for less than 1 percent of the total provincial expenditure related to climate change.

In most of the departments, there is no consistent trend of increasing or decreasing CC expenditure share over the four-year period.

Table 10.7: Sindh – Department-wise distribution of total climate expenditure (PKR millions)

Sindh Minisitries/Divisions	2011-12		2012-13		2013-14		2014-15	
	Total CC Expenditures	% Share	Total CC Expenditures	% Share	Total CC Expenditures	% Share	Total CC Expenditures	% Share
Agriculture	396.45	1.04	1,254.94	4.90	1,777.91	6.56	1,416.12	3.66
Forest and Wildlife	757.20	1.99	616.43	2.41	379.08	1.40	933.95	2.41
Livestock and Fishries	642.63	1.69	275.78	1.08	315.42	1.16	315.57	0.81
Mines and Minerals Development	454.56	1.19	80.00	0.31	145.57	0.54	270.57	0.70
Education and Literacy	8,301.67	21.82	6,421.25	25.08	3,590.97	13.25	5,315.63	13.72
Coal and Energy	173.45	0.46	246.69	0.96	438.54	1.62	2,505.16	6.47
Health	5,383.13	14.15	7,155.93	27.94	5,355.23	19.77	5,673.31	14.65
Industry	196.34	0.52	59.54	0.23	106.38	0.39	78.00	0.20
Transport and Communication	1,047.87	2.75	1,054.96	4.12	1,782.06	6.58	812.48	2.10
Women Development	0.23	0.00	2.01	0.01	0.00	0.00	36.44	0.09
Finance		0.00		0.00	21.45	0.08	0.00	0.00
Information Science and Technology	0.36	0.00	5.83	0.02	16.63	0.06	5.69	0.01
Planning and Development	115.41	0.30	757.24	2.96	548.62	2.02	305.33	0.79
Public Health Engineering	672.11	1.77	231.48	0.90	316.74	1.17	414.93	1.07
Cooperatives	17.32	0.05	29.64	0.12	15.12	0.06	13.64	0.04
Irrigation	11,608.37	30.51	4,269.37	16.67	6,914.33	25.52	12,875.57	33.24
Local Government	239.45	0.63	292.01	1.14	970.22	3.58	1,627.84	4.20
Population		0.00	1,380.95	5.39	3,306.26	12.20	2,083.78	5.38
Statistics and Economic Research	16.15	0.04	73.75	0.29	31.85	0.12	28.09	0.07
Social Welfare	239.73	0.63	249.69	0.98	413.44	1.53	131.54	0.34
Rural Development	0.00	0.00	13.10	0.05	73.23	0.27	12.35	0.03
Environment	2.99	0.01	1.54	0.01	48.08	0.18	0.00	0.00
Special Package	1,100.01	2.89	201.04	0.79	150.94	0.56	798.09	2.06
Special Initiative	6,683.51	17.57	934.30	3.65	364.02	1.34	3,075.55	7.94
Tourism		0.00		0.00	11.27	0.04	0.00	0.00
Total	**38,048.95**	**100.00**	**25,607.45**	**100.00**	**27,093.34**	**100.00**	**38,729.62**	**100.00**

10.5 Climate expenditures by themes and tasks

As outlined in Chapter 5, a typology of themes and tasks for CC response activities was developed based on the NCCP. As outlined in Chapter 5, a typology of themes and tasks for CC response activities was developed for this study, based on the themes and classifications given in the NCCP. Each project with a climate-relevant component that is accounted for in the ADP development budget lines from 2011/12 to 2014/15, was coded to one task type within the typology. This information, in addition to revealing the proportional expenditure of the budget line on the climate-related component, permitted an identification of overall expenditure within each category of the typology. This analysis was carried out for the four years of Sindh's development expenditure from 2011/12 to 2014/15 and is given in table 10.8.

Table 10.8: Sindh – Division of sectors and sub-sectors in the ADP (2011–2015), according to CC tasks and themes

Climate Change Tasks				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Awareness Raising & Education (AE)	7%	10%	4%	3%
Agriculture & Livestock (AL)	2%	6%	3%	3%
Biodiversity (BI)	1%	0%	0%	0%
Carbon Sequestration & Forestry (CF)	1%	2%	1%	1%
Capacity Building & Institutional Strengthening (CI)	1%	3%	1%	1%
Disaster Preparedness (DP)	33%	5%	10%	6%
Energy (EN)	0%	0%	1%	8%
Forestry (FS)	1%	1%	0%	0%
Health & other Social Services (HS)	27%	23%	18%	16%
Transport (TN)	8%	16%	20%	10%
Town Planning (TP)	1%	1%	1%	7%
Water Resources (WR)	18%	33%	41%	43%
Total	100%	100%	100%	100%

Climate Change Themes				
Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Adaptation	90%	84%	92%	79%
Mitigation	1%	3%	3%	16%
Supporting	8%	13%	5%	5%
Total	100%	100%	100%	100%

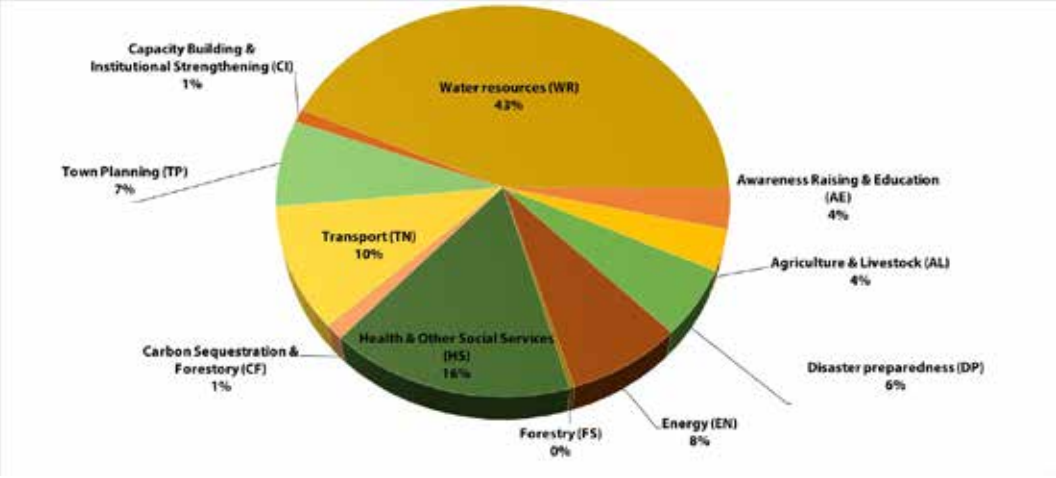
Adaptation				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Agriculture & Livestock (AL)	3%	8%	3%	4%
Biodiversity (BI)	1%	0.05%	0.24%	0.35%
Disaster Preparedness (DP)	37%	6%	11%	7%
Forestry (FS)	1%	1%	0.19%	0.42%
Health & other Social Services (HS)	31%	27%	20%	21%
Transport (TN)	9%	19%	21%	13%
Water Resources (WR)	20%	40%	45%	54%
Total	100%	100%	100%	100%

Mitigation				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Carbon Sequestration & Forestry (CF)	57%	73%	30%	8%
Energy (EN)	0%	0%	24%	48%
Transport (TN)	42%	27%	46%	44%
Town Planning (TP)	0%	0%	0%	0.12%
Total	100%	100%	100%	100%

Supporting				
Sub-Sectors	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Awareness Raising & Education (AE)	89%	76%	76%	76%
Capacity Building & Institutional Strengthening (CI)	11%	24%	24%	24%
Total	100%	100%	100%	100%

The allocation of expenditures to climate-related tasks was broad for the overall ADP of 2014/15 , with water resources (43 percent of climate components of the ADP), health and social services (16 percent), transport (10 percent), energy (8 percent), town planning (7 percent) and disaster preparedness (6 percent) accounting for 90 percent of the climate-relevant investment. There were smaller allocations to a variety of other climate tasks such as awareness raising and education, agriculture and livestock, capacity building and institutional strengthening, and carbon sequestration and forestry.

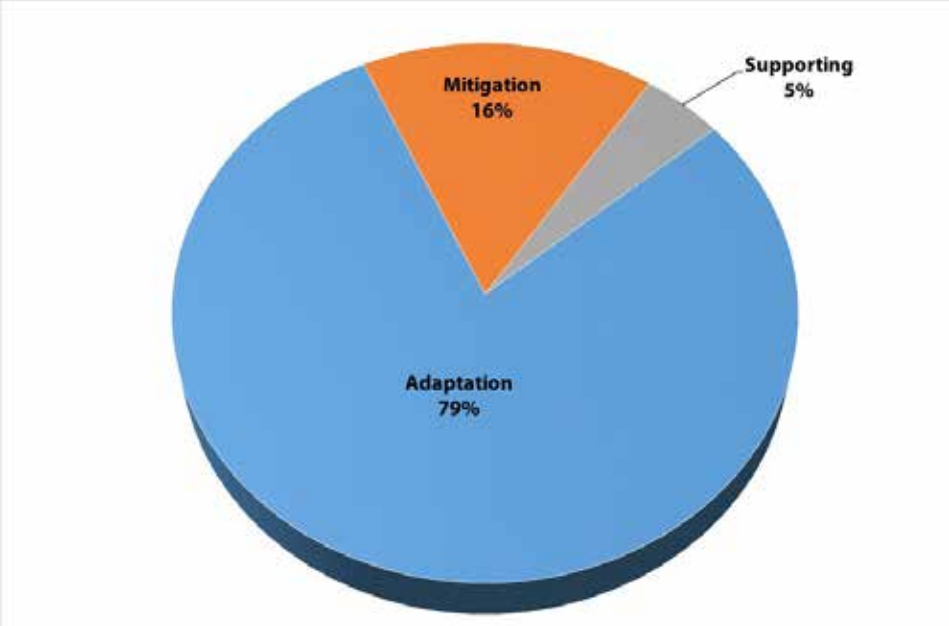
Figure 10.5: Sindh – Complete allocations of 2014/15 development budget expenditure to climate-relevant tasks



The typology also codes the development expenditures under three themes, mitigation, adaptation, and supporting activities, which are enablers of the CC response. The 2014/15 climate expenditures by theme were distributed across all three themes (Figure 10.6). Adaptation contributed the most to the climate budget (79 percent), and was followed by mitigation (16 percent), suggesting that more than two-thirds of climate activities in Sindh had an adaptation component, which is consistent with the NCCP which places greater emphasis on adaptation response.

The theme with the lowest allocation was supporting activities (5 percent), which was contributed mostly by the awareness raising and education (76 percent allocation, Figure 10.5). The low focus on energy and mitigation is apparent in the differences between the federal and provincial theme allocations, as mitigation is the smallest theme with 16 percent in Sindh and 14 percent in KP. The corresponding figure for the federal budget was 57 percent.

Figure 10.6: Sindh – Allocation of expenditure to climate-relevant themes in ADP, 2014/15



Further analysis permitted a detailed breakdown of tasks associated with each of the themes outlined above. Adaptation, the dominant theme in terms of expenditure, was formed mainly from tasks in water resources (43 percent), health and social services (16 percent), transport (10 percent), disaster preparedness (7 percent) and agriculture and livestock, and awareness raising and education (3 percent each). Forestry and biodiversity tasks contributed <1 percent (Figure 10.7a). The mitigation theme was related mainly to energy (48 percent), town planning tasks (44 percent) and carbon sequestration and forestry (8 percent) (Figure 10.7b). The supporting theme, which was the lowest in this case, was mainly awareness raising and education (76 percent), with the remaining 24 percent from capacity building and institutional strengthening. (Figure 10.7c).

Figure 10.7a: Sindh – Allocation of climate-relevant expenditure in 2014/15 development budget (adaptation theme)

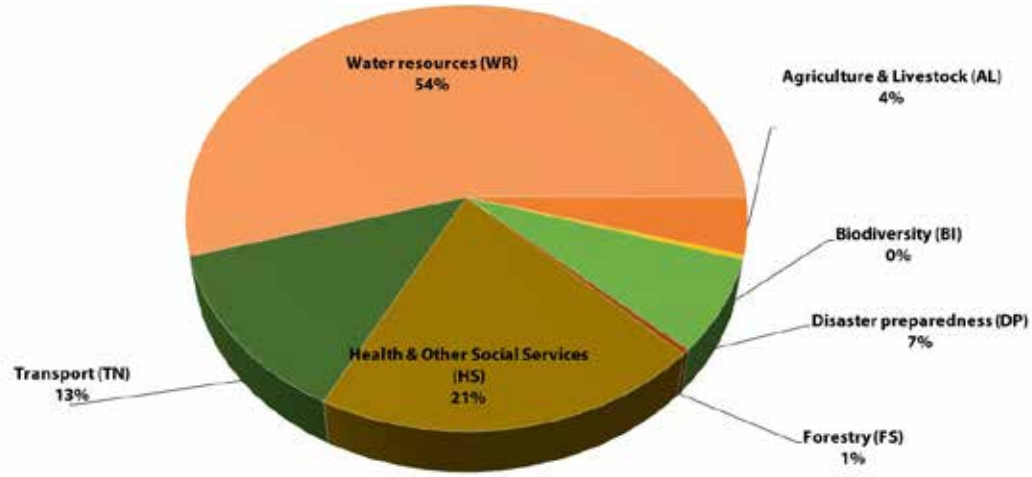


Figure 10.7b: Sindh – Allocation of climate-relevant expenditure in 2014/15 development budget (mitigation theme)

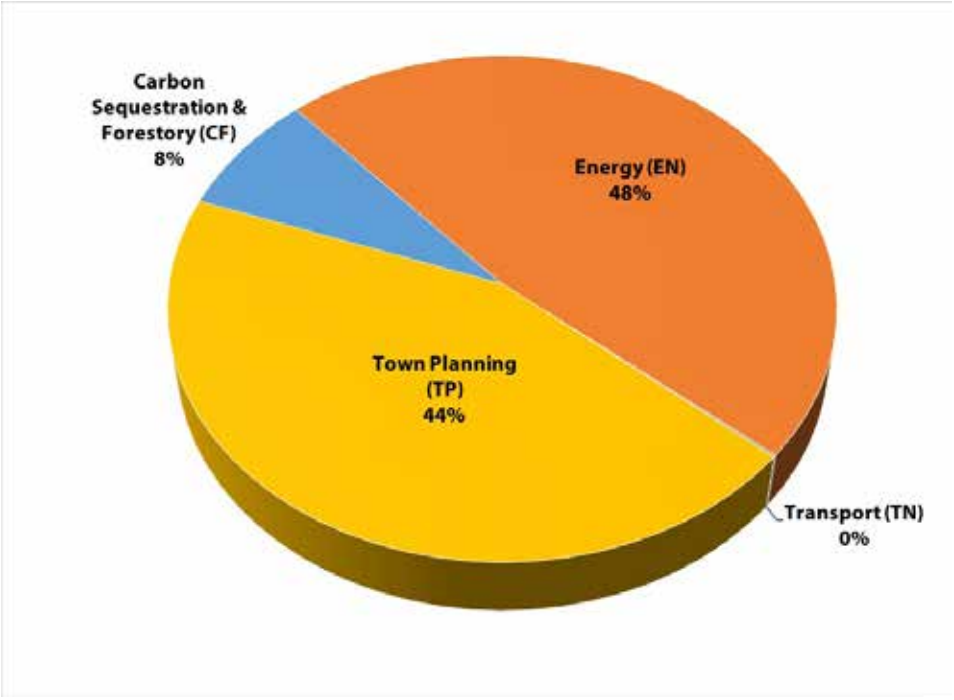


Figure 10.7c: Sindh – Allocation of climate-relevant expenditure in 2014/15 development budget (supporting actions theme)

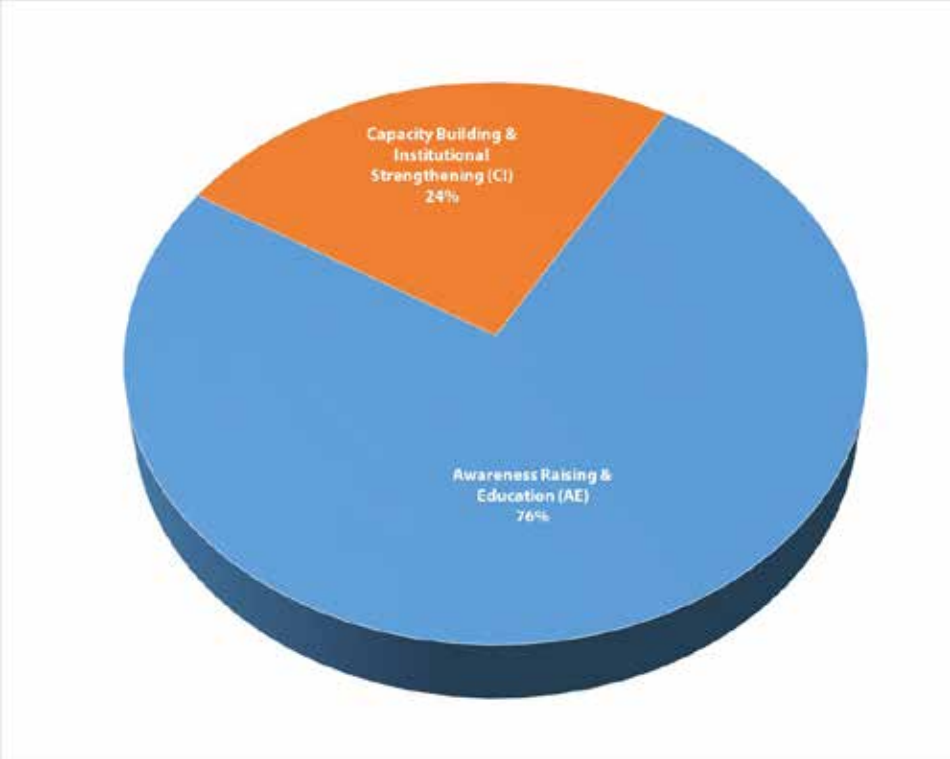
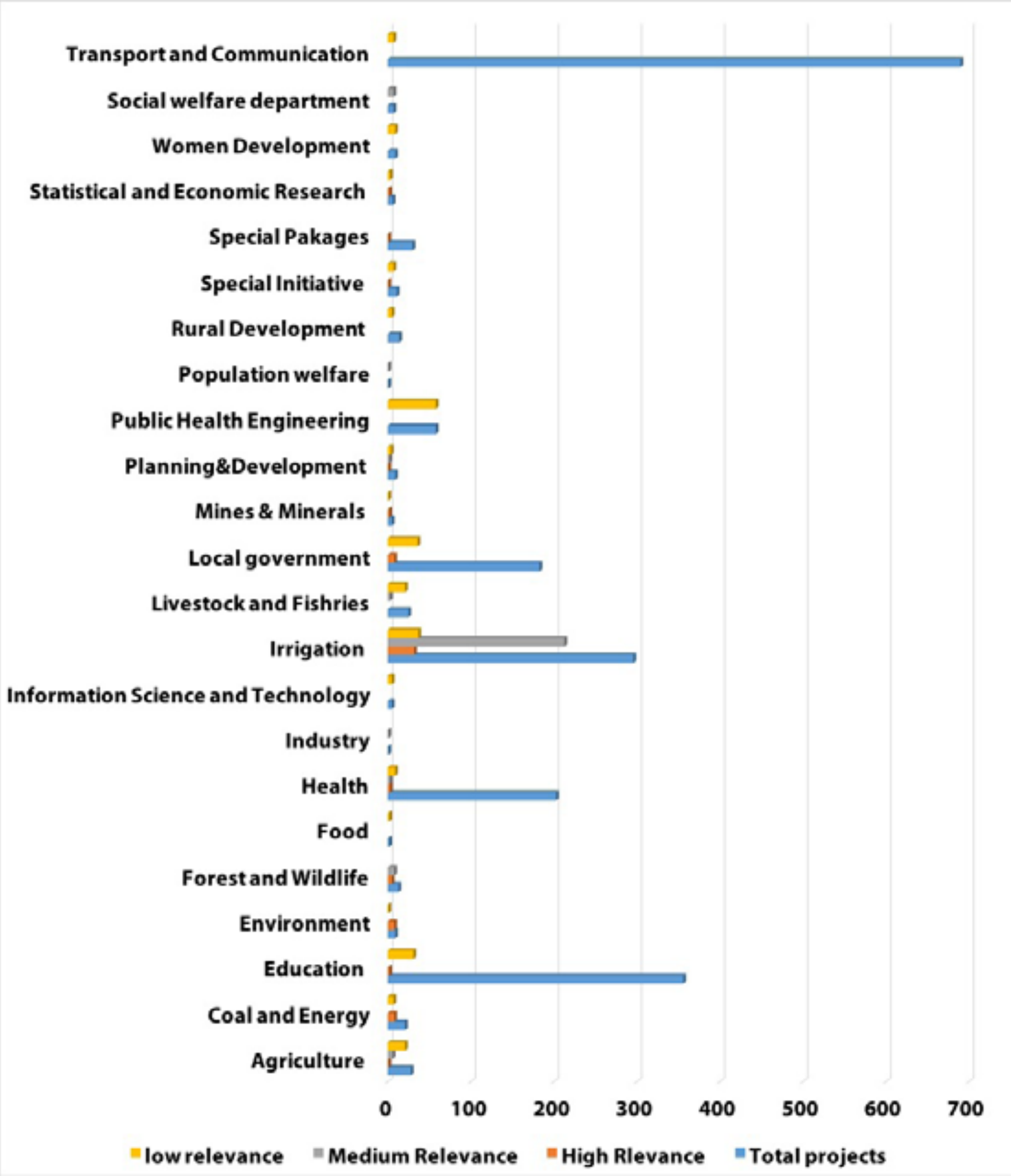


Figure 10.8: Sindh – Distribution of climate-relevant investment expenditures in relevant government institutions



10.6 Sindh provincial institutional assessment

10.6.1 Policy instruments and mechanisms

The Sindh Environment Protection Act, 2014, provides the legislative framework for environment protection and climate change at the provincial level. In comparison to the older Federal EPA Act 1997, this law gives greater powers to the provincial government for enforcement of environmental standards in Sindh. In order to more effectively address climate change and environmental issues in the province, a Sindh Climate Change Policy is under formulation, in sync with the objectives of the National Climate Change Policy, 2012. A Steering Committee headed by the Additional Chief Secretary (Development) and having representation from concerned line departments, including Climate Change, Environment and Coastal Development Department has been set-up to guide the development of Sindh's Climate Change Policy.

The institutional mandate for environment and climate change rests with the Sindh EPA under the administrative control of the Climate Change, Environment and Coastal Development Department. The latter department has been recently created to give a sharper policy focus to climate change issues in the province by merging the Environment and Coastal Development departments. The Sindh EPA is responsible for implementing environmental laws and regulations in the province and initiating environmental impact assessments and examinations in the formulation of public sector development projects. In this regard, the EPA is guided by the newly developed Review of IEE and EIA Regulations 2014.

In addition to the Climate Change, Environment and Coastal Development Department, Sindh's Planning and Development (P&D) Department also plays an important role in coordinating provincial climate change processes. The P&D Department is also involved in development of Sindh's Climate Change Policy in collaboration with the EPA, and its Environment Section is responsible for providing technical input for addressing environment and CC-related concerns in the design of development projects funded under the ADP. As with other provinces, the P&D and Finance Departments play an important role in enabling provincial climate action and investment, given their role in developing and financing the provincial ADP.

In addition, several sectoral departments including Agriculture; Irrigation; Industries; Energy; and Forest, Wildlife and Fisheries, etc. are important actors in the institutional landscape of provincial climate action and governance. However, there is little evidence to suggest that these institutions are as yet consciously engaging with climate change policy and planning processes in any significant way.

The Sindh Vision 2025 serves as an overarching platform for highlighting and aligning cross-sectoral long term development plans and priorities of the provincial government under one framework.

10.6.2 Coordinating and mainstreaming climate change in Sindh

Existing arrangements for coordinating climate change policy response in Sindh appear to be better developed in comparison to the other three provinces. The Climate Change, Environment and Coastal Development Department is taking the lead role in climate change policy formulation and is working closely with the P&D Department in mainstreaming climate change concerns in the province. The department would also serve as the focal point from Sindh on Implementation Committee of the National Climate Change Policy, a role that was previously being performed by the P&D Department. However, in order to effectively take up its newly acquired mandate, the department requires capacity building in climate change planning and financing to deliver its main functions.

The continued involvement of the P&D Department in climate change policy planning can provide impetus for mainstreaming climate change concerns in central provincial planning, particularly in the formulation of public sector development projects under the provincial ADP. This is already being attempted in the case of the SDGs that are also administered through the P&D Department in Sindh. Additional fields have been added to the ADP project formulation format (PC-I) to link impact of proposed development projects with the SDGs and climate change.

With regards to climate change mainstreaming and integration, there are strong entry points in sectors like agriculture, irrigation, energy, transport, forestry and disaster management for linking to adaptation and mitigation objectives. However mechanisms and platforms needed to connect the provincial development priorities with climate change policy processes and financing are under-developed, and the mainstreaming goal remains unmet. The provincial climate change policy, currently under development can help address these concerns.

10.7 Findings and conclusions

- Total climate-relevant spending in Sindh increased marginally from PKR 38.0 billion in 2011/12 to PKR 38.8 billion in 2014/15, an increase of 2.1 percent. Climate-relevant expenditure represents between 4.1 and 6.9 percent of the total provincial budget.
- Between 5.6 and 10.0 percent of Sindh's development budget is climate-related. Over the studied years, the rate of annual increase in climate-related development investment was higher than that of the overall development budget (3.8 percent compared to -0.3 percent).
- The provincial ADP covers development projects in a wide range of sectors. Climate-relevant projects make up 82–86 percent of development expenditure lines (compared to 47.8–63 percent at the federal level), with over half the projects at several government institutions deemed climate-relevant. This suggests that climate-relevant projects and investments are common and widely spread across the provincial government's portfolio.
- ADP climate expenditure across studied years is relatively stable in terms of average climate relevance of each department. However, the proportion of climate-related investment per department fluctuates in most of the departments. In most of the studied years, Forestry, Irrigation and Social Welfare spent 16–86 percent of their budgets on climate-relevant investments.
- Climate-related expenditures represent between 4.3 and 6.9 percent of the total provincial budget.
- The allocation of expenditures to climate-related tasks was broad for the overall ADP of 2014/15 , with water resources (43 percent of climate components of the ADP), health and social services (16 percent), transport (10 percent), energy (8 percent), town planning (7 percent) and disaster preparedness (6 percent) accounting for 90 percent of the climate-relevant investment.
- Adaptation has been the main theme in Sindh's climate-relevant development budget, accounting for 79 percent of related expenditures in 2014/15. Adaptation-related expenditures in Sindh's budget were formed mainly by tasks in water resources (54 percent), health and social services (21 percent), transport (14 percent), disaster preparedness (7 percent) and agriculture and livestock (5 percent). Forestry and biodiversity tasks contributed <1 percent.
- Mitigation-related expenditures, which were dominated by energy and town planning tasks, accounted for just 17 percent of the climate budget (2014/15), whereas supporting activities that predominantly included awareness raising and education tasks, accounted for just 3 percent of climate–relevant expenditure. The low focus on energy and mitigation highlights differences between the federal and Sindh theme allocations, as the corresponding figure for the mitigation theme in the federal budget was 57 percent.
- The wide dispersion of climate-relevant funding, presently across 25 Sindh government departments, coupled with competing public funding priorities means that proper oversight and coordination is required to push forwards a trend of climate-sensitive budgeting. Though the recently enacted Sindh Environment Protection Act, 2014, provides the legislative framework for environment protection and climate change at the provincial level. Additionally Sindh Government has very recently renamed the Environment and Coastal Development Department the Climate Change, Environment and Coastal Development Department to give a sharper policy focus to climate change issues in the province. More additional mechanisms and targeted approaches are still required to ensure effective coordination and integration across the wide-ranging sectors and departments involved in climate-relevant planning and expenditure.

CHAPTER 11 – AJK, GB AND FATA: CLIMATE CHANGE BUDGET AND INSTITUTIONAL ASSESSMENT

11.1 Introduction

The regions of Azad Jammu and Kashmir (AJK), Gilgit–Baltistan (GB) and FATA comprise the northern and north-western parts of Pakistan. These regions are situated at the foothills of the three mountain ranges, the Himalayas, the Hindu Kush and the Karakoram. The regions are projected to be significantly affected by CC in coming decades as rising temperatures affect weather cycles and the quantity of snow melt, and thereby the water flows originating from the three mountain ranges. The devastating earthquake in 2005 in parts of AJK and KP is also a reminder of unpredictable disasters that the three regions are vulnerable to and which can alter the geophysical landscape of the region as well as deal a blow to their people and economies.

In contrast to the fiscal federalism followed in the four provinces, two regions (GB and FATA) are entirely dependent on yearly grants from the Federal Government for development (capital) and current expenditures; they do not have a revenue base of their own.[85] AJK is dependent on grants and loans from the Federal Government for 52–57 percent of its total budgeted expenditures, but finances the remaining expenditure through internal revenues. Annual total fiscal transfers (excluding loans) to the three regions ranged from PKR 58–88 billion during 2011–2014, constituting 1.95–3.20 percent of the federal budget.[86]

The grants for capital outlays in the three regions are outside the federal PSDP (but part of the overall development budget of the Federal Government) and are channelled as development expenditures of two federal ministries namely the Ministry of Kashmir Affairs and GB (KANA) and the Ministry of States and Federal Region (SAFRON). The grants for current expenditure to the three regions are included as "current expenditures on revenue accounts" in the current expenditure of the two involved federal ministries. In addition, the three regions are included in many of the vertical development programmes (PSDP and other) of various federal line ministries financed by the Federal Government, as well as multilateral and bilateral donors.

Although these two ministries are covered under the federal budget analysed in Chapter 6, a region-wise examination of the climate-relevant expenditure outlays helps to highlight the region-specific trends and investment priorities of the local administrations. In the federal-level analysis given in Chapter 6, the budgetary accounts of these regions are grouped under the aforementioned ministries and the project details of these ministries in the PSDP are sketchy, aggregate and mostly in block grants as single line items.[87]

85 Since assuming a de facto province-like status in 2009, the Government of GB has begun to demand shares in hydropower profits from the Federal Government as is the case with the Government of KP. The demand is due to the fact that power plants on GB rivers are becoming a source of hydropower for other provinces.

86 The account and year-wise details of fiscal transfers appearing in the MoF budgetary documents are given in Appendix 11.2.

87 For example, in 2011/12, PSDP documents listed 20 projects, including a block grant of more than PKR 6 billion to 'development schemes in GB' in the Ministry of Kashmir Affairs and GB, while the CGA provided detailed expenditure accounts for over 100 projects for GB for the same year.

11.2 Gilgit-Baltistan

The territory of present-day Gilgit-Baltistan (GB) became a separate administrative unit in 1970 named the Northern Areas. It presently consists of nine districts, has a population approaching one million, an area of approximately 73,000 km^2 and shares borders with Pakistan, China, Afghanistan and India. GB was never formally integrated with Pakistan and does not participate in constitutional political affairs, although it has been administratively controlled by Pakistan since the first Kashmir War. The Gilgit-Baltistan Empowerment and Self-Governance Order of2009 grants the people of GB the right to self-rule by creating an elected Legislative Assembly and Council. GB is therefore a *de facto* province without constitutionally being part of Pakistan. The Government's official position is that Pakistan cannot integrate GB with the rest of the country because it would prejudice its international obligations with regard to the Kashmir dispute.[88, 89, 90, 91, 92, 93]

Table 11.1 presents the four-year macro trends of total revised and actual expenditures of the government of GB.[94] Nominal total actual budgetary expenditures (development and current) increased from PKR 16.5 billion to PKR 29.5 billion during the four years at an AAGR of 21.3 percent, higher than the average annual inflation rate of 8.1 percent. However, year-to-year changes in both revised and actual expenditures are large, ranging from 1.1 to 38.8 percent.

Table 11.1: GB – Macro-view of revised and actual expenditures, 2011/12–2014/15

Year	Revised expenditures	% change in revised expenditures	Actual expenditures	% change in actual expenditures
2011/12	15,220		16,511	
2012/13	21,131	38.8	22,335	35.3
2013/14	23,179	8.8	22,574	1.1
2014/15	30,213	30.3	29,468	30.5

Table 11.2 profiles the four-year trend in development (capital) and current expenditures. During the four years, the nominal current expenditures increased at an average annual rate of 25.4 percent against growth of 10.8 percent for development expenditures. The comparatively higher growth in current expenditures is an outcome of the a) changed administrative and governance structure of the region after 2009 and b) expansion in the number of departments. Correspondingly, the share of development expenditure in total outlays decreased from 30.6 percent in 2011/12 to 23.3 percent in 2014/15.

88 M. Ismail Khan, "Gilgit-Baltistan autonomy", *Dawn,* 9 September 2009. Available from http://www.dawn.com/news/843990/gilgit-baltistan-autonomy.

89 Pallavi Singh, "Gilgit-Baltistan: A question of autonomy", *The Indian Express,* 29 April 2010. Available from http://archive.indianexpress.com/news/gilgitbaltistan-a-question-of-autonomy/519428/1.

90 "Gilgit-Baltistan part of Jammu and Kashmir: India", *The Times of India,* 10 March 2006. Available from http://timesofindia.indiatimes.com/india/Gilgit-Baltistan-part-of-Jammu-and-Kashmir-India/articleshow/1445666.cms?referral=PM.

91 Victoria Schofield, *Kashmir in conflict India, Pakistan and the unending war* (London, I.B. Tauris, 2003).

92 Xinhua News Agency, "Pakistani president signs Gilgit-Baltistan autonomy order", 7 September 2009. Available from http://news.xinhuanet.com/english/2009-09/07/content_12011387.htm.

93 Manzar Shigri, "Pakistan's disputed Northern Areas go to polls", *Thomson Reuters,* 12 November 2009. Available from https://web.archive.org/web/20141006195522/http://www.reuters.com/article/2009/11/12/us-pakistan-election-idUSTRE5AB1ZE20091112.

94 GB was granted province-like status in August 2009. Its first budget (for 2011/12) under the new setup was passed in June 2010. Consequently, just three years of data were analyzed.

Table 11.2: GB – Distribution of development and current actual expenditures (PKR million, shares as percentages)								
Actual expenditure	**2011/12**		**2012/13**		**2013/14**		**2014/15**	
Development	5,047	30.60%	5,687	25.50%	6,449	28.60%	6,873	23.32%
Current	11,464	69.40%	16,648	74.50%	16,125	71.40%	22,595	76.68%

The sectoral distribution of total capital (investment) expenditure is a simple indicator of the administration's priorities and sectoral policies. Table 11.3 gives the department-wise share of investment outlays in total development budget for the four years.[95] The investment in infrastructure, and water and power ranged from 69 to 89 percent of the total investment in the four years. The trends indicate that outlay shares have consistently increased in Agriculture and Education Departments, and doubled in last two years for Health Department at the cost of declining shares in the Works Department after the 2009 change in administrative and legal structure.

Table 11.3: GB – Share of main expenditure heads in actual development expenditures				
	2011/12	**2012/13**	**2013/14**	**2014/15**
P&DD	1.10%	3.78%	0.64%	1.32%
Food and Agriculture Dept.	1.58%	1.65%	2.67%	4.63%
Education Dept.	0.76%	1.90%	3.09%	3.04%
Health and Population Welfare Dept.	1.65%	0.90%	3.02%	7.49%
Forest- Wildlife and Environment Dept.	0.05%	1.00%	0.45%	1.99%
Local Govt. and Rural Dev. and Census Dept.	3.75%	3.95%	4.70%	4.41%
Tourism, Sports and Culture Dept.	0.48%	2.22%	2.68%	0.77%
Minerals, Industries, Commerce and Labour	0.30%	0.45%	0.36%	0.47%
Water and Power Dept.	34.52%	36.86%	37.74%	47.42%
Works Department	55.81%	47.05%	41.52%	22.21%
Home and Prison Department				5.71%

11.2.1 Climate programmes and budgets

The overall climate-related expenditures in GB as a percentage of the total expenditures for the period under consideration are shown in table 11.4. This ratio increased from 15.7 in 2011/12 to 28.4 percent in 2014/15. The steep jump in 2014/15 of 8.5 percentage points was due to increased allocations to the departments of Home and Prisons, Health, and Water and Power as compared to the previous years.

Table 11.4: GB – Summary results – CC-related expenditures				
PKR millions	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Total cc-weighted actual expenditures - (a)	2597.69	4270.2	4489.71	8359.4
Total actual expenditure - (b)	16511.25	22334.66	22573.65	29468.34
Ratio - (a)/(b)	15.70%	19.10%	19.90%	28.37%

95 The totals do not add up to 100 percent as some departments are excluded.

Table 11.5 presents an overview of the total number of projects in the development budget and the proportion of climate-relevant projects. We see from the table that although GB's development budget varied from PKR 5.04 billion to PKR 6.87 billion during 2012–2015, the number of projects implemented and the corresponding climate-relevant projects increased *exponentially* in 2013/14. This may be due to:

i) More detailed reporting of projects, small or large, in comparison to aggregate reporting in earlier years, including prior to 2009;

ii) The initiation/implementation of more projects in response to a higher level of grassroots representation in the legislative assembly;

iii) In 2014/15, the number of projects implemented and the corresponding climate-relevant projects stabilized at the higher level. Even with this jump in project numbers, the proportion of CC-related projects in the overall portfolio remained in the range of 65–76 percent during the four years.

The share of climate-relevant projects across the four years is less volatile in Food and Agriculture, Health and Population, Forestry and Minerals and Industries departments as compared to the remaining six departments where the percentage of climate-relevant projects ranges from 4 to 83 percent. Exponential growth in a number of projects in the Works Department also led to high variability in the proportion of climate-relevant projects, ranging from 10 to 83 percent.

The relevance weights for each of the projects are summarized as mean relevance ratios for each department in figure 11.1. The following observations are noted:

i) The mean relevance of departments is relatively static across the four years in 5 of the 12 departments. In other words, there is considerable homogeneity of projects in these departments which include Food and Agriculture, Education, Health and Population Welfare, Forest and Environment, and Water and Power.

ii) On average, the climate relevance is high for projects implemented by the departments of Water and Power, Forest and Environment, Planning and Development, Services and General Administration, and the Home and Prison.

iii) The mean climate-relevance of investment projects undertaken by the Works Department declined notably after 2011/12, soon after the floods of 2010.

Figure 11.2a shows the department-wise share in the total climate-relevant expenditure of the region. Some 70–95 percent of the total climate-relevant expenditure over four years is undertaken by the Water and Power Department, followed by shares of the Works Department (in 2014/2015), and Health and Population Department. All of the other departments' climate-related expenditures have remained in single digits and below 5 percent of the total during the four years.

Figure 11.2b shows the total climate-relevant weighted actual expenditure as percentage of the total budget of each department. In a stylistic sense, it reflects the importance accorded to climate-relevant projects in the overall budgets of the respective departments. The four-year trends are summarized as follows:

i) There is no increasing or decreasing trend of expenditure shares in the climate-relevant of projects during the four years;

ii) The climate-proofing expenditure of the departments of Planning and Development, Forest, Wildlife and Environment, Food and Agriculture, and Water and Power is on average higher than the remaining departments.

Table 11.5: GB – Department-wise percentage of climate-related projects

		2011-12			2012-13			2013-14			2014-15		
#	GB Minisitries/Divisions	Total # of Projects	Total # of CC related Projects	% (No of CC related projects/Total # of Projects)	Total # of Projects	Total # of CC related Projects	% (No of CC related projects/Total # of Projects)	Total # of Projects	Total # of CC related Projects	% (No of CC related projects/Total # of Projects)	Total # of Projects	Total # of CC related Projects	% (No of CC related projetcs/Total # of Projects)
1	Planning and Development Department	4	3	75.0	8	3	37.5	20	6	30.0	21	13	61.9%
2	Food and Agriculture Department	22	22	100.0	26	25	96.2	70	68	97.1	75	73	97.3%
3	Education Department	8	5	62.5	19	17	89.5	64	46	71.9	80	76	95.0%
4	Health and Population Welfare Department	10	10	100.0	16	15	93.8	63	56	88.9	92	91	98.9%
5	Forest- Wildlife and Environment Dept	7	7	100.0	10	10	100.0	17	16	94.1	24	24	100.0%
6	Local Govt- Rural Dev. and Census Dept	9	3	33.3	10	3	30.0	23	3	13.0	25	2	8.0%
7	Tourism, Sports and Culture Department	12	4	33.3	14	2	14.3	35	4	11.4	47	2	4.3%
8	Minerals, Industries, Commerce	9	1	11.1	10	1	10.0				20	2	10.0%
9	Water and Power Department	7	7	100.0	8	8	100.0	142	91	64.1	118	91	77.1%
10	Works Department	14	3	21.4	10	1	10.0	548	455	83.0	489	369	75.5%
11	Services and General Administration Dept				4	1	25.0	4	1	25.0			
12	Home and Prison Department				1	1	100.0	4	2	50.0	22	5	22.7%
	Total	**102**	**66**	**64.7**	**131**	**85**	**64.9**	**982**	**745**	**75.9**	**1013**	**748**	**73.8%**

Figure 11.1: GB – Department-wise mean climate relevance ratios

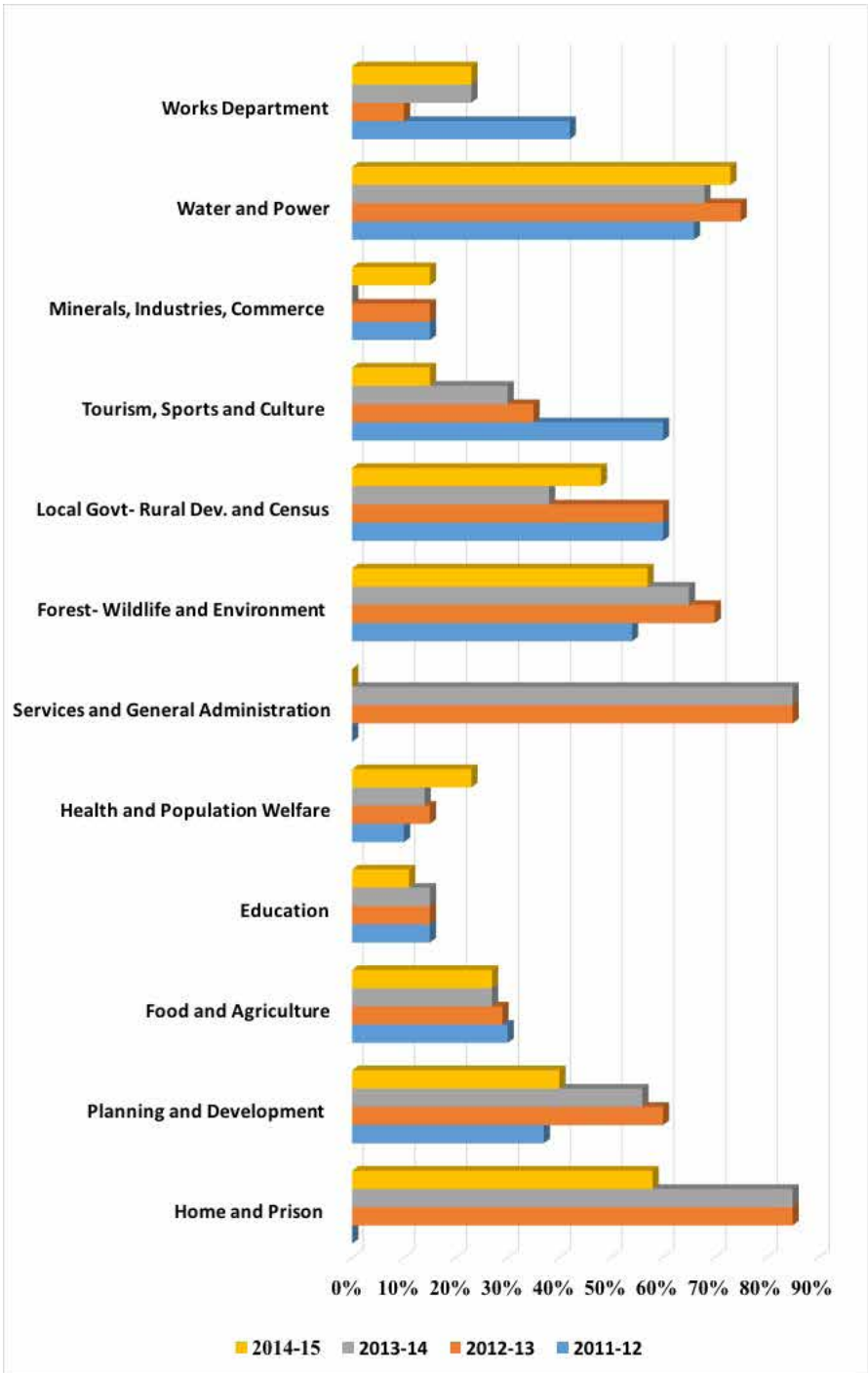


Figure 11.2a: GB – CC-weighted actual expenditure as a percentage of total sum of CC-weighted actual expenditures

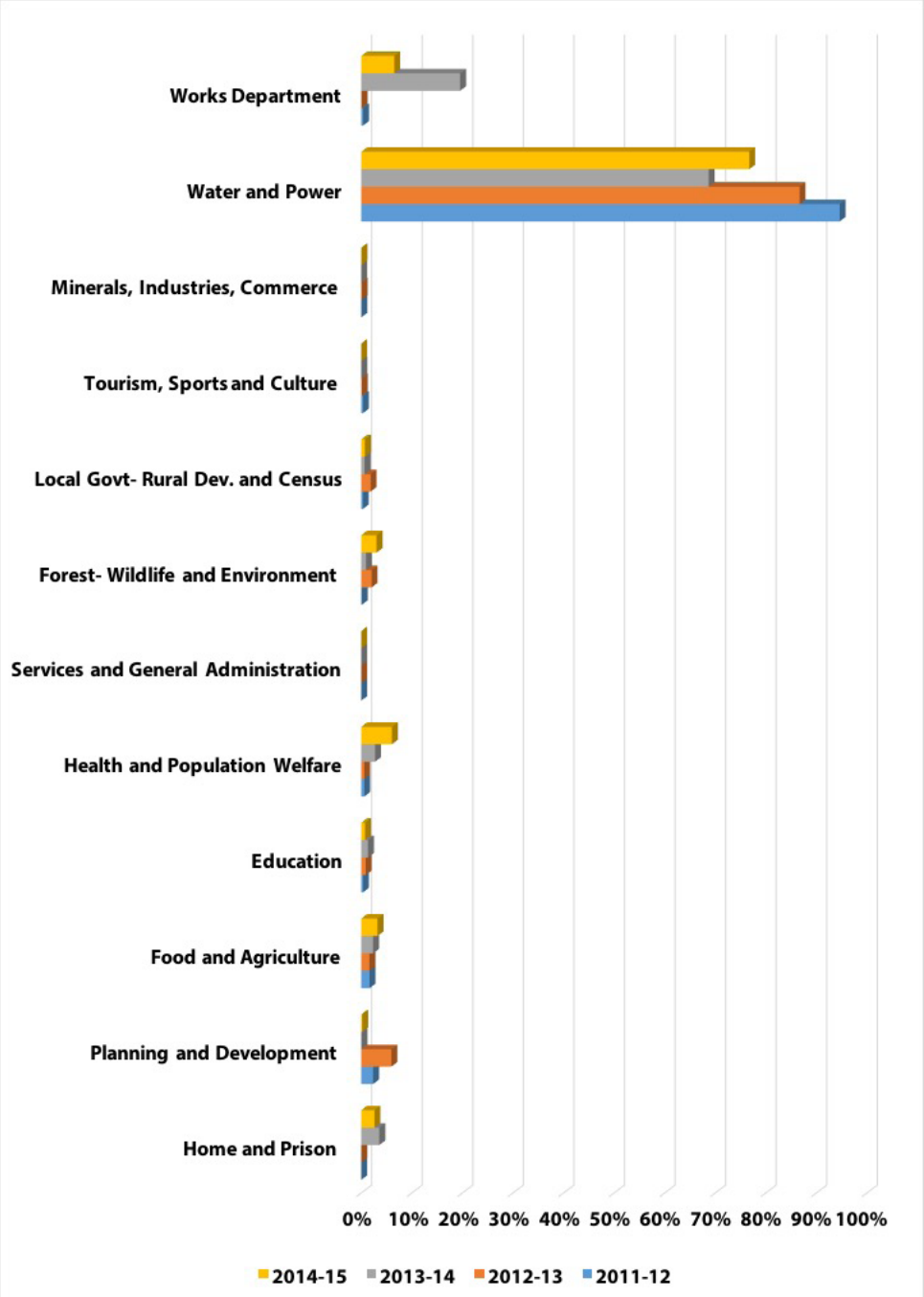
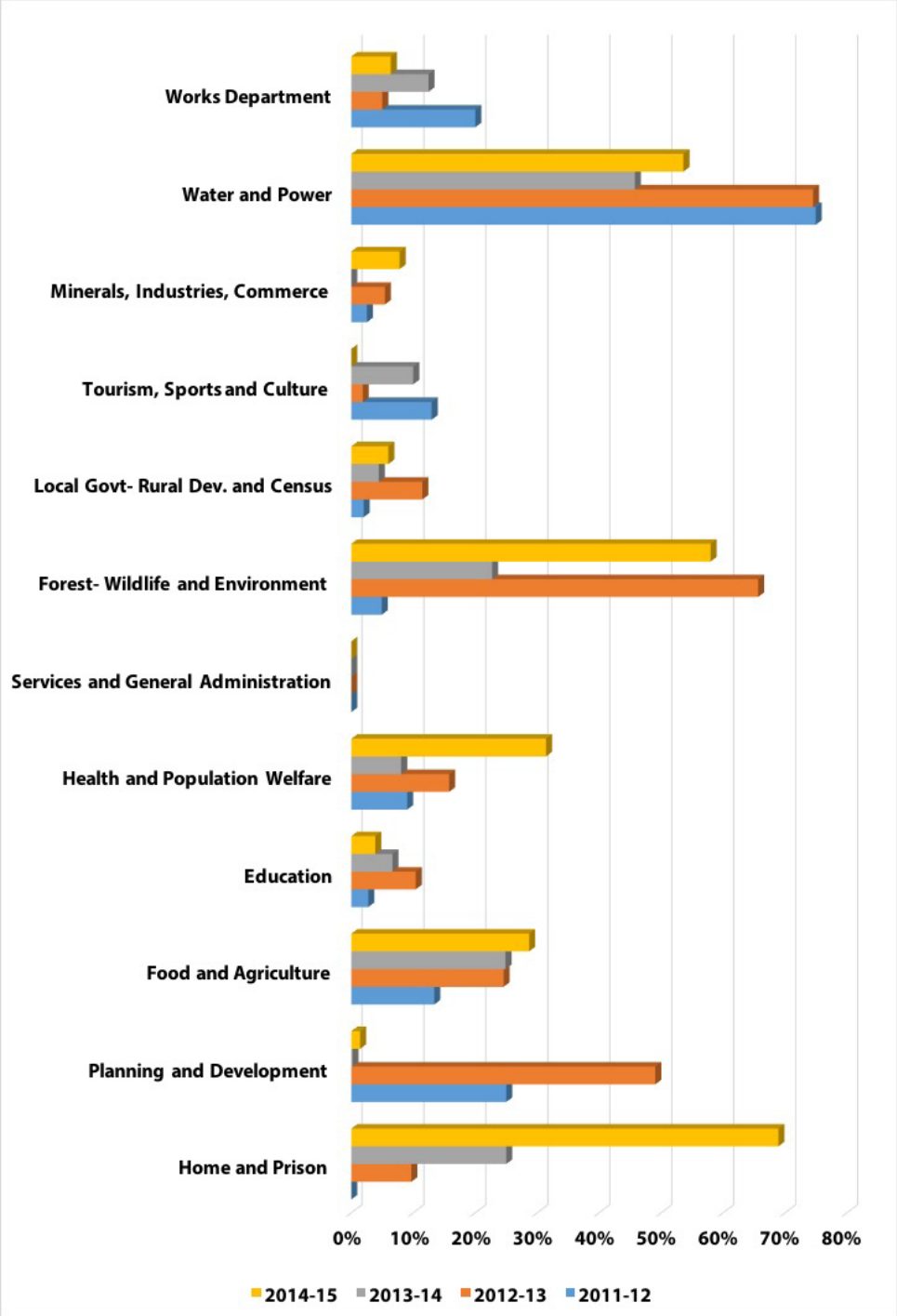


Figure 11.2b: GB – CC-weighted actual expenditure as a percentage of total budgetary allocation



11.2.2 Climate-relevant expenditures in the development and current budget

Table 11.6 brings together the trends in earlier tables in the form of three main indicators: climate-relevant actual investment expenditures as a ratio of total actual development budget, climate-relevant actual current expenditures as a ratio of total actual current expenditures, and total climate-relevant actual expenditures as a ratio of total actual budgetary expenditures. Climate-relevant investment expenditures increased at an average annual rate of 26.7 percent during the three-year period against a corresponding growth rate of 10.8 percent for overall capital spending. As a ratio of total development budgetary outlays, climate-relevant capital spending was stable in the first three years ranging between 27.4 and 30.9 percent, but increased noticeably to 40.8 percent in 2014/15. This share is comparable to the corresponding federal ratios, but is more than twice the ratios observed for KP.

Table 11.6: GB – Four-year summary analysis

Development expenditures (PKR millions)	**2011/12**	**2012/13**	**2013/14**	**2014/15**
CC-weighted actual development expenditure (a)	1380.47	1813.98	1993.81	2806.77
Total actual development expenditure (b)	5047.4	5687.1	6448.77	6872.88
Ratio - (a)/(b)	27.40%	31.90%	30.90%	40.84%
Current expenditure (PKR millions)				
Cc-weighted actual current expenditure- c	1217.22	2456.22	2495.9	5552.63
Total actual current expenditure- d	11463.85	16647.56	16124.88	22595.46
Ratio- c/d	10.60%	14.80%	15.50%	24.57%
Total expenditures (PKR millions)				
Cc-weighted actual development expenditure	1380.47	1813.98	1993.81	2806.77
Cc-weighted actual current expenditure	1217.22	2456.22	2495.9	5552.63
Total cc-weighted actual expenditures - (e)	2597.69	4270.2	4489.71	8359.40
Total actual development expenditure (ADP)	5047.4	5687.1	6448.77	6872.88
Total actual current expenditure	11463.85	16647.56	16124.88	22595.46
Total actual expenditure - (f)	16511.25	22334.66	22573.65	29468.34
Ratio - (e)/(f)	15.70%	19.10%	19.90%	28.37%

The AAGR of climate-relevant current expenditure is 65.8 percent, more than double the growth rate of overall current expenditure. The climate-relevant current expenditure, as a ratio of the overall current budget, increased steadily from 10.6 percent in 2011/12 to 24.6 percent in 2014/15, which is more than a 100 percent increase.[96] The higher ratio of climate-related current expenditures also weighs into a higher ratio for overall climate-related expenditures as compared to the corresponding ratios estimated at the federal level. In the case of GB, the overall ratio ranges from 16 to 28.4 percent as compared to the range of 6 to 8 percent for the Federal Government.

11.2.3 Department-wise profile of total climate-relevant expenditures

An overview of climate-relevant expenditure and shares across various departments during the last four years sheds light on the evolving priorities of the GB administration with respect to climate-proofing and adaptation. By 2014/15, the highest share of Water and Power in climate-relevant expenditure in 2011/12

96 The methodology in deriving climate-relevant current expenditures is the same as that adopted for deriving corresponding estimates for the Federal and other provinces' climate-related current expenditures. See Chapters 6 and 7.

has been chipped away by rising climate-relevant shares of Home and Prison, and Health and Population Department. In the remaining departments, the share has fluctuated, notably in Education, Forest, Wildlife and Environment, and Works department.

Table 11.7: GB – Department-wise total CC expenditure and share 2012/15

GB Minisitries/Divisions	2011-12		2012-13		2013-14		2014-15	
	Total CC Exp	Share	Total CC Exp	Share	Total CC Exp	Share	Total CC Exp	Share
Home and Prison Department			355.24	8.32%	1032.14	22.99%	3120.67	37.33%
Planning and Development Department	41.03	1.58%	131.19	3.07%	0.95	0.02%	6.57	0.08%
Food and Agriculture Department	86.42	3.33%	165.17	3.87%	187.03	4.17%	278.00	3.33%
Education Department	87.10	3.35%	466.96	10.94%	309.07	6.88%	219.03	2.62%
Health and Population Welfare Department	105.43	4.06%	240.97	5.64%	197.90	4.41%	915.04	10.95%
Services and General Administration Dept	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Forest- Wildlife and Environment Dept	11.26	0.43%	318.47	7.46%	77.11	1.72%	259.45	3.10%
Local Govt- Rural Dev. and Census Dept	11.66	0.45%	82.55	1.93%	34.04	0.76%	52.30	0.63%
Tourism, Sports and Culture Department	9.67	0.37%	3.20	0.07%	0.33	0.01%	0.00	0.00%
Minerals, Industries, Commerce	0.92	0.04%	2.38	0.06%	0.00	0.00%	3.40	0.04%
Water and Power Department	1951.78	75.13%	2501.39	58.58%	2016.38	44.91%	3163.25	37.84%
Works Department	292.45	11.26%	2.68	0.06%	634.76	14.14%	341.69	4.09%
Total	2597.72	100.00%	4270.21	100.00%	4489.71	100.00%	**8359.40**	**100.00%**

11.2.4 Climate expenditure by themes and tasks

As outlined in Chapter 5, a typology of themes and tasks for CC response activities was developed for this study, based on the themes and classifications given in the National Climate Change Policy. Each project with a climate-relevant component that is accounted for in the ADP development budget lines for 2014/15 was coded to a thematic task within the typology. This information helped reveal the overall expenditures made within different categories of climate-relevant expenditure, as identified in the typology. This analysis was carried out for the year 2014/15 of GB's development expenditure and is shown in the following pie charts.

The energy sector accounted for a major portion (77 percent of the total climate component of the ADP) of the climate-relevant tasks allocated in the GB ADP of 2014/15, while the remaining 23 percent of allocations were distributed over other climate-relevant tasks including health and other social services (6 percent), disaster preparedness (4 percent), transport and agriculture and livestock (3 percent each), water resources and forestry (2 percent each), town planning, carbon sequestration and forestry and awareness raising & education (1 percent each), as highlighted in figure 11. 3.

Figure 11.3: GB – Complete allocations of 2014/15 development budget expenditures to climate-relevant tasks

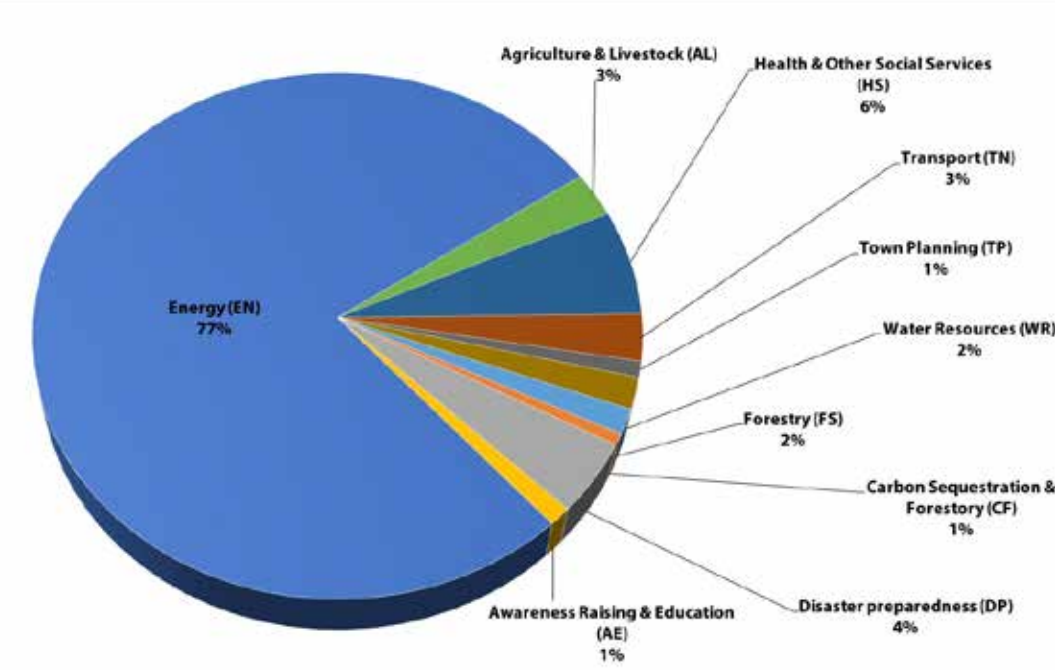
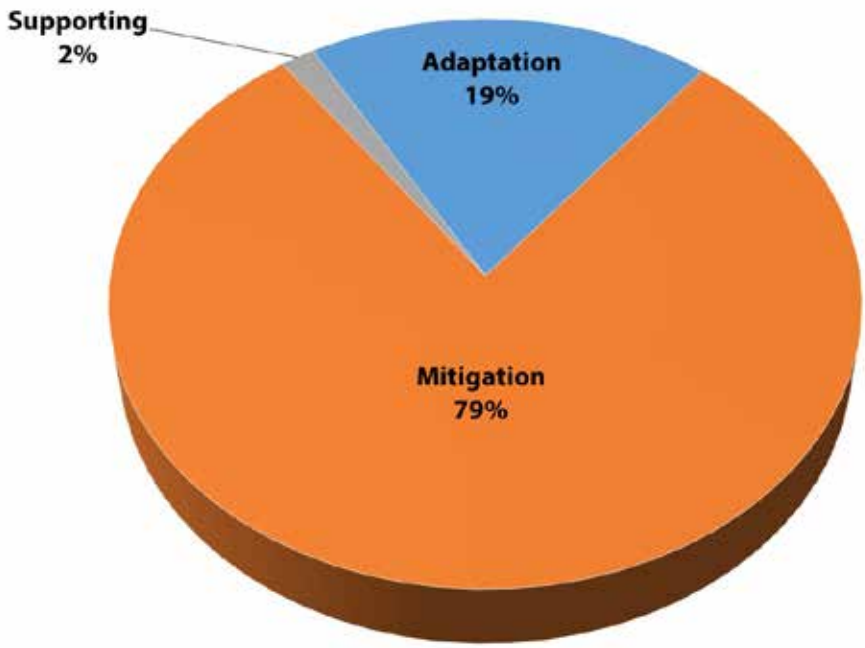
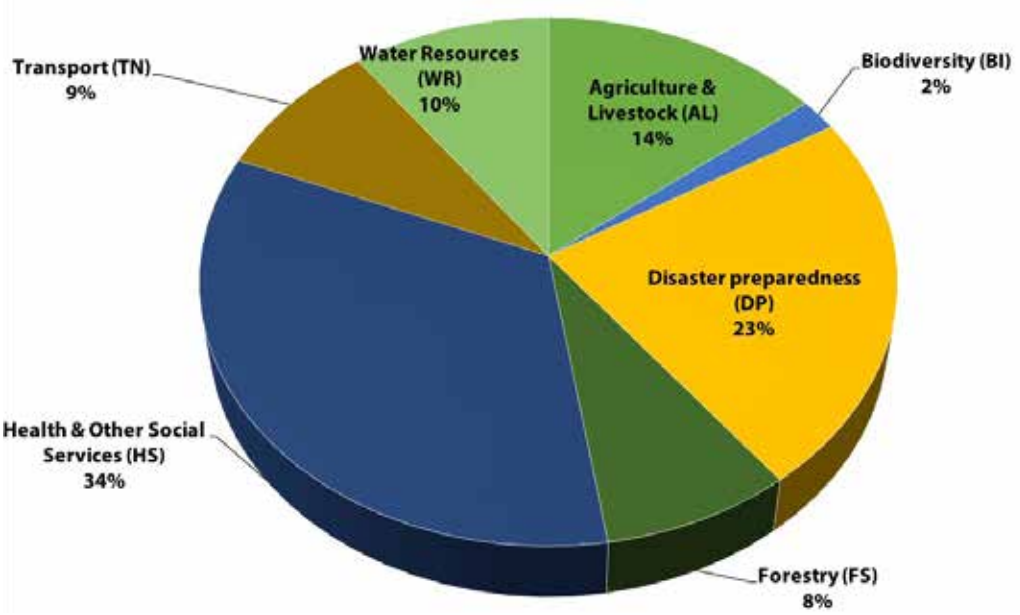


Figure 11.4: GB – Complete allocations of 2014/15 development budget expenditures to climate-relevant themes



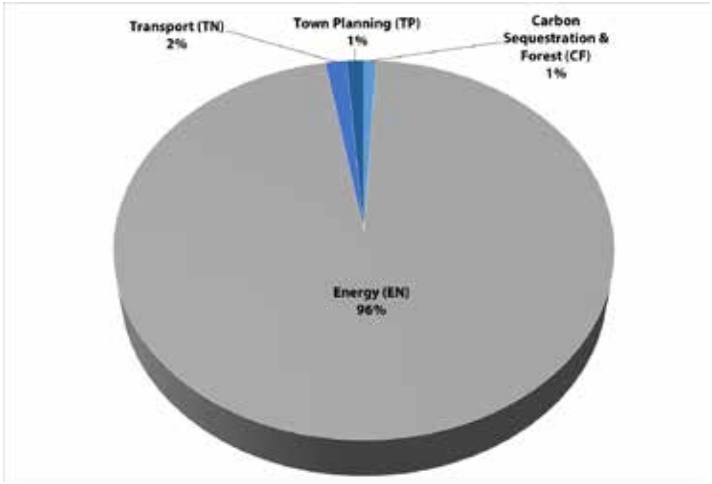
The assigned typology further breaks down the development expenditures into different climate change themes — mitigation, adaptation, and supporting activities — that are enablers of the CC response. The analysis of the 2014/15 development budget showed that unlike the four provinces, mitigation expenditure accounted for a major share of GB's climate budget (79 percent of the total climate-relevant investment), followed by adaptation activities at 19 percent, and supporting activities at 2 percent, suggesting that more than three-fourths of climate-relevant activities in GB had a mitigation component (Figure 11.4).

Figure 11.5: GB – Allocation of expenditure to climate-relevant themes in ADP, 2014/15 (adaptation theme)



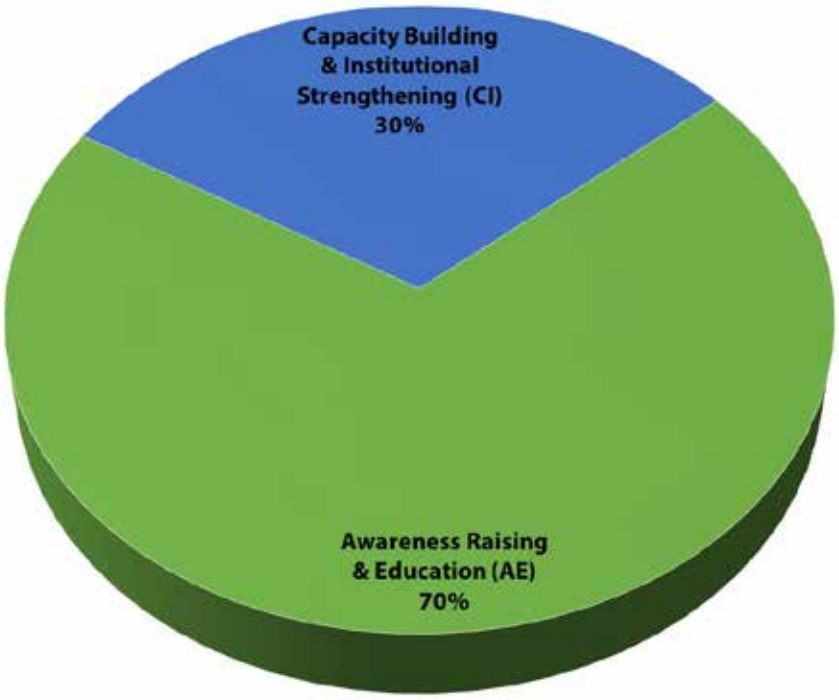
Relevant expenditures under the adaptation theme were mainly formed by tasks involving health & social services and disaster preparedness (34 and 23 percent respectively of total adaptation response budget), agriculture & livestock (14 percent), water resources (10 percent) transport (9 percent). Forestry and biodiversity tasks altogether accounted for around 10 percent of the adaptation response investment (Figure 11.5).

Figure 11.6: GB – Allocation of expenditure to climate-relevant themes in ADP, 2014/15 (mitigation theme)



Mitigation-related expenditure made up 79 percent of the climate-relevant component of the development budget for 2014/15 (Figure 11.6). This was mostly contributed by activities in energy sector (96 percent of the total mitigation response allocation), while transport, town planning, and carbon sequestration & forestry activities contributed the remaining 4 percent. The focus on mitigation theme allocations varies widely among the federal and provincial budgets, as mitigation was the largest theme in the federal budget at 63 percent while the corresponding figure in Punjab is at 30 percent, and the lowest was observed in KP and Balochistan at 14 percent for each.

Figure 11.7: GB – Allocation of expenditure to climate-relevant themes in ADP, 2014/15 (supporting actions theme)



The CC supporting activities theme has emerged as the lowest one (2 percent) in terms of budgetary allocations in the year 2014/15 (Figure 11.4). Major contribution to this response theme came from the sub-sector of awareness raising and education (70 percent of the total supporting activities in development budget) while the rest was contributed by the sub-sectors capacity building and institutional strengthening (30 percent) (Figure 11.7).

11.3 Federally Administered Tribal Areas

The tribes in the north-west region of Pakistan pledged allegiance to the newly-created state soon after Independence. Some 30 instruments of agreement were subsequently signed, strengthening this arrangement. Mohmand Agency was included in FATA in 1951 and Bajaur and Orakzai in 1973.

The instruments of agreement, signed in 1948, granted the tribal areas a special administrative status, but The agreements did not include tribal political autonomy.. Except where strategic considerations dictated, the tribal areas were allowed to retain their semi-autonomous status, exercising administrative authority based on tribal codes and traditional institutions. This unique system was enshrined in the Constitution of 1973.

FATA is a semi-autonomous tribal region in Pakistan, bordering the provinces of KP and Balochistan. It is represented in the National Assembly and Senate, but remains under the direct executive authority of the President of Pakistan. Laws framed by the National Assembly do not apply to FATA unless so ordered by the President, who is also empowered to issue regulations for the peace and good of the Government of the Tribal Areas. FATA continues to be governed primarily through the Frontier Crimes Regulations, 1901. It is administered by the Governor of KP in his capacity as an agent to the President of Pakistan under the overall supervision of SAFRON in Islamabad.

Until 2002, decisions related to development planning in the tribal areas were taken by the FATA section of the KP Planning and Development Department, and implemented by the concerned provincial line departments. In 2002, the FATA Secretariat was set up and was headed by a Secretary. Four years later, in 2006, the Civil Secretariat of FATA was established to take over decision-making functions with an Additional Chief Secretary, four secretaries and a number of directors. Project implementation is now carried out by the line departments of the Civil Secretariat of FATA. The KP Governor's Secretariat plays a coordinating role between the Federal Government and provincial governments and the Civil Secretariat of FATA.[97]

Table 11.8 shows the trends in overall budget size of the FATA region for the last four years. Revised budgetary expenditures and actual budgetary expenditures (development and current) increased at an AAGR of 7.7 and 12.5 percent, respectively during 2012–2014. The actual expenditures are lower than the revised estimates in three out of four years (except 2014/15), but the AAGR is higher due to a smaller base of actual expenditures. Moreover, the yearly percentage changes of the two indicators have not moved in step with each other, suggesting a weak link between the budgeting process and its actual disbursement and implementation.

Table 11.8: FATA – Macro view of revised and actual expenditures (PKR million)

Year	Revised Expenditures (RE)	Percentage changes in Revised Expenditures	Actual Expenditures (AE)	Percentage changes in Actual Expenditures
2011/12	28,262	8.3	26,116	21.3
2012/13	33,913	20.0	28,384	8.7
2013/14	39,911	17.7	34,370	21.1
2014/15	35,336	-11.5	37,234	8.3

Table 11.9 splits the actual outlays into development (investment) and current expenditures. The share of capital spending in overall spending increased slowly in the last four years from 44.1 percent of the total in 2011/12 to 47.2 percent in 2014/15. The AAGR of development expenditures was 15.1 percent against 10.4 percent growth of recurrent expenditures. The volume of actual expenditure outlays in FATA is double the volume in GB. The share of development expenditure is also higher in FATA as compared to the corresponding share for GB. This difference is understandable given FATA's role as a crucial border in Pakistan's fight against terrorism and greater development needs in the impoverished region.

97 The role of political agents is explained in Appendix 8.1.

Table 11.9: FATA – Distribution of development and current actual expenditures (expenditures in PKR millions, shares as percentages)

Actual expenditure	2011/12		2012/13		2013/14		2014/15	
Development	11,519	44.11%	12,285	43.30%	16,353	47.60%	17,585	47.20%
Current	14,597	55.89%	16,099	56.70%	18,016	52.40%	19,649	52.80%

Table 11.10 gives the four-year trend profile of the shares of expenditures of various departments in the overall actual development expenditure outlays of the region. The following observations are noted:

i) The shares allocated to 6 out of 11 departments show considerable variability across time, including in Forestry, Wildlife and Environment Department

ii) The share of development expenditures allocated to Education increased slightly and the share allocated to Forest and Local Government Departments decreased notably. The shares of Water and Power, Works, and Planning and Development Departments increased notably during the last four years. The post-2011/12 shares remained stable in the remaining four departments.

iii) The double-digit capital spending share of Planning and Development Department in 2013–2015 suggests more centralized and planned prioritization of investment expenditures by the regional administration.

iv) The slow and continuous decline of shares of the Forest, Wildlife and Environment Department does not bode well for the FATA administration's climate response.

Table 11.10: FATA – Share of expenditure heads in actual development expenditures (percentage)

DD	2011/12	2012/13	2013/14	2014/15
Education	22.1%	20.3%	21.1%	19.3%
Health and Population Welfare	8.9%	11.0%	9.7%	11.0%
Food and Agriculture	2.5%	4.9%	4.5%	3.8%
Forest- Wildlife and Environment	6.9%	3.3%	2.9%	2.4%
Water and Power		1.4%	3.8%	4.0%
Local Govt- Rural Dev. And Census	18.4%	10.1%	9.1%	6.1%
Works Department	14.7%	18.6%	19.8%	19.9%
Services and Administration	26.3%	30.2%	17.9%	22.7%
Planning and Development	0.2%	0.3%	10.2%	10.1%
Tourism and Sports			1.0%	0.7%
Mineral Industries and Commerce	0.1%		0.1%	0.05%

11.3.1 Climate programmes and budgets

The overall climate-relevant expenditures in FATA as a percentage of the total expenditure for the period under consideration are shown in table 11.11.

Table 11.11: FATA – summary results – CC-related expenditures

PKR millions	2011/12	2012/13	2013/14	2014/15
Total CC Weighted Actual Expenditures- (a)	3427.63	3548.9	3983.6	4438.263
Total Actual Expenditure- (b)	26116.2	28384.3	34369.6	37234
Ratio- (a)/(b)	13.12%	12.50%	11.59%	11.92%

Table 11.12 presents an overview of the total number of projects in the development budget and the projects which are climate-relevant. We note the following from the trends in the table:

i) In contrast to the trend of FATA's development budget that increased from PKR 11.5 billion in 2011/12 to PKR 17.6 billion in 2014/15, the total number of climate-relevant projects remained in the range of 136–155 during the period.

ii) The share of climate-relevant projects increased gradually from 73.5 percent in 2011/12 to 83.4 percent in 2014/15. During the last two years (2013/14 and 2014/15), the share of climate-relevant projects increased to 80 percent, partly because of a higher proportion of climate-related projects in the Services and Administration Department.

Figure 11.8 shows the mean CC relevance of projects undertaken by various departments in the FATA region. Note the following in trend values of average relevance:

i) The mean relevance weight is fairly similar across the four years in all of the eight departments. In other words, the portfolio of climate-related projects is also similar, leading to a similar climate-relevance weight of investment schemes.

ii) The climate-relevance of projects in the Forest, Wildlife and Environment Department and the Departments of Power and Works is generally higher than in other departments.

Figure 11.9a shows the four-year trend in the shares of climate-relevant expenditure of each department to total climate-relevant expenditure of all departments. The two main findings are as follows:

i) The total share of climate-relevant expenditure of four departments, namely Education, Forest, Wildlife and Environment, Works, and Services and Administration, ranged from 85 to 90 percent.

ii) The departmental shares were fairly stable for the Education Department and Services and Administration Department after 2010/11; they rose for the Works Department and declined for the Forest, Wildlife and Environment Department.

Figure 11.9b shows the estimates of CC-weighted actual expenditure as a percentage of the total budget, i.e. the share of climate-relevant actual development expenditure in the total revised development budget of each department. This ratio was also applied to the current expenditure of each department to obtain an estimate of climate-relevant current expenditure at the department level. This analysis suggests the following:

i) The projects/programmes of the Forest, Wildlife and Environment Department are most climate-relevant in relation to development budget of the department. The corresponding estimates for the Food and Agriculture Department and Works Department follow closely in second and third place.

ii) Except for the trends of the Works Department and Services and Administration Department, the extent of climate-relevant expenditure is stable for other departments in the four years.

Table 11.12: FATA climate-relevant projects

	2011/12			2012/13			2013/14			2014/15		
	Total # of Projects	**Total # of CC-related Projects**	**% (No of CC-related projects/Total # of Projects)**	**Total # of Projects**	**Total # of CC-related Projects**	**% (No of CC-related projects/ Total # of Projects)**	**Total # of Projects**	**Total # of CC-related Projects**	**% (No of CC-related projects/Total # of Projects)**	**Total # of Projects**	**Total # of CC-related Projects**	**% (No of CC-related projects/Total # of Projects)**
Education	33	33	100.0%	26	26	100.0%	27	27	100.0%	29	29	100%
Health and Population Welfare	33	32	97.0%	28	28	100.0%	19	19	100.0%	18	18	100%
Food and Agriculture	38	38	100.0%	34	34	100.0%	36	36	100.0%	32	32	100%
Forest- Wildlife and Environment	22	22	100.0%	22	22	100.0%	28	28	100.0%	29	29	100%
Water and Power				9	1	11.1%						
Works Department	42	14	33.3%	41	14	34.1%	42	14	33.3%	41	14	34%
Services and Administration	29	14	48.3%	20	14	70.0%	14	14	100.0%	14	14	100%
Planning and Development	14	2	14.3%	19	2	10.5%						
Total	**211**	**155**	**73.5%**	**199**	**141**	**70.9%**	**166**	**138**	**83.1%**	**163**	**136**	**83.4%**

Figure 11.8: FATA – Percentage of projects with climate relevance

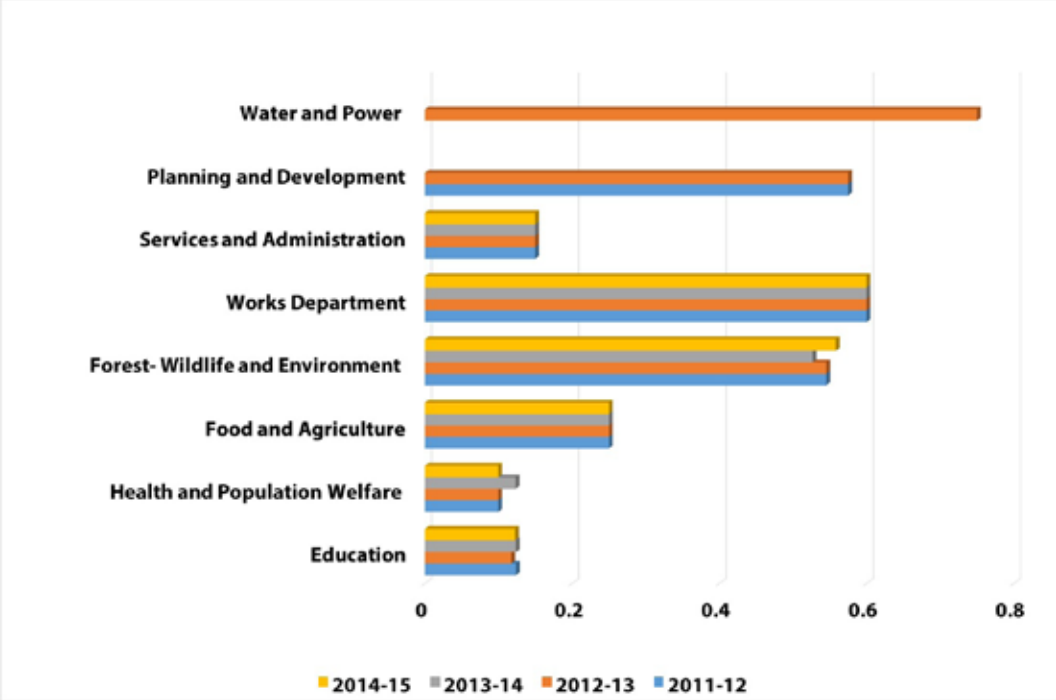


Figure 11.9a: FATA – CC-weighted actual expenditures as a percentage of total CC-weighted actual expenditures

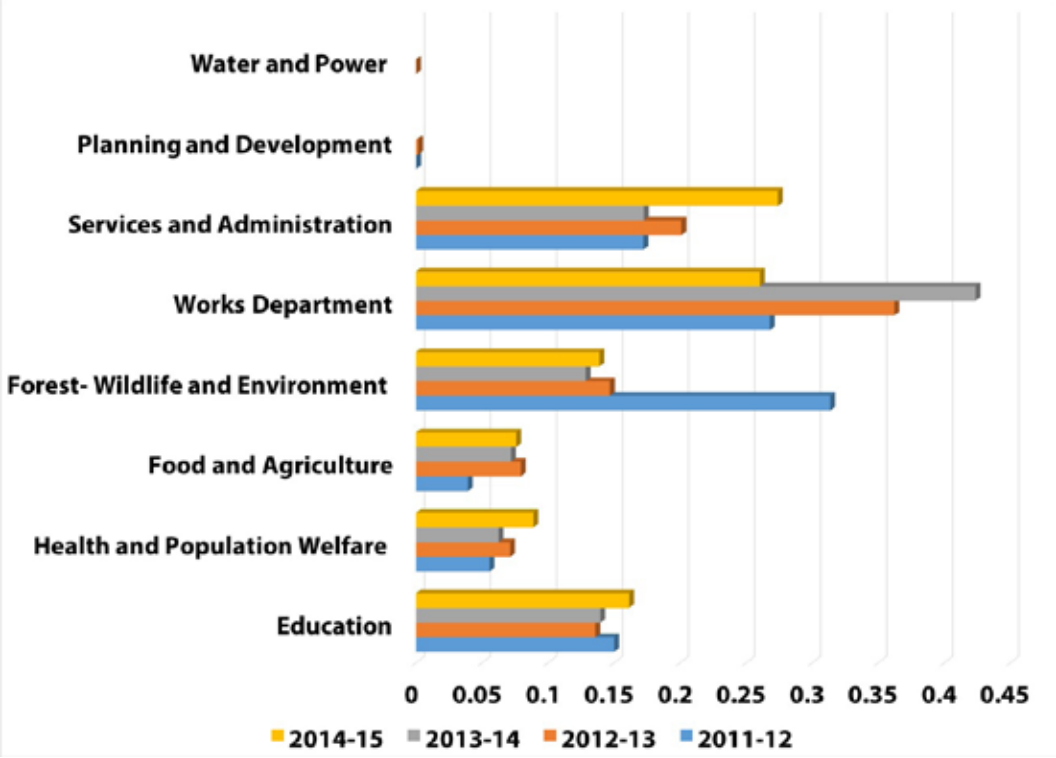
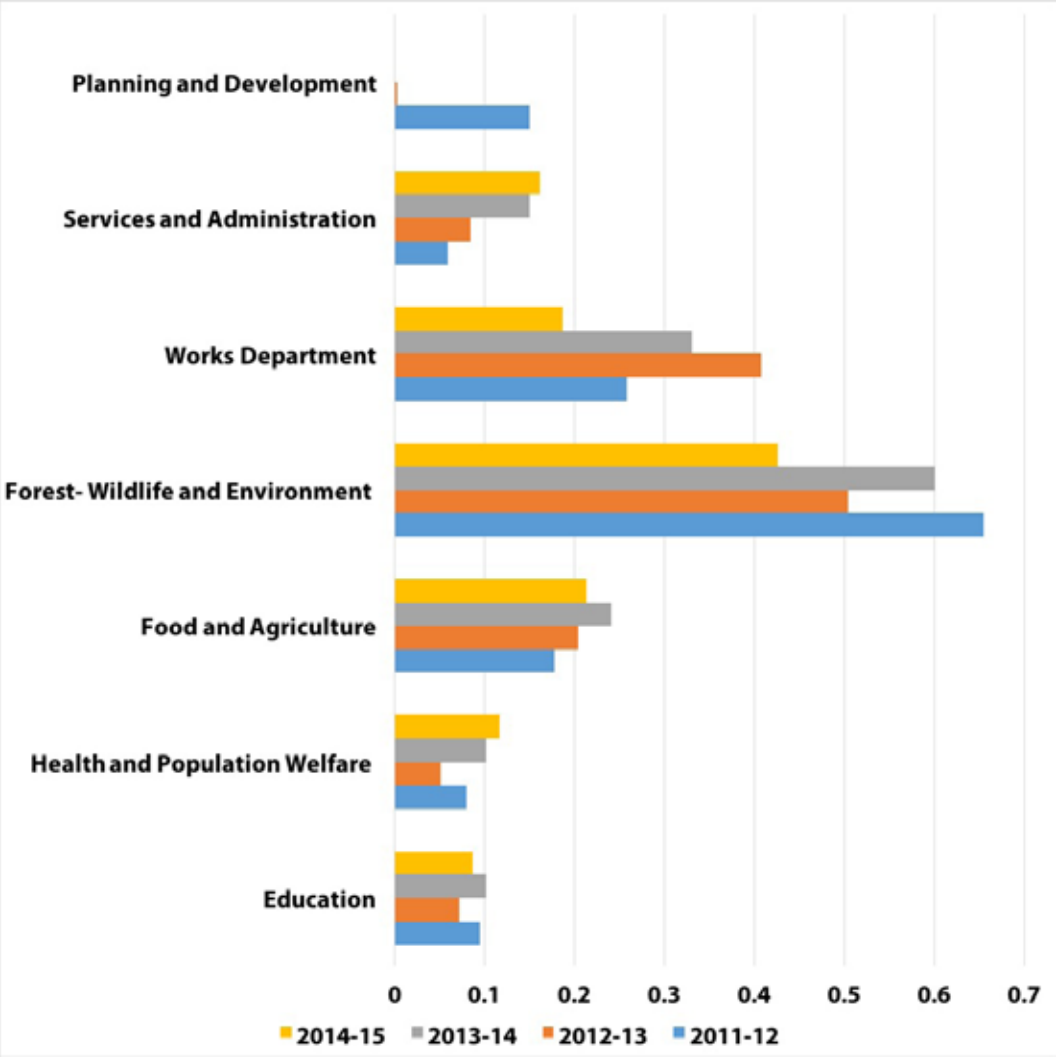


Figure 11.9b: FATA – CC-weighted actual expenditures as a percentage of total budgetary allocation



11.3.2 Climate-relevant expenditure in development and current budgets

Bringing together the information on the number of climate-relevant projects, their climate-relevance weights and total outlays on projects, yields estimates regarding the climate-relevant expenditure in the total development and current budgets of the region. The aggregate expenditure is summarized in table 11.13 in the form of three ratios, as discussed in the previous section and Chapters 6 and 7.

The AAGR (8.3 percent) of climate-related actual investment spending increased slower than actual development expenditure growth of 15.1 percent during the period. The ratio of CC-weighted actual development spending to total actual development expenditure varied in a tight range of 12.4–15.5 percent over the years. These ratios for FATA are nearly half of the corresponding ratios estimated for GB.

The AAGR (9.6 percent) of derived climate-relevant actual current expenditures is slightly below the growth rate of 10.4 percent seen in overall current expenditure in the region. This close tracking of climate-relevant current expenditures against the overall current budget indicates that spending on the portfolio of all projects is in line with climate-weighted current expenditures; some scope exists for raising these expenditures on capacity building, human and/or technical. During the four years, the ratio of

climate-relevant actual current expenditure to total current actual expenditure fluctuated between a low of 8.0 to a high of 11.75 percent. The shares in FATA are one-third lower than the corresponding ratios of the GB region.

The third estimate is the ratio of total climate-relevant actual expenditures (development and current) to total actual expenditure. This fluctuated between 11.6 and 13.1 percent during the four-year period.

Table 11.13: FATA – Four-year summary analysis

Development Expenditures (PKR millions)	2011/12	2012/13	2013/14	2014/15
CC weighted Actual Development Expenditure (a)	1712.8	1882.3	2540.9	2178.4
Total Actual Development Expenditure (b)	11519.3	12284.9	16353.1	17585
Ratio- (a)/(b)	**14.87%**	**15.32%**	**15.54%**	**12.39%**
Current Expenditure (PKR millions)				
CC Weighted Actual Current Expenditure- c	1714.8	1666.6	1442.7	2259.8
Total Actual Current Expenditure- d	14596.9	16099.4	18016.5	19649
Ratio- c/d	**0.1175**	**0.1035**	**0.0801**	**0.115**
Total Expenditures (PKR millions)				
CC weighted Actual Development Expenditure	1712.8	1882.3	2540.9	2178.4
CC Weighted Actual Current Expenditure	1714.8	1666.6	1442.7	2259.8
Total CC Weighted Actual Expenditures- (e)	**3427.6**	**3548.9**	**3983.6**	**4438.3**
Total Actual Development Expenditure (ADP)	11519.3	12284.9	16353.1	17585
Total Actual Current Expenditure	14596.9	16099.4	18016.5	19649
Total Actual Expenditure- (f)	**26116.2**	**28384.3**	**34369.6**	**37234**
Ratio- (e)/(f)	**13.12%**	**12.5%**	**11.59%**	**11.92%**

11.3.3 Department-wise profile of total climate change expenditures

An overview of climate-relevant expenditures and shares across various departments (Table 11.14) during the last 4 years sheds light on the changing priorities of the FATA administration with respect to climate-related spending.

11.3.4 Climate expenditure by themes and tasks

Each ADP development project in 2014/15 budget lines with a climate-relevant component was coded to one task type within the typology as outlined in Chapter 5. This information, in addition to revealing the proportional expenditure of the budget line on the climate-related component, permitted an identification of overall expenditure within each category of the typology. This analysis was carried out for FATA's development expenditure in the year 2014/15.

The major portion of the climate-relevant tasks allocation in the 2014/15 ADP of FATA fell in the awareness raising and education, and water resources sectors (43 and 26 percent respectively), followed by carbon

Table 11.14: FATA – Department-wise total CC expenditure and share 2012–2015

	2011/12		2012/13		2013/14		2014/15	
	Tot. CC Exp.	Share	Tot. CC Exp.	Share	Tot. CC Exp.	Share	Tot. CC Exp.	Share
Education	1030.73	30.08%	924.44	26.05%	594.24	14.92%	1344.84	30.30%
Health and Population Welfare	248.11	7.24%	275.01	7.75%	428.36	10.75%	522.98	11.78%
Food and Agriculture	214.90	6.27%	325.85	9.18%	413.03	10.37%	386.28	8.70%
Forest- Wildlife and Environment	702.23	20.50%	355.00	10.00%	463.16	11.63%	391.87	8.83%
Water and Power		0.00%	0.07	0.00%				0.00%
Works Department	818.17	23.88%	1,167.78	32.91%	1407.66	35.34%	921.83	20.77%
Services and Administration	386.13	11.27%	496.74	14.00%	677.18	17.00%	870.45	19.61%
Planning and Development	25.95	0.76%	3.93	0.11%				
	3,426.21	1.00	3,548.82	1.00	3,983.63	1.00	4,438.26	1.00

sequestration & forest (13 percent), health and social services (9 percent), agriculture & livestock (8 percent). The remaining minor (2 percent) allocations were distributed across the forestry and biodiversity sectors as highlighted in figure 11. 10a.

Figure 11.10a: FATA – Complete allocations of 2014/15 development budget expenditures to climate-relevant tasks

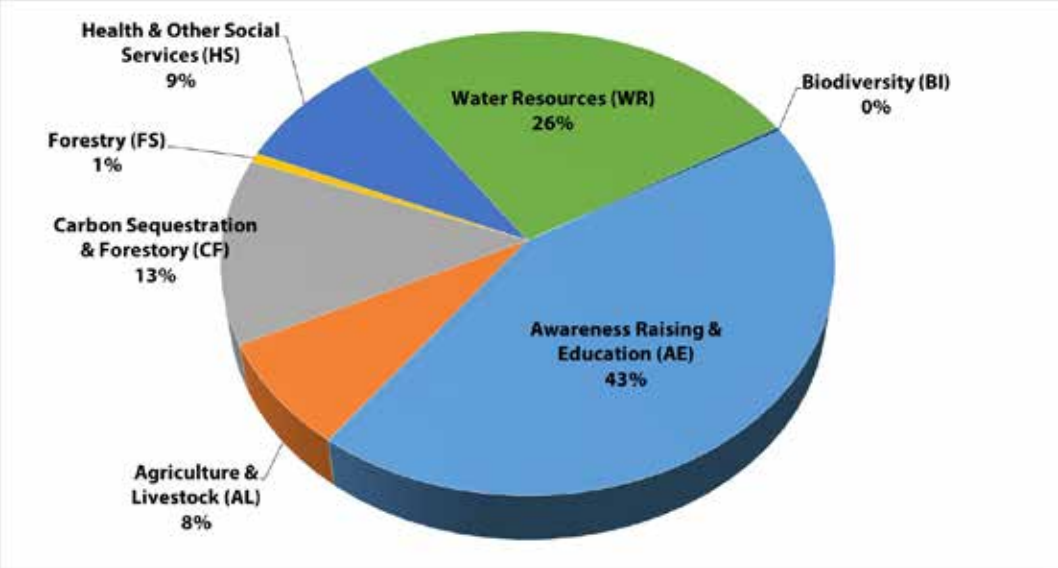
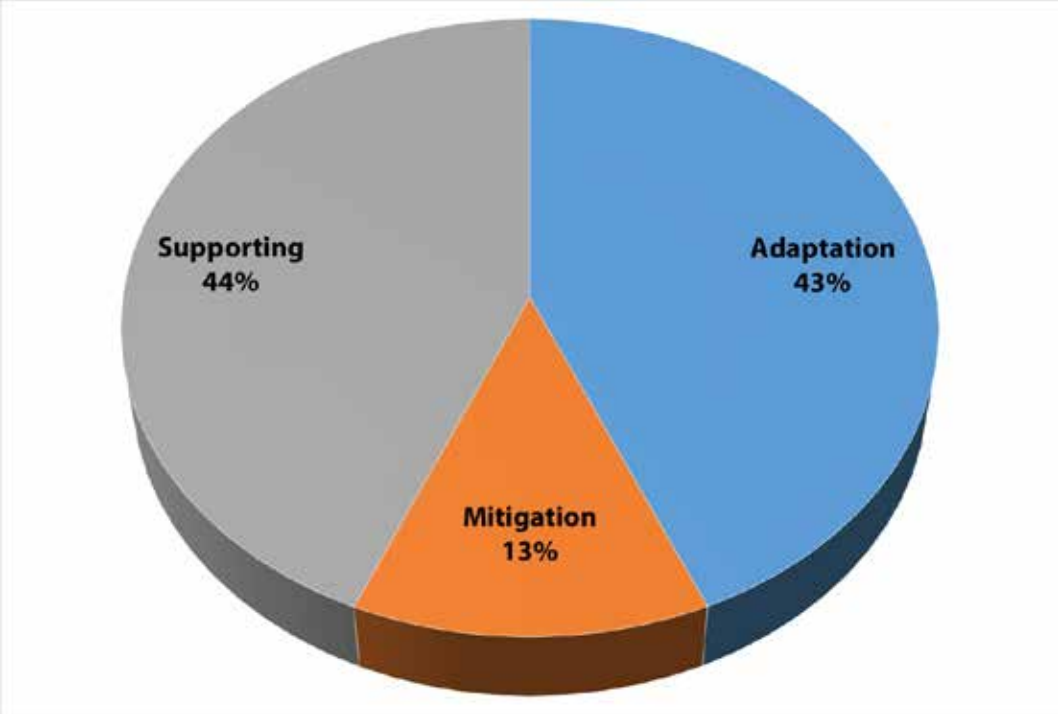
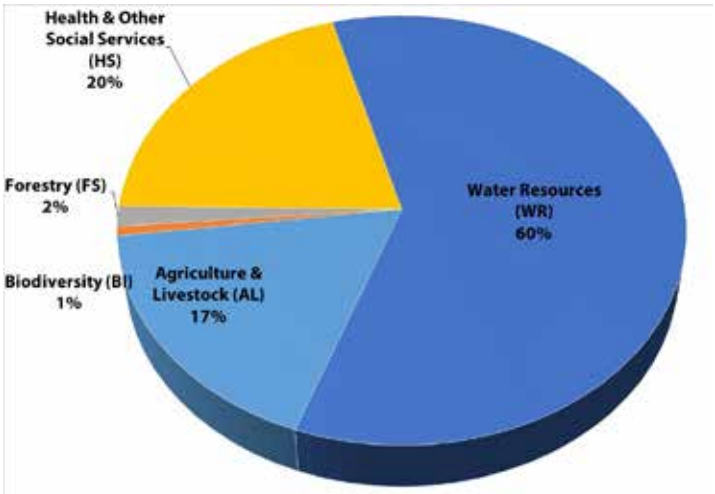


Figure 11.10b: FATA – Complete allocations of 2014/15 development budget expenditures to climate-relevant themes



The assigned typology further breaks down the development expenditures into different climate change themes — mitigation, adaptation, and supporting activities — that are enablers of CC response. The analysis of the 2014/15 development budget showed that the supporting theme contributed the most to FATA's climate budget (44 percent of the total climate-relevant investment), followed by adaptation activities at 43 percent, and mitigation at 13 percent, suggesting that nearly half of climate-relevant activities in FATA had a supporting component (Figure 11.10b).. This focus on supporting actions was not seen in the provinces or at the federal level.

Figure 11.10c: FATA – Allocation of expenditure to climate-relevant themes in ADP, 2014/15 (adaptation theme)



Relevant expenditures under the adaptation theme were mainly formed by tasks involving water resources (60 percent), health & social services (20 percent) and agriculture & livestock (17 percent). Forestry and biodiversity tasks altogether accounted for just around 3 percent of the adaptation response investment (Figure 11.10c).

Mitigation-related expenditure made up 13 percent of the climate-relevant component of the development budget for 2014/15 (Figure 11.10b). This was contributed by activities in carbon sequestration & forestry activities.

The supporting activities theme has emerged as the largest one (44 percent) in terms of budgetary allocations in the year 2014/15 (Figure 11.10(b). Total contribution in the development budget to this response theme came from the sub-sector of awareness raising & education activities.

11.4 Azad Jammu and Kashmir

The State of Azad Jammu and Kashmir (AJK) is an autonomous administrative region of Pakistan and together with GB forms what is known as Pakistan-administered Kashmir. To the north of AJK is GB, while the Indian occupied territory of Jammu and Kashmir, a disputed region between Pakistan and India, is to its east. KP province is west of AJK, and Punjab province to its south. AJK has a total area of 13,297 square km with an estimated population of around 4.6 million.

AJK has a parliamentary form of government with Muzaffarabad as its capital. It has its own elected president, prime minister, legislature, high court, emblem and official flag. The highest body in the state is the Azad Jammu and Kashmir Council which has six members from the Government of AJK (including the President and the Prime Minister of Azad Kashmir) and five members from the Government of Pakistan, including the President of Pakistan who is the chairman/chief executive of the council. AJK's financial matters – budget and tax affairs – are handled by the AJK Council rather than Pakistan's Central Board of Revenue.

Table 11.15 shows the macro fiscal four year trends for AJK. The total budgeted outlays in the region increased from PKR 44.4 billion to PKR 62.0 billion during the four-year period (2011/2012 to 2014/2015) at an AAGR of 11.7 percent, which is higher than the annual inflation rate of 8.1 percent. In other words, the real budgeted outlays of the Government of AJK increased during the same period. The year-to-year change remained stable, unlike the corresponding fluctuations observed in GB and FATA.

Over the four years, the share of current and development expenditures in total outlays remained stable within a narrow range except in the last year when it dropped to 17 percent from the 18–19 percent range. In nominal terms, development expenditure increased at an average annual rate of 8.8 percent and current expenditure increased at an average annual rate of 12.4 percent. Although not exactly comparable, these rates match the growth of expenditures in GB and FATA.

In spite of the devastating earthquake of 2005 and the resulting reconstruction of social and physical infrastructure that is still in progress, these low allocations understate the amount of direct investments undertaken by the international NGO community and the Government of Pakistan.

Table 11.15: AJK – Macro-view of budgeted expenditures

Year	Total Budgeted Expenditures (BE)	Percentage change in Tot. Budgeted Expenditures	Development Budgeted Expenditures		Current Budgeted Expenditures	
			Outlay	% Share	Outlay	% Share
2011/12	44,407		8,142	18.3	36,265	81.7
2012/13	49,597	11.7	9,547	19.2	40,050	80.8
2013/14	55,685	12.3	10,500	18.8	45,185	81.2
2014/15	62,000	11.3	10,500	16.9	51,500	83.1

Table 11.16 shows share of the main departments in overall capital spending of the region.[98] The four-year trends indicate the following:

i) The Transport and Communications Department absorbed over 40 percent of the ADP. Allocation to the power sector was the second highest.

ii) Education and Health sectors experienced a one-year (i.e., 2012/13) spurt in allocation and reverted to 8 and 3 percent allocation in the remaining three years. Allocations to Environment/Forestry/Wildlife stagnated while allocations to Local Government and Rural Development and Physical Planning and Housing declined. Allocations to Transport and Communications fluctuated in the range of 40–45 percent.

Table 11.16: AJK – Development expenditure shares of main departments

	2011/12	2012/13	2013/14	2014/15
Education	7.7	9.3	8.4	7.9
Environment/Forestry/ Fisheries/Wildlife	3.6	3.5	3.7	3.7
Health	3.2	6.1	2.9	3.0
Local Govt./Rural Development	9.7	8.1	8.1	8.1
Power	12.7	11.8	11.6	11.8
Physical Planning and Housing	7.4	6.5	6.6	6.7
Transport and Communications	40.0	41.0	45.2	45.1

11.4.1 Financing in AJK – ADP

Table 11.15 shows the sources for financing the current expenditures of the AJK region. Nominal tax and non-tax revenue plus receipts increased at an AAGR of 18.5 and 14.9 percent above the annual inflation rate during the period, indicating an increase in the real value of resources collected within the region. The AAGR of federal grants (15.6 percent) was also above the inflation rate. In contrast to the fiscal structure followed in KP, where the entire current expenditure is met from federal transfers and capital spending from internally-generated revenues, the entire ADP in AJK is financed from loans from the Federal Government; slightly more than 40 percent of current expenditure is financed from federal grants.[99]

98 The totals do not add up to 100 percent as departments with smaller allocations are excluded.

99 Note that total revenue receipts in 2011/12 and 2012/13 match the current expenditures, exactly. The current expenditures in 2013/14 were less as PKR 3,046 million of total revenue receipts were used to pay federal loans.

Table 11.17: AJK – Distribution of resources for current budgetary expenditures (PKR millions)				
	2011/12	**2012/13**	**2013/14**	**2014/15**
Tax revenue and receipts	11,156	12,550	14,783	18,576
Direct taxes	6,940	7,514	9,329	12,616
Indirect taxes	3,496	4,196	4,645	5,182
Tax receipts	720	840	809	778
Non-tax revenue and receipts	25,109	27,500	33,448	38,084
Income from property	1,800	775	600	280
Other non-tax revenue	255	135	203	143
Federal grants	15,000	16,500	21,000	23,200
Other non-tax receipts	8,054	10,090	11,645	14,461
Total revenue receipts[18]	36,265	40,050	48,231	56,660
Percentage of tax revenues	30.80%	31.30%	30.70%	32.79%
Percentage of non-tax revenues (excluding federal grants)	27.90%	27.50%	25.80%	26.27%
Percentage of federal grants	41.40%	41.20%	43.50%	40.95%

The development budget needs to be enhanced substantially if the region's future vulnerability to CC is to be addressed in a sustainable manner. The options are to either become more dependent on federal loans, thereby increasing debt and concomitant debt servicing liabilities, or to gradually reform the tax base to entirely finance the current expenditures from internally-generated funds. The Government of AJK will then be in a position to request grants (instead of loans) from the Federal Government to finance long-term investments towards climate compatible development.

100 The incomes (in terms of fees and charges) of various departments under the Government of AJK are recorded as non-tax receipts.

11.4.2: Climate programmes and budgets

The overall climate-relevant expenditure in AJK as a percentage of total expenditure for the period under consideration is shown in table 11.18.

Table 11.18: AJK – Summary results of CC-related expenditures

	2011/12	2012/13	2013/14	2014/15
Total CC-weighted actual expenditures - (a)	4,110	6,936	6,963	10,472
Total budgeted expenditure - (b)	44,549	49,597	55,685	62,000
CC-related expenditures in % (Ratio - (a)/(b))	9.20%	13.98%	12.50%	16.89%

As stated earlier, the extent of the Government's budget devoted to climate-relevant activities is based on the share of projects with climate relevance in the overall portfolio of projects, their importance in terms of relevance weights, and the conversion of weights into CC-related capital spending in terms of nominal rupees. Table 11.19 shows the department-wise trend in climate-related projects as a percentage of total department-wise projects initiated in each of the four years. The share of climate-related projects in the overall portfolio of projects is fairly high (78–84 percent), and for most years, exceeds the corresponding percentages of GB and FATA. Additional characteristics of the trend are as follows:

i) Over 50 percent of the projects are climate-relevant in 8 of the 14 departments of the Government of AJK. Of these, 6 departments are managing more than 80 percent of the projects that have some degree of climate relevance.

ii) There is considerable stability (or less variation) in the share of climate-relevant projects over the period. Apart from Social Welfare and Women's Development, the trend in shares is similar for sectors with less than or greater than 50 percent of projects in their respective portfolios.

Figure 11.11 shows the four-year trend in department-wise mean relevance weight of projects related to CC. Except for projects undertaken by the Development Authorities and Industries Departments, the mean relevance in four years for all other departments is fairly similar. A gradual increase in the proportion of climate-relevant projects undertaken by the Environment/Forestry/Fisheries/Wildlife and Local Government and Rural Development is encouraging.

Table 11.19: AJK – Climate-related projects

#	Sectors	2011/12			2012/13			2013/14			2014/15		
		Total # of Projects	Total # of CC-related Projects	% Share of CC-related projects	Total # of Projects	Total # of CC-related Projects	% Share of CC-related projects	Total # of Projects	Total # of CC-related Projects	% Share of CC-related projects	Total # of Projects	Total # of CC-related Projects	% Share of CC-related projects
1	AGRICUTURE SECTOR	37	32	86.49%	48	42	88%	38	33	86.84%	32	32	100.00%
2	CIVIL DEFENCE	3	3	100.00%	3	3	100%	3	3	100.00%	2	2	100.00%
3	DEVELOPMENT AUTHORITIES/ RESEARCH & DEVELOPMENT	30	11	36.67%	42	20	48%	18	10	55.56%	20	13	65.00%
4	EDUCATION	119	117	98.32%	133	131	98%	96	95	98.96%	57	57	100.00%
5	ENVIRONMENT/FOREST/ FISHERIES/WILDLIFE	31	30	96.77%	47	46	98%	23	23	100.00%	23	23	100.00%
6	HEALTH	31	26	83.87%	30	28	93%	22	22	100.00%	7	7	100.00%
7	INDUSTRIES/MINERALS	43	6	13.95%	54	12	22%	22	1	4.55%	14	5	35.71%
8	INFORMATION TECHNOLOGY	22	9	40.91%	27	9	33%	14	5	35.71%	12	6	50.00%
9	LOCAL GOVERNMENT & RURAL DEVELOPMENT	24	12	50.00%	21	12	57%	13	7	53.85%	15	7	46.67%
10	PHYSICAL PLANNING & HOUSING	69	20	28.99%	103	44	43%	59	22	37.29%	45	16	35.56%
11	POWER	42	18	42.86%	60	20	33%	48	15	31.25%	40	17	42.50%
12	SOCIAL WELFARE & WOMEN DEVELOPMENT	7	4	57.14%	7	5	71%	6	5	83.33%	6	3	50.00%
13	TRANSPORT & COMMUNICATION	326	322	98.77%	399	353	88%	308	302	98.05%	275	273	99.27%
14	REHABILITATION & FOREIGN FUNDED PROJECTS				9	2	22%				2	1	50.00%
	TOTAL	**784**	**610**	**77.8%**	**983**	**727**	**74.0%**	**670**	**543**	**81.0%**	**550**	**462**	**84.00%**

Figure 11.11: AJK – Mean relevance

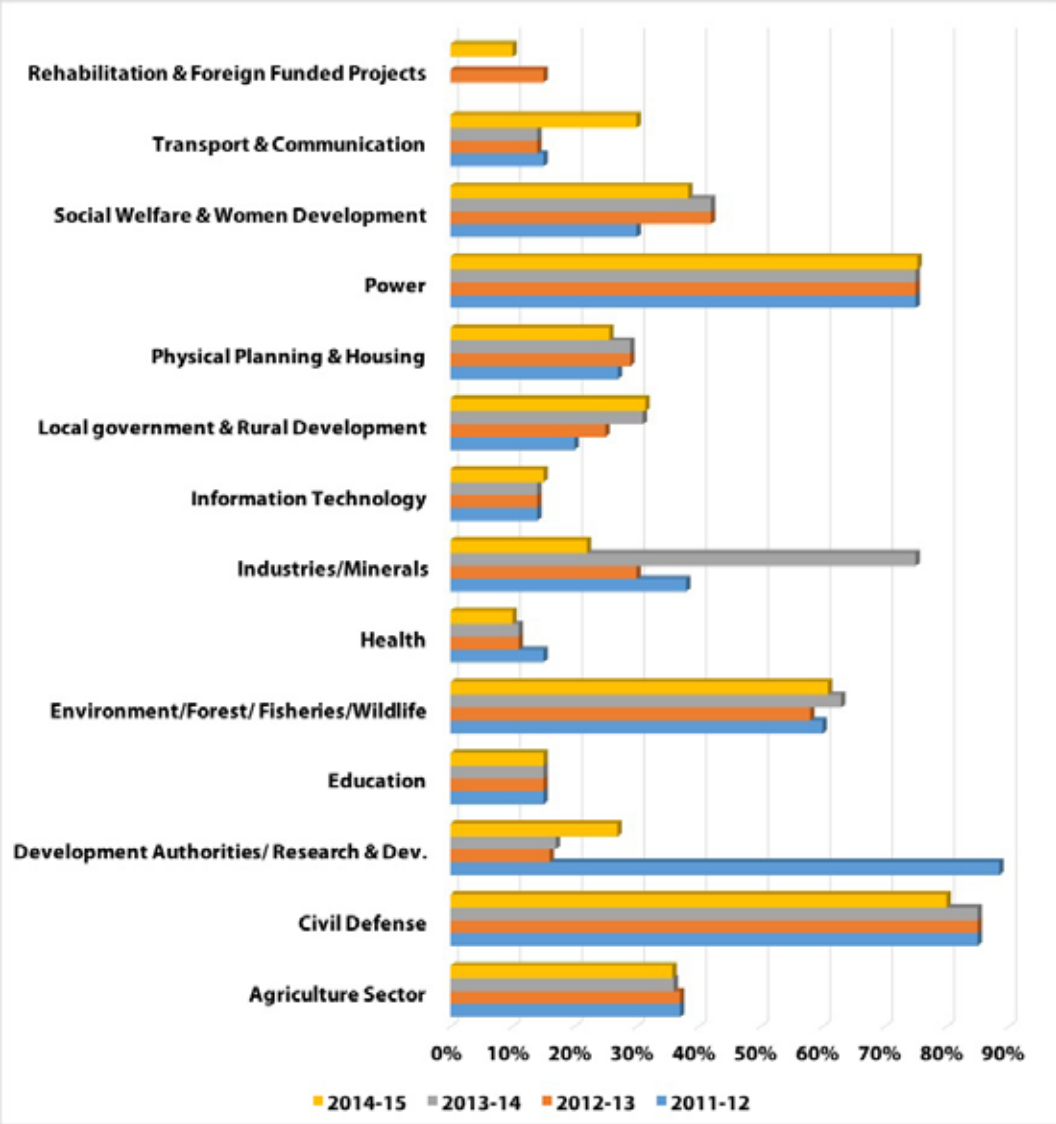


Figure 11.12a shows department-wise trends in the share of climate-relevant project outlays out of total climate-relevant expenditure in the region.

i) The departments of Transport and Communications, Power and Environment have double-digit shares in overall climate expenditures, ranging from 10 to 51 percent. However, these expenditures vary over the four-year period, depending on the type of projects undertaken.

ii) In all the departments there is no clear trend in climate expenditures, and in 8 out of 14 departments this ratio declined in 2014/15 compared to the previous year.

Figure 11.12b shows the share of each department's climate-relevant spending in relation to its total outlays (BEs) on all projects. To reiterate, this ratio is applied to total current expenditures to obtain an estimate of current expenditures on climate-related projects.

i) Of 14 departments, the actual spending on the climate-proofing of projects implemented by four departments (Agriculture, Civil Defence, Environment and Power — except 2013/14) has been consistently above one-fourth of their total spending on projects. It fluctuated between 0 and 44 percent in the Power and Social Welfare Departments during the four years.

i) The shares of expenditures on climate-proofing in total capital spending shows a rising trend with minor one year dip in 8 out of the 14 departments.

Figure 11.12a: AJK – CC-weighted actual expenditure as a percentage of total CC-weighted actual expenditure

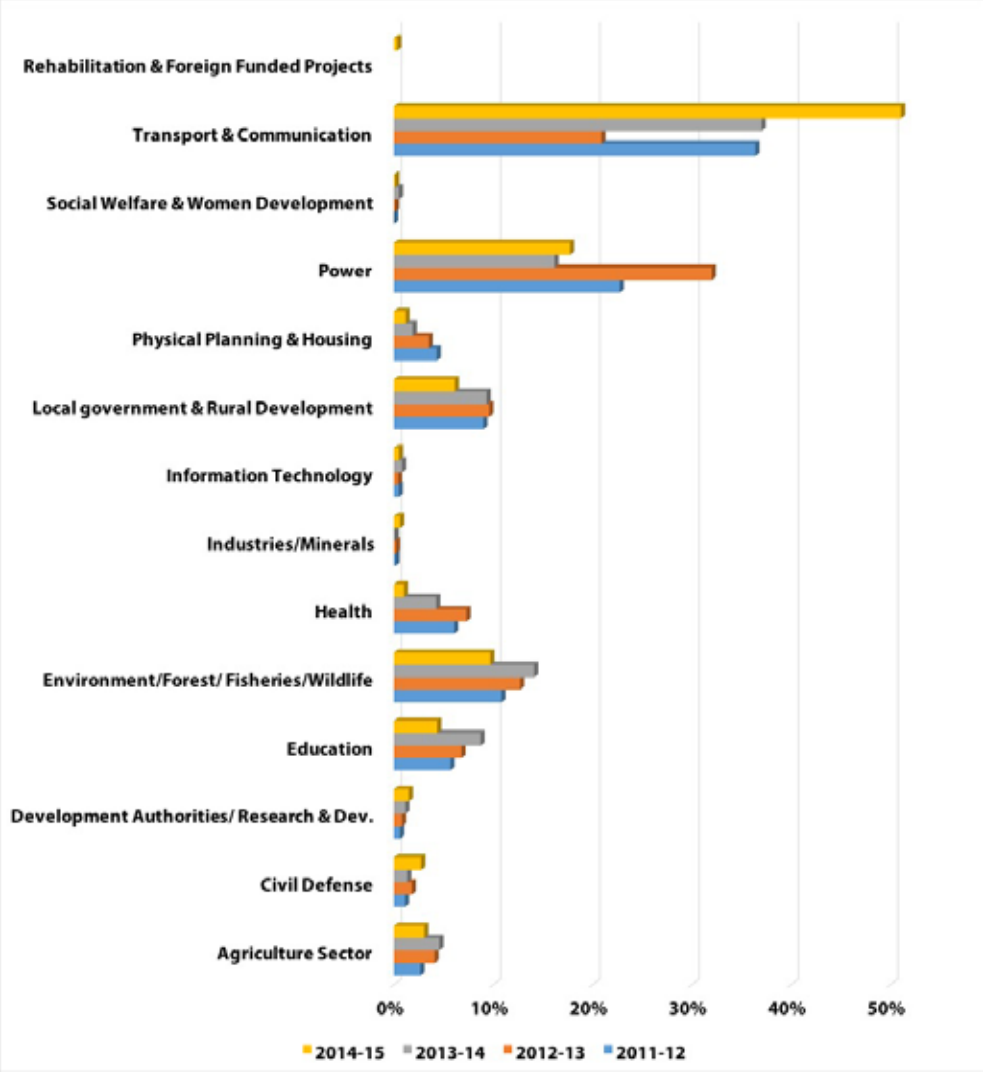
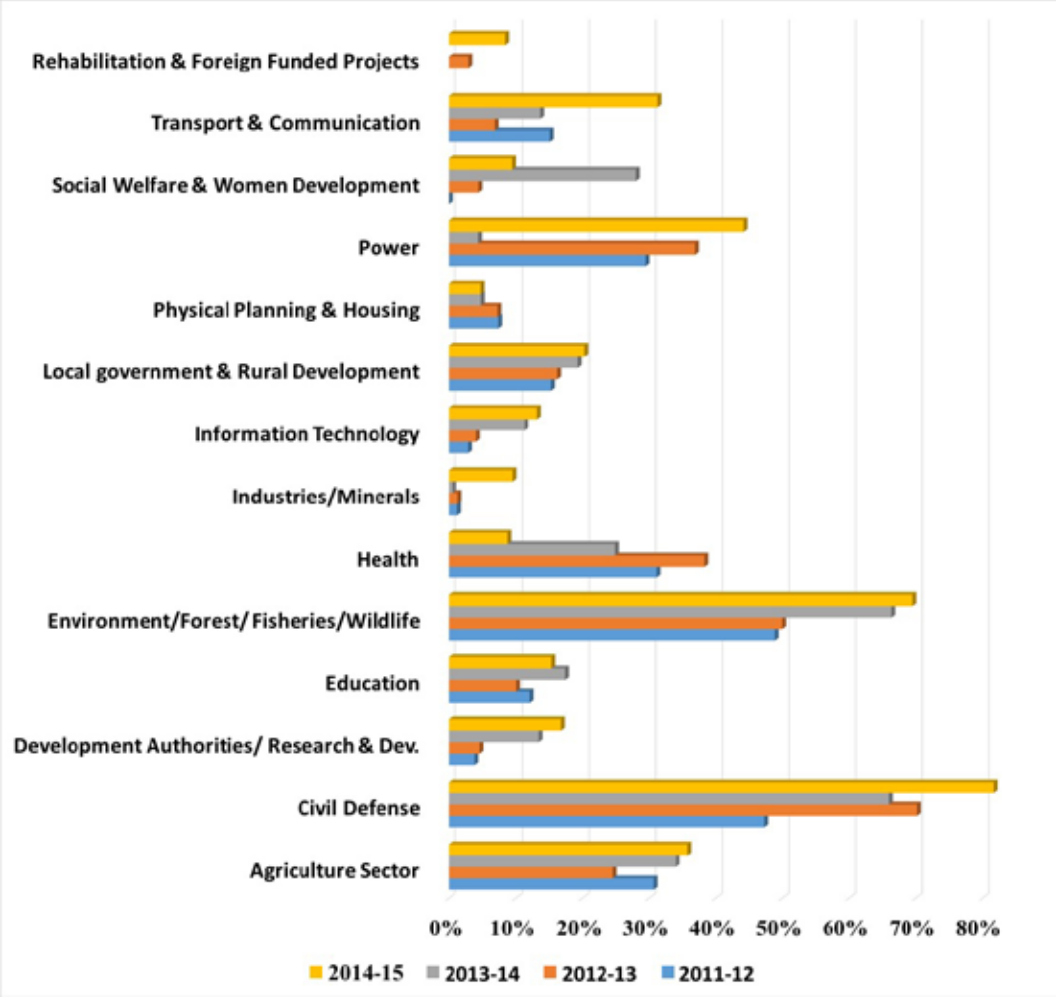


Figure 11.12b: AJK – CC-weighted actual expenditure as a percentage of budgeted estimates



11.4.3 Climate-relevant expenditure in the development and current budget

Table 11.20 brings together earlier pieces of information on projects, climate relevance weights and department-wise spending into an aggregate for the region. Capital spending on climate-relevant projects increased from PKR 1,365 million to PKR 2,780 million at an AAGR of 26.8 percent. As a ratio of overall budgeted capital spending in the region, the climate expenditures indicate a rising tendency with fluctuations in the range of 13.7–26.5 percent.

The derived estimates of climate-relevant current expenditure increased from PKR 2,745 million in 2011/12 to PKR 7,690 million in 2014/15 at an AAGR of 40.9 percent. As a percentage of overall budgeted current expenditure, the climate-relevant current expenditure estimates ranged from 7.6 to 14.9 percent during the four years.

The share of total expenditure (development and current) on climate varied from 9.2 to 16.9 percent in the total public sector budget of the AJK region. These ratios are lower compared to GB (15.7–28.4 percent) and compare favourably with FATA (11.6–13.1 percent).

Table 11.20: AJK – Four-year summary of expenditure ratios

	2011/12	2012/13	2013/14	2014/15
Development Expenditures (PKR millions)				
CC weighted Actual Development Expenditure (a)	1365	1307	1760	2782
Total Development Budget Estimates (b)	8284	9547	10500	10500
Ratio- (a)/(b)	16.5%	13.7%	16.8%	26.5%
Current Expenditure (PKR millions)				
CC Weighted Actual Current Expenditure- c	2745	5629	5203	7690
Total Current Budget Estimates- d	36265	40050	45185	51500
Ratio- c/d	7.6%	14.1%	11.5%	14.9%
Total Expenditures (PKR millions)				
CC weighted Actual Development Expenditure	1365	1307	1760	2782
CC Weighted Actual Current Expenditure	2745	5629	5203	7690
Total CC Weighted Actual Expenditures- (e)	4110	6936	6963	10472
Total Development Budget Estimates	8284	9547	10500	10500
Total Current Budget Estimates	36265	40050	45185	51500
Total Budget Estimates- (f)	44549	49597	55685	62000
Ratio- (e)/(f)	9.2%	14.0%	12.5%	16.9%

11.4.4 Department-wise profile of total CC expenditures

The four-year profile of department-wise spending on climate-relevant activities is shown in table 11.21. Climate-relevant expenditures increased at an AAGR of 23.4 percent during the period. Except for the double-digit shares of Education, Power and Transport and Communications, the share of all other departments in total CC-related expenditures remained in single digits. The share of Environment/Forestry/Fisheries/Wildlife remained between 4.3 and 7.4 percent during the period. Except Civil Defence, that shows a rising trend and Physical Planning and Housing shows a declining trend, the shares of all other departments show a fluctuating trend during the four year period.

Table 11.21: AJK – Department-wise total CC expenditure and share 2012–2015

	2011/12		2012/13		2013/14		2014/15	
	Total CC Exp	% Share	Total CC Exp	% Share	Total CC Exp	% Share	Total CC Exp	% Share
AGRICUTURE SECTOR	280.56	6.83%	285.69	4.12%	422.12	6.06%	443.52	4.24%
CIVIL DEFENCE	42.90	1.04%	72.47	1.04%	75.04	1.08%	145.00	1.38%
DEVELOPMENT AUTHORITIES/ RESEARCH & DEVELOPMENT	70.20	1.71%	83.72	1.21%	256.46	3.68%	359.14	3.43%
EDUCATION	1575.06	38.32%	1617.20	23.32%	2998.41	43.06%	2792.25	26.66%
ENVIRONMENT/ FORESTRY/FISHERIES/ WILDLIFE	184.78	4.50%	421.59	6.08%	299.65	4.30%	778.20	7.43%
HEALTH	251.73	6.12%	1353.24	19.51%	995.62	14.30%	377.13	3.60%
INDUSTRIES/MINERALS	2.93	0.07%	3.34	0.05%	1.76	0.03%	25.78	0.25%
INFORMATION TECHNOLOGY	10.14	0.25%	6.49	0.09%	19.14	0.27%	20.73	0.20%
LOCAL GOVERNMENT & RURAL DEVELOPMENT	176.43	4.29%	190.77	2.75%	252.51	3.63%	246.80	2.36%
PHYSICAL PLANNING & HOUSING	174.22	4.24%	145.08	2.09%	101.88	1.46%	70.37	0.67%
POWER	588.86	14.33%	2338.65	33.72%	541.88	7.78%	2910.16	27.79%
REHABILITATION & FOREIGN FUNDED PROJECTS	0.00	0.00%	0.00	0.00%	0.00	0.00%	57.66	0.55%
SOCIAL WELFARE & WOMEN DEVELOPMENT	0.00	0.00%	8.41	0.12%	60.91	0.87%	22.21	0.21%
TRANSPORT & COMMUNICATION	752.74	18.31%	408.78	5.89%	937.44	13.46%	2223.04	21.23%
TOTAL	**4110.**	**100.00%**	**6935**	**100.00%**	**6962**	**100.00%**	**10471**	**100.00%**

11.4.5 Climate expenditure by themes and tasks

As mentioned earlier, a typology of themes and tasks for CC response activities are based on the themes and classifications given in the National Climate Change Policy. Each project with a climate-relevant component that is accounted for in the ADP development budget lines for 2014/15, was coded to one task type within the typology. This information, in addition to revealing the proportional expenditure of the budget line on the climate-related component, permitted an identification of overall expenditure within each category of the typology. This analysis was carried out for the year 2014/15 of AJK's development expenditure and is given in the following pie-charts.

The analysis indicate that transport presents the major portion of climate-related tasks allocation in the AJK ADP of 2014/15, covering over half the expenditure. The other important task area was energy sector (18 percent). Remaining 28 percent allocations were distributed across awareness raising and education (6 percent), water resources (5 percent), health and other social services (4 percent), disaster preparedness (3 percent), biodiversity (3 percent) transport and agriculture and livestock (3 percent each), carbon sequestration and forestry (2 percent each), town planning, capacity building and institutional strengthening, and agriculture and livestock (1 percent each) as highlighted in figure 11. 13a.

Figure 11.13a: AJK – Complete allocations of 2014/15 development budget expenditures to climate-relevant tasks

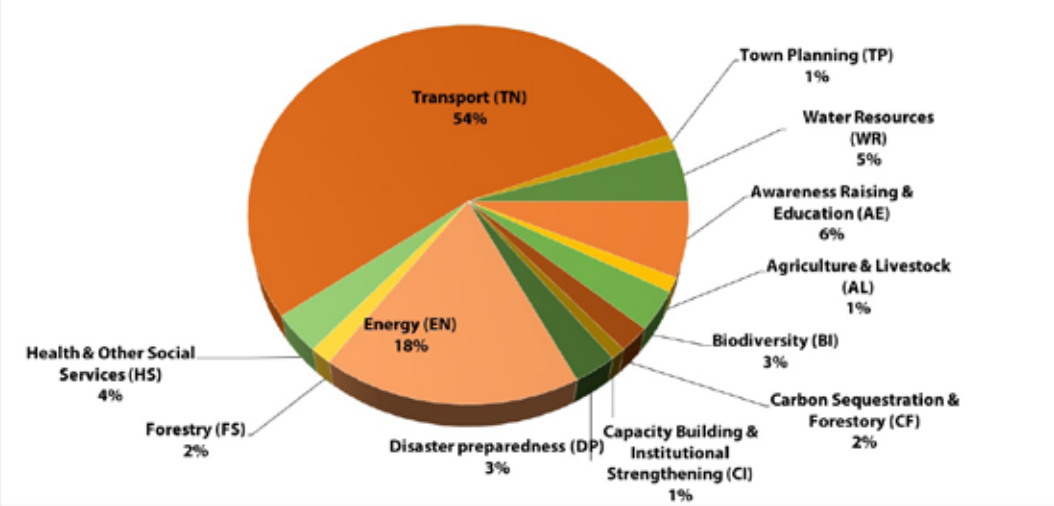
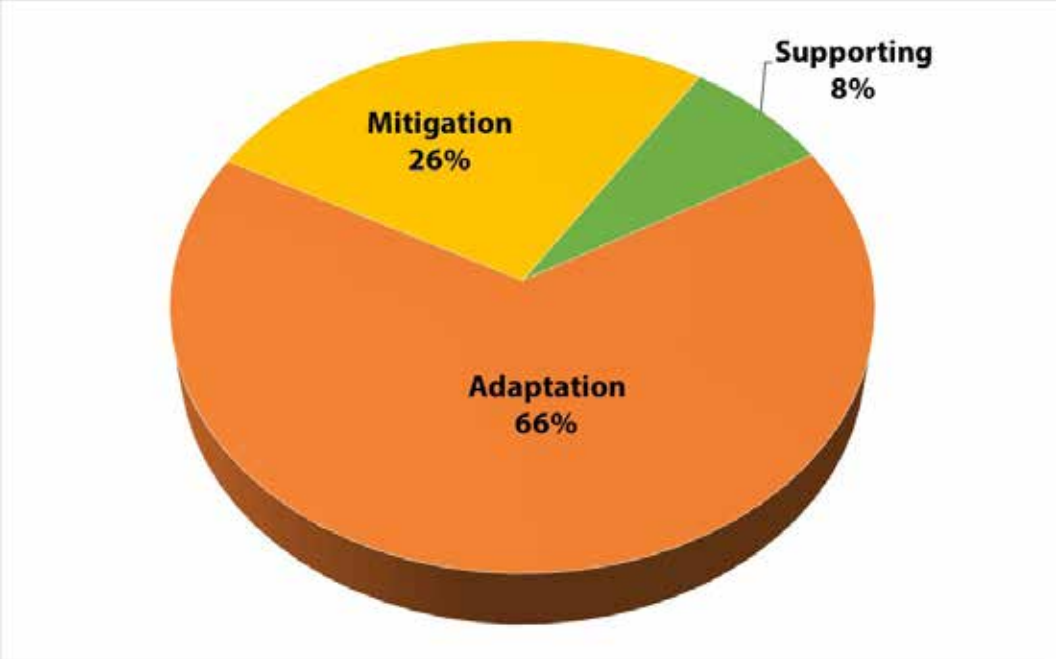
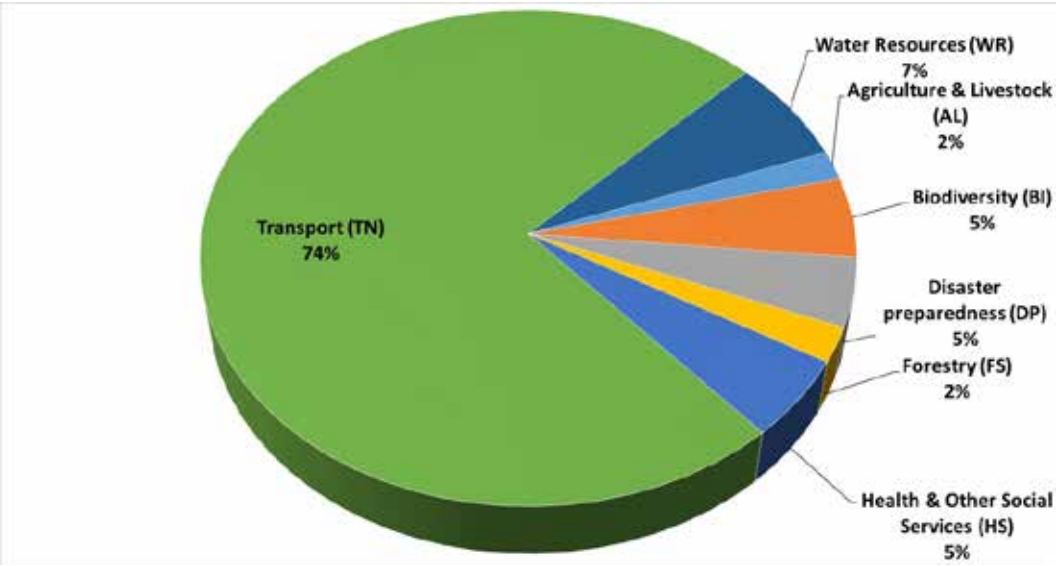


Figure 11.13b: AJK– Complete allocations of 2014/15 development budget expenditures to climate-relevant themes



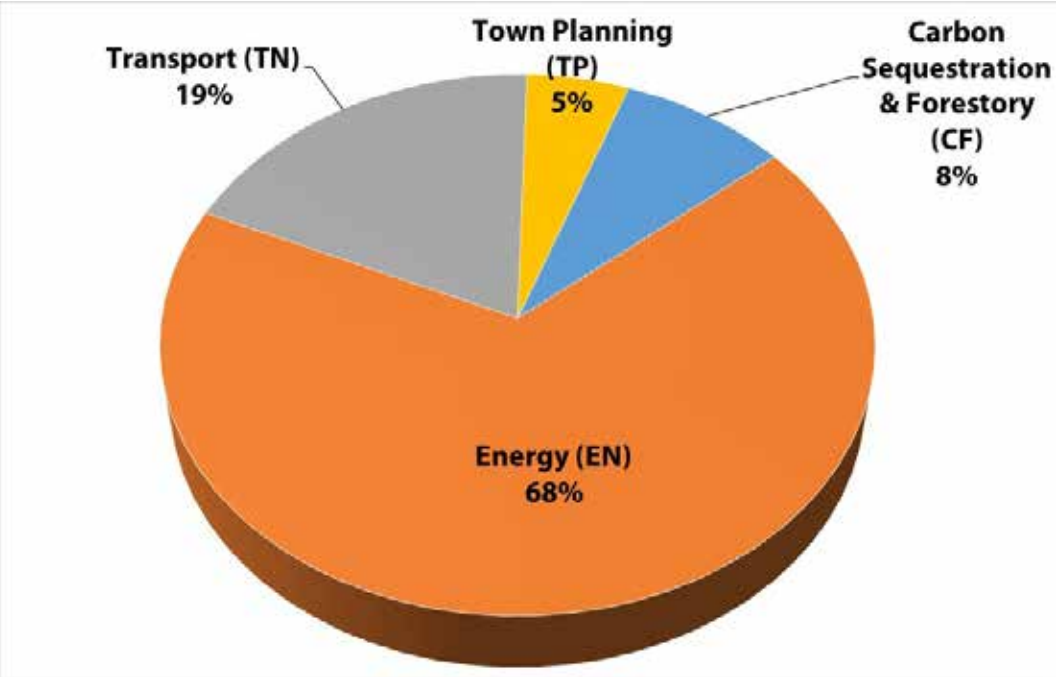
The assigned typology further breaks down the development expenditures into different climate change themes — mitigation, adaptation, and supporting activities — that are enablers of CC response. The analysis of the 2014/15 development budget showed that the adaptation theme contributed the most to the AJK climate budget (66 percent of the total climate-relevant investment), followed by mitigation activities at 26 percent, and supporting activities at 8 percent, suggesting that two-thirds of climate-relevant activities in AJK had an adaptation component (Figure 11.13b).

Figure 11.13c: AJK – Allocation of expenditure to climate-relevant themes in ADP, 2014/15 (adaptation theme)



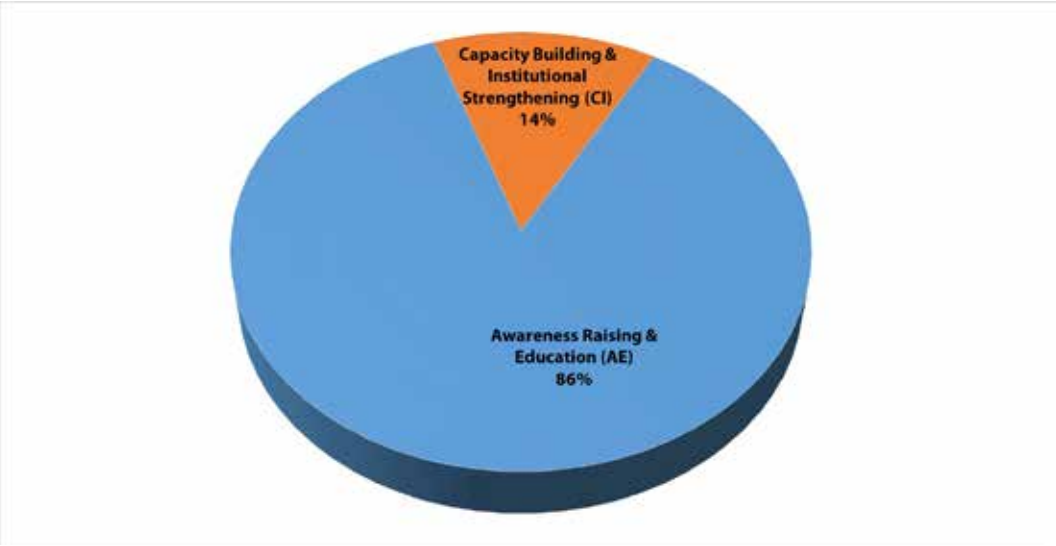
Relevant expenditures under the adaptation theme were mainly formed by tasks involving transport infrastructure (74 percent), while the remaining 26 percent is distributed among water resources (7 percent), health and social services, disaster preparedness, biodiversity (5 percent each) and forestry and agriculture & livestock (2 percent each) (Figure 11.13c).

Figure 11.13d: AJK – Allocation of expenditure to climate-relevant themes in ADP, 2014/15 (mitigation theme)



Mitigation-related expenditure made up 26 percent of the climate-relevant component of the development budget for 2014/15 (Figure 11.13d). The major contributors were the energy sector (68 percent) and transport (19 percent) of the total mitigation response allocation, while town planning, and carbon sequestration & forestry activities contributed the remaining 13 percent towards total mitigation investments. The focus on mitigation theme allocations varies widely among the federal and provincial budgets, as mitigation was the largest theme in federal budget at 63 percent and in GB 79 percent, while the corresponding figure in Punjab is at 30 percent, and the lowest was observed in KP and Balochistan at 14 percent for each.

Figure 11.13e: AJK – Allocation of expenditure to climate-relevant themes in ADP, 2014/15 (supporting actions theme)



The CC supporting activities theme has emerged as the lowest (8 percent) in terms of budgetary allocations in the year 2014/15 (Figure 11.13b). Major contributions to this response theme came from the sub-sectors of awareness raising and education (86 percent of the total supporting activities in AJK development budget), while the rest is contributed by the sub-sectors of capacity building and institutional strengthening (14 percent) (Figure 11.13e).

11.5 Comparison of regions in relation to climate change budgets

Table 11.22 summarizes key metrics in relation to the CC response in each of the three regions which was analysed in this section. The percentage of projects that have climate relevance is fairly similar across the three regions, implying a similar climate response. The share of climate-proof expenditure in total size of climate-related projects varies considerably among the three regions ranging from a high of 54.3 percent in GB to a low of 18.6 percent in FATA, indicating variation in the type and size of projects undertaken in the three regions in 2014/15. The share of outlays on climate-relevant projects with respect to total development expenditure varies from 6.7 to 40.8 percent. This share is the lowest in AJK as it is more flexible and responsive to demands for the competing use of funds, leading to smaller climate expenditures as internal resources are raised in AJK to finance a portion of budgets.

Table 11.22: Comparison of climate response indicators for GB, FATA, AJK and KP, 2014/15

Climate response budget indicators	Federally administered regions		
	GB	*FATA*	*AJK*
Percentage of projects with climate relevance	73.8%	83.4%	84.0%
Share of climate-related expenditures to total size of climate-related projects	54.3%	18.6%	32.5%
Share of climate-proofed expenditures to development expenditure	40.8%	12.4%	6.7%
Share of climate-related expenditures to total budget (development + current)	28.4%	11.9%	16.9%

11.6 Institutional assessment of federally administered regions

CC requires actions to be taken in many policy sectors, considering the social and ecological aspects of Pakistan. The domains of poverty reduction, rural development and agriculture, disaster management and energy security are interlinked in policy and institutions, providing an intricate backdrop to the political economy of CC. This is reported in other sections of this report, but is especially valid for the federally administered regions considered here.

Pakistan's water sector is vulnerable to CC as 70 percent of the freshwater supply in the country is served by river flow; the rest is provided mainly by rainfall, depending on the monsoons. River flows are dependent to a large extent on glacier and snow melt from three mountain ranges (the Hindukush, Karakoram and the Himalayas) concentrating in GB, AJK and KP. The draft NSDS notes that the relative forest cover area is one of the lowest in the world and low even within South Asia, with a high deterioration rate. Most of the forest area is concentrated in the northern part of the country i.e. KP, GB and AJK, and comprises coniferous and scrub forest, which provide an important function for watershed integrity.

Discussions in AJK and GB reflected the inadequacy of incentives and resources for climate-resilient development in light of projected CC. In contrast to GB and AJK, FATA is arid and mountainous, distinguished by a pastoral economy with rain-fed agriculture. FATA also has the lowest share of total budget which is climate-sensitive, in comparison with GB and AJK.

AJK has recently established a Climate Change Centre in their Planning and Development Department headed by a Director-General Climate Change. The Centre's main objectives include formulation and facilitation implementation of the region's CC policy, strategies and action plans to integrate/mainstream mitigation and adaptation aspects into development, socioeconomic policies and programmes/plans/projects for ensuring climate-resilient development; facilitate/guide stakeholders to prepare climate change proposals, sensitization and effective mobilization of funds for implementation of climate change policy; ensuring that all major investments are made in a manner with full assimilation of climate change mitigation and adaptation aspects for sustainable development; strengthening the institutional and professional capacities of GLDs for climate change mitigation and adaptation; and development of an updated and web-enabled climate change database. GB is also working on a project to develop its CC Policy and Action Plan.

11.6.1 Policy instruments and mechanisms

GB and AJK have their own administrative departments dealing with subjects including environment, planning and finance. Institutionally, these are governed by the GB Council and AJK Council. In this regard, all legislative acts and policies are presented to the AJK and GB Legislative Assemblies as well as the two councils. The federal Ministry of KANA is the Secretariat for both of the councils and the Secretary of KANA serves as an ex-officio member on both councils. CC is not mentioned as a subject in the Legislative Lists for AJK and GB. The Gilgit-Baltistan Empowerment and Self-Governance Order, 2009 lists "environmental pollution and ecology" in the Fourth Schedule as part of the GB Assembly Legislative List. In the case of AJK, any subject not on the Council Legislative List is a subject of legislation for the AJK Assembly. However, it is important to remember that devolution through the 18th Amendment does not extend to these regions and therefore, federally legislated laws and policies remain valid. Therefore the NCCP and the accompanying Framework for Implementation remain the overarching policy document for mainstreaming CC in GB, FATA and AJK.

Some of the NCCP recommendations that are specific to these regions include:

- Undertaking a survey of water resources in the provinces, including AJK and GB, to assess and accordingly enhance their potential to generate energy.

- Developing a consensus at the national level to divert funds to GB so that hydropower projects can be initiated that will benefit both local and external communities.
- Setting up CC adaption and mitigation cells in AJK's Departments of Agriculture, Livestock and the EPA.
- Undertaking detailed soil and groundwater quality studies in AJK.
- Constructing small dams, as abundant water is available in GB, for power generation and supply to other parts of the country.
- Enhancing forest cover on uphill watershed areas through rapid afforestation and reforestation measures.
- Conducting glacial lake outburst flood (GLOF)-related research and accordingly developing projects to conserve the glaciers of the northern regions, especially in GB.

Given the ecological assets of the regions, both adaptation and mitigation actions from the Framework can be piloted here to climate-proof resources and exploit the potential of renewable energy sources.

In terms of institutional arrangements, AJK, FATA and GB remain within the federal PSDP through the Ministry of KANA and SAFRON. The federal MPDR is the custodian of the federal PSDP and the various planning processes leading up to the PSDP remain relevant for public climate investment in the regions. These processes also involve the MoF as an important member. Hence, at the federal level, key institutions that are relevant for investment decisions on CC in the regions are:

- MPDR – responsible for the development of the PSDP in coordination with relevant ministries);
- MoF – responsible for current and development budgetary allocations;
- MCC – custodian of the Climate Change Policy of 2012;
- Ministry of KANA;
- Ministry of SAFRON.

The elaborate financial analysis above can form the basis of an informed discussion within these institutions. The following are given as examples to consider while taking forward an informed discussion at the federal level and with the administration of these regions.

The financial analysis shows a focused policy commitment to CC from the Government of GB since the proportion of climate expenditures on investments undertaken by P&DD, Forest, Wildlife and Environment, Food and Agriculture and Water and Power are, on average, higher than in the remaining departments. With 95 percent of CC-relevant expenditures in GB in Water and Power, the grounds are laid for the NCCP Implementation Framework. Our discussions with officials from GB, policy-implementers and the NCCP Implementation Framework recognized a resource constraint in this area, (see above for NCCP). The officials said that while they prioritize within the budget allocated to them through KANA, ensuring a high percentage within the ADP, the demands of the fragile ecosystem require more resources. They saw a need to expand resources under the ADP while keeping on increasing the current percentages as reflected in the climate-relevant expenditure analysis given above. This is in line with the NCCP recommendation on hydropower resources. It is worth mentioning that GB is currently developing its own climate change policy and revising its 2007 GB Hydropower and Renewable Energy Policy. Currently, the policy considers projects up to 50 MW within the PSDP. The policy revision is looking to expand and could therefore provide a possible entry point.

At the GB institutional level, along with Water and Power and P&DD, the EPA, Environment Department and Wildlife and Forest Department seem relevant for CC as per the financial analysis and have also been mentioned as implementing institutions in the NCCP Implementation Framework.

Commitment to forestry in AJK is evident from the exploratory and analytical work undertaken with collaboration from the Pakistan Forestry Institute. The SWOT[101] analysis carried out by the institute in 2013 recommends a forest policy and legal provisions to safeguard and carry out the functions of the Forestry Department as per the current rules of business. These functions include watershed management and reforestation, providing an opportunity to build on in line with the NCCP Implementation Framework recommendations (given above).

The institutional setup in FATA which can support climate-relevant actions is generally weak. However, the MCC is well-positioned to promote adequate measures to bring the FATA Secretariat,[102] initially through the Ministry of SAFRON, into the fold of the Framework for Implementation CC Policy more proactively. The Directorates under the FATA Secretariat include agriculture, irrigation and forests, which may provide possible institutional entry points in the short term.

11.6.2 Mainstreaming climate change

While each region has its own set of opportunities and challenges in policy response, implementation and mainstreaming the common challenge remains within the overarching control of a federal ministry in the case of AJK and GB, and the FATA Secretariat in the case of FATA. The opportunity is for the Federal Government to use demonstration models across the regions with enhanced public sector financing as an incentive. In addition, as at federal level and in KP province, climate-relevant decisions in the regions continue to be taken in different policy areas without much attention to policy coherence for climate-related activities.

In the overview analysis carried out as part of this work, GB seems more coherent than others in its focus and climate-sensitive component of its budget (nearly 20 percent of total budget). However, financial constraints and public sector capacity issues seem to limit the reach. From our discussions with GB officials, it was clear that they understood themselves as the first in line to be affected by CC. It was also clear that they are keen to change that into being the first line of defence: "The change in seasonal patterns and climate that you feel today have affected us five years back and the magnitude for our fragile economy is much more," said one P&DD official. The Government of GB seemed open and keen to climate-proof their infrastructure and protect ecosystem functions from projected climate impacts. A more comprehensive approach to include and interlink poverty reduction, rural development and agriculture, disaster management, energy security to demonstrate a workable model seems to exist in GB.

In AJK, support for an integrated natural resource management-based forestry policy (that builds on the NCCP) will demonstrate the delivery for policy coherence across the most significant climate-sensitive sectors.

The work of the FATA Secretariat is difficult, especially when it comes to allocating public sector development funds across the myriad of the region's needs. However, international policy research on the political economy of CC in transitional regions points to the need for making CC an important element of a holistic approach. Given the current mix of finances (see financial analysis above) and activities, there are potential entry points to mainstreaming by climate-proofing key infrastructure development across sectors. The FATA Secretariat (Public Health and Engineering) is also undertaking solar-based project for local amenities like streetlights. These can be explored further for future policy directions and then rolled out.

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101 Pakistan, Pakistan Forest Institute (PFI), *Third-Party Evaluation of Forestry Resource Development in Azad Jammu and Kashmir: Strengths, Weaknesses, Opportunities and Threats Analysis of Forest Department and Azad Kashmir Logging and Sawmill Corporation* (Peshawar, 2013). Available from http://pndajk.gov.pk/Documents/evaluation%20reports/forest%20evaluation%20reports/05%20Strengths,%20Weaknesses,%20Opportunities%20and%20Threats%20Analysis.pdf.

102 FATA is under the executive authority of the President of Pakistan as per article 247 of the Constitution of Pakistan, 1973. The FATA Secretariat has supported the Agent of the President and the governor of the province in administering FATA under the overall coordination of the Ministry of SAFRON since 2006.

In conclusion, it is important to recognize that each of these three regions presents a unique set of institutional and socioecological nuances. FATA's social ecology and institutional arrangement differ from AJK and GB. While there are ecological similarities between AJK and GB, the GB council and Legislative Assembly are still nascent in comparison to AJK. The MCC will therefore need to not only establish the importance of CC for the development of these regions, but also be able to provide technical backup as per the unique and distinct needs of the three regions.

11.7 Findings and conclusions

- Fiscal transfers from the Federal Government to GB, FATA, and AJK represent approximately 2–3 percent of the federal budget. GB and FATA are entirely dependent on this federal transfer. However, AJK raises 43–48 percent of revenues through internal sources.
- The development budget accounts for 25–30 percent of the total budget in GB. Investments in infrastructure (Works Department) and water and power (Water and Power Department) accounted for 79–89 percent of the total development budget (2011–2014 figures).
- The proportion of CC-related projects in the overall development portfolio was in the range of 65–76 percent in GB. Of the total climate expenditures, the Water and Power Department was responsible for 70–95 percent. The proportion of climate expenditures on investments undertaken by P&DD, Forest, Wildlife and Environment, Food and Agriculture and Water and Power are, on average, higher than in remaining departments. There was no reliable trend in the climate budget and overall, 20 percent of the GB budget was climate-related.
- The development budget accounts for 43–48 percent of the total budget in FATA. The allocation of this budget to departments was highly variable over the studied years (2012–2015). In 2015, the largest allocations were in departments responsible for Services and Administration (22.7 percent of total budget), Works (19.9 percent), Education (19.3 percent), Health and Population (11 percent) and Planning and Development (10 percent).
- The proportion of climate-related development projects in FATA ranges from 73 to 83 percent, with 100 percent of projects in Education, Forest and Wildlife and Health and Population Welfare. Around 85–90 percent of the climate budget was delivered by four departments: Education, Forest, Wildlife and Environment, Works and Services and Administration. Overall, 12–13 percent of the FATA budget was climate-related.
- In AJK, the development budget, which is funded from federal grants, represents 17–19 percent of the total budget with 40 percent or more going to Transport and Communications. Seven of the fourteen departments have climate-related aspects in over 80 percent of their development projects, and overall, between 74 and 84 percent of development projects are climate-related.
- The Transport and Power Departments are consistently the institutions with the highest absolute climate-related expenditure. However, the highest proportional climate-related departmental spending was from Civil Defence and Environment, Forestry and Fisheries, Agriculture and Health where it is generally over 30 percent of the total budget. The climate budget increased from 9 to 17 percent of the total AJK budget from 2011/12 to 2014/15.
- The percentage of projects that have climate relevance is fairly similar across the three regions. The GB climate budget is dominated by infrastructure (Water and Power). This is similar in AJK where Transport and Power dominate climate spending. However, in FATA, the climate budget is more widely spread (Education, Forest, Wildlife and Environment, Works Department and Services and Administration Department).
- As a proportion of the total budget in the three regions during 2014/15, the climate budget varied from 12 percent (FATA) and 17 percent (AJK) to 28 percent (GB). This was much higher than the corresponding figure for the federal budget (8 percent).
- GB has the most focused policy commitment for CC with the highest expenditure and a focused expenditure in the Water and Power sector. Linking this initiative both within the revision of the GB power sector policy and across wider policy revisions in other sectors (such as poverty reduction, disaster management and rural development) would help move the climate response forward. Similarly, possible entry points for further fulfilment of the NCCP in other regions are identifiable.

CHAPTER 12 – CLIMATE PUBLIC EXPENDITURE AND INSTITUTIONAL REVIEW FROM A POVERTY AND GENDER PERSPECTIVE

12.1 Introduction

This chapter aims at providing a stylistic analysis of the nexus between climate change, poverty and gender in the context of Pakistan. A large and growing body of research from across the globe has highlighted that the burden of adverse climate change events is higher on the poor and the women, especially those living in rural areas of the developing world. The linkages between climate change, poverty and gender in Pakistan will be examined through a review of the existing policy and institutional frameworks in place for addressing these three key development concerns, which will be supplemented by a public expenditure review drawing on the overlaps between use of public funds in these three areas. In view of the existing data constraints and methodological limitations, this preliminary analysis will only be carried out for policy/ institutional framework as well as public funding with respect to climate change, poverty and gender at the Federal Government level.

Climate change is expected to affect the world in many ways. Since the start of the current decade, extreme events have been witnessed across the globe, and the likelihood of such events is projected to increase. Pakistan's vulnerability to climate change events as well as adverse impacts across different sectors of the economy have been highlighted earlier in Chapter 2.

Germanwatch has placed Pakistan in the top ten most affected countries on its long-term index for climate-related disasters (1994 to 2013).[103] With a national poverty rate of 29 percent and a large proportion of the population, especially women dependent on agriculture, which contributes 23 percent to GDP,[104] the country needs to take the threat of climate change seriously. The impacts of climate change cut across several aspects of life. With water, health, energy and food security being increasingly stressed and limited resources stretched out, climate change in some areas can pose genuine concerns for livelihoods and even survival. These concerns are particularly more acute for the poorest in society and the women who constitute the more marginalized segments of society.

This chapter is divided into five sections. After the introduction, the second section examines the existing research in Pakistan's context on the impact of climate change on the poor and its differential effect by gender. Section three provides an overview of the existing policy and institutional framework in place at the federal level for addressing concerns relating to climate change, poverty reduction and gender mainstreaming. The review of public expenditures relevant to climate change, poverty and gender at the federal level, along with an analysis of their overlapping benefits, drawing on the methodology developed by UNDP,[105] is presented in section four. Section five concludes with some important system-wide recommendations for strengthening the policy linkages between climate change, poverty and gender in the context of Pakistan.

103 Global Climate Risk Index 2015 'Who Suffers Most from Extreme Weather Events? Weather-related Loss Events in 2013 and 1994 to 2013, Germanwatch

104Pakistan Economic Survey 2015-16

105 Incorporating Gender and Poverty Analysis in the Climate Public Expenditure and Institutional Review: A Methodological Note, 2014, UNDP.

12.2 Poverty and gender related impacts of climate change

Across the developing world, adverse climate events constitute one of important factors leading many households to fall into poverty trap. Examples of these conditions include price shocks that can be linked to low agricultural production; natural disasters that destroy poor people's assets and disrupt the functionality of transport systems and infrastructure; and health shocks (such as death and illness) that are influenced by climate and environmental conditions (such as higher rainfall or higher temperatures.[106] Moreover, climate risks are likely to affect the behaviour of poor and vulnerable population segments, who may reduce productive investments and asset accumulation in the face of the possibility of losses and select lower-risk but lower-return activities — a rational strategy to avoid catastrophic outcomes, but one that can keep them in poverty.

Women make up the majority of the poorest population segment considered most vulnerable to climate change. This is primarily because women — on the whole — are disadvantaged compared to men in terms of the opportunities available to them, the social and legal status they enjoy and the resources they are able to access.[107]

The existing body of evidence on the impacts of climate change on poverty alleviation and gender empowerment, in the context of a developing country like Pakistan, tend to substantiate the claims of adverse effects. Climate change threatens food security and leads to higher prices of agriculture products, which directly affects the lives of the poor. Due to involvement of the majority of the poor in Pakistan in agriculture related activities, climate change effects poverty reduction negatively. A recent World Bank study[108] estimates that under a high-impact climate scenario, the incomes of the bottom 40 percent of the population in Pakistan are likely to decline by 8 percent by 2030. Such a situation demands that rural economic structure is modified to accommodate non-farm activities like promoting agriculture and agro-based industry, grading and initial processing, etc. The Asian Development Bank in a study paper entitled "Do natural disasters change savings and employment choices? Evidence from Bangladesh and Pakistan" recommends developing nonfarm employment opportunities in rural areas to reduce the livelihoods vulnerability from future disaster and financing economic migration to reduce income vulnerability.

Research on asset-based approaches to development and poverty alleviation since the 1990s has shown that control over assets plays a fundamental role in increasing incomes, reducing vulnerability, and empowering people to move out of poverty (Bebbington 1999; Moser 2007; Sen 1997; Sherraden 1991). Providing opportunities to the poorest segments to create some assets can lead to reducing their vulnerability to climate change impact. When faced with climate-linked shocks, the poorer households often sell their assets while simultaneously reducing their consumption level, whereas the better-off households typically sell assets in order to maintain their consumption level.

An important aspect that the literature highlights is that women are more prone to the effects of climate change, and hence they are the frontline workforce to take steps to address the problems. Pakistan Institute of Development Economics in their study titled "Climate Change, Vulnerability, Food Security and Human Health in Rural Pakistan: A Gender Perspective", concluded that households where females are empowered in terms of decision-making, entitlement to inheritance, education, food security and are allowed to visit hospital, are less vulnerable compared to their counterparts in male-dominated families.

Three-quarters of female employment in Pakistan is concentrated in the agriculture sector, which is most vulnerable to the direct impacts of floods and droughts. Pakistan Water Partnership's report[109] rightly concludes that decreased water availability due to climate change will therefore not only impact the agricultural potential for women farmers to produce food and to generate income, it will also impact

106Managing the Impact of Climate Change on Poverty, 2016

107Gender and Climate Change Overview Report, 2011, Institute of Development Studies.

108Managing the Impact of Climate Change on Poverty, 2016

109Gender, Water and Climate Change: A case for Pakistan, 2013

upon their time usage as they are primarily responsible for fetching drinking water.

Climate change very likely may limit easy access to economic opportunities for women. In a case study of the fishing community of Dadu district, the Social Policy and Development Centre[110] finds that after the decline in fish population due to pollution and changing weather, the local women find their previous income earning activities, such as fishing, net-weaving and other fishing-related activities that once helped them earn to support their families, no more a viable and profitable option. To deal with such a situation, the study suggests helping women adopt climate-resilient activities, training them to protect themselves from extreme weather events such as heatwaves and water conservation techniques such as rainwater harvesting.

The current cultural norms and practices in Pakistani society is another major factor for women to take the direct and major blunt of climate change. The gender discrimination was visibly noted during the super floods of 2010 which inundated around a fifth of Pakistan and where women and children constituted the major segment of the climate induced disaster victims. According to the Needs assessment report of the Asian Development Bank on Pakistan floods in 2010, it was found that women's medical, hygiene, and nutrition needs were frequently neglected and girls' education was not even prioritized in periods following disasters. The report concluded that impact of climate variability specifically on water availability will be distributed differently between men and women.

12.3 Policy and institutional review

12.3.1 Policy review

The NCCP (2012) provides overarching guidance to all institutions responsible for addressing the adverse impact of climate change at sectoral scale. The policy acknowledges that climate change is placing disproportionate burden on the poor segments of population. To improve their resilience, it suggests incorporating the possible impact of climate change on communities living in deprivation and poverty, into future development planning.

The NCCP recognizes that women are powerful agents of change. It stresses participation by women and female gender experts in preparation of policies, initiatives and decisions relating to climate change. The policy proposes many measures to cope with the impacts of climate change that mainly addresses integrated gender planning and mainstreaming the perspectives across sectors at national and regional levels. One of the basic elements of this planning is to take steps to reduce the vulnerability of women from climate change impacts, particularly in relation to their critical roles in rural areas in providing water, food and energy. This step may require undertaking a comprehensive study of the gender-differentiated impacts of climate change with particular focus on gender difference in capabilities to cope with climate change adaptation and mitigation strategies. Once completed, the study findings should feed into developing gender-sensitive criteria and indicators with focus on specific vulnerability types and scale, and finally helping the planners and policymakers to design and implement a suitable adaptation plan that would contribute towards reducing gender-specific vulnerability and improve the overall resilience of the community and household.

It is however pertinent to mention that the effective implementation of the policy requires that responsible agencies working in the policy domains of CC, poverty alleviation and gender empowerment create appropriate institutional linkages to monitor progress in implementation and coordinating the response at national level to synergize the linkages between these three key development concerns.

The National Disaster Risk Reduction Policy 2013 is coordinated by the National Disaster Management Authority. This policy recognizes that disasters have had significant negative impacts on agriculture, infrastructure, housing, health, education and environment sectors and result in serious socioeconomic

110Gender and Social Vulnerability to Climate Change – A Study of Disaster Prone Areas in Sindh

setbacks threatening poverty reduction efforts. As such they have the potential to put the whole sustainable development initiative in Pakistan off track. The policy provides guideline for timely, dedicated and adequate investment on hazard mitigation and preparedness interventions at all levels in order to reduce disaster risk and its consequential damages for Pakistan. It envisages integration of DRR into development planning and implementation, and capacity building of the vulnerable including women and children, in particular the poor, elderly and those living in remote communities. It further proposes that assessment of needs as well as vulnerability and damage should be gender-sensitive. The policy calls for clearly defining roles and responsibilities of different layers of governance and actors, improving coordination between the institutions at province, district and tehsil level strengthening community organization, capacity building and preparation of plans at village and union council levels.

The National Poverty Reduction Strategy aims at regaining macroeconomic stability and sustaining growth, creating employment opportunities and improving income distribution. It suggests taking measures to protect the poor and the vulnerable, as well as ensuring environmental sustainability, empowering women and reducing gender disparities.

The Vision 2025 document provides for a long-term development framework of the country. It recognizes the hazards of climate change and acknowledges the need to build and strengthen adaptation capacity to climate change, especially amongst the poorest and most vulnerable populations. It calls for devising policies and plans to meet the challenges posed by climate change and implementation of well-defined mitigation and adaptation strategies. The document highlights the scale of imbalance between economic and social development, and therefore it calls for ending the discrimination faced by women, and providing an enabling environment for women to realize their full potential and make their contribution to the socioeconomic growth of the country.

The National Policy for Development and Empowerment of Women formulated in 2002 aims to stop violence against women, provide women a friendly atmosphere and equal status. The policy recognizes protection of rights (economic, legal, political and social) of all women, including women belonging to minority groups, those in rural areas, poor women, girls and women with disabilities, and women in vulnerable circumstances. It calls for ensuring women's equal access to development benefits and social services, full participation of women in national development and decision-making, in political processes and enhancing women's representation in all elective bodies.

An Inter Provincial Ministerial Group for Women's Development was constituted in January 2015 to meet on a periodic basis for agreeing on key priorities for gender equality in line with international commitments. The group members include provincial ministers for women development, provincial Secretaries of Women Development Departments, Chairperson National Commission on the Status of Women and representatives from Ministry of Law, Justice & Human Rights. The National Commission on the Status of Women serves as the secretariat.

12.3.2 Institutional Review

The **Ministry of Climate Change** is entrusted to take steps for developing national policy, plans, strategies and programmes with regard to disaster management including environmental protection, preservation, pollution, ecology, forestry, wildlife, biodiversity, climate change and desertification; and coordination, monitoring and implementation of environmental agreements with other countries, international agencies and forums; policy formulation, coordination and reporting of human settlements including urban water supply, sewerage and drainage.

The **Pakistan Environmental Protection Agency** (Pak-EPA) is responsible for enforcing the Pakistan Environmental Protection Act (PEPA-1997) rules and regulations, approving EIAs, IEEs and issuing certificates for establishment of environment labs in the federal capital.

The **National Disaster Management Authority** (NDMA) is the executive arm of the National Disaster Management Commission tasked with improving nation's resilience to natural and man-made disasters in view of the changing climatic conditions and frequent recurrence of unpredictable extreme events. NDMA implements, coordinates and monitors disaster management activities. The Gender and Child Cell (GCC) of the NDMA has compiled training manual for child protection in emergencies for Government, NGOs and other relevant officials. National policy guidelines on vulnerable groups (women, children, elderly and the disabled) during disaster and its parallel advocacy/awareness amongst all stakeholders were launched to assist humanitarian partners.

The massive monsoon floods in 2010 created a disaster in Pakistan that impacted the poorest areas the most and severe and compounded the challenges to the poverty reduction efforts. To facilitate rehabilitation of the affected communities, the government launched the **Citizen Damage Compensation Programme** (CDCP) in two phases. In Phase I, the programme disbursed PKR 20,000 in cash grants to affected families in all four provinces, AJK and Gilgit-Baltistan. In the second phase, the cash grant was increased to PKR 40,000 but were disbursed in two equal instalments of PKR 20,000 each to the affected families. To qualify as a beneficiary for this grant programme, the extent of damage occurred to a house (building) was used as a proxy indicator. The respective Provincial Disaster Management Authorities carried out the assessment of damage to households. Government also carried out a third party validation (TPV) of CDCP's initial list of potential beneficiaries for damaged houses. Under the CDCP Phase I, 1.69 million families received a total of PKR 33 billion across Pakistan. CDCP Phase II had a total financial outlay PKR of 60.3 billion to disburse PKR 40,000 in two equal tranches to 1.1 million households in affected areas.

The **Benazir Income Support Programme** (BISP) is the largest initiative of the national government aimed at consumption smoothening and cushioning the effects of food inflation on the poor, particularly the women. The programme supports eligible female-headed families by transferring a certain cash amount each month. It started with monthly instalment of PKR 1,000 in 2008. The amount was increased to PKR 1,300 in 2013 and PKR 1,500 per month per household in 2014. It is now the largest single social safety net programme in Pakistan. It started with serving 1.7 million households in 2009 and approximately 4.7 million households in 2014, with annual disbursements increasing from PKR 16 billion in 2008/09 to close to PKR 89 billion in 2014/15. Since 2010/11, poor households have been identified through a poverty scorecard based on household survey using a Proxy Means Test that determines welfare status of the household. Around 94 percent of beneficiary households are receiving payments through branchless banking tools.

The Constitution of Pakistan under Articles 25, 27, 34, 35 and 37 defines and recognizes the rights of Pakistani women. The Government of Pakistan is a signatory to the Universal Declaration on Human Rights and ratification of Convention on Elimination of All Forms of Discrimination against Women (CEDAW); and has approved a National Plan of Action (NPA) for the empowerment of women in pursuance of Beijing Platform for Action.

The **Ministry of Planning, Development and Reform** (MPDR) is responsible for development planning, including planning for poverty reduction. The MPDR's Poverty Alleviation Section is also responsible for poverty estimation and coordinates approval of development projects. The process includes review of environmental impact assessment reports of the proposed projects, social impact assessment as well as impact of the projects employment and poverty situation in the country. The **Ministry of Finance** reports pro-poor public expenditures since 1990. Finance Division has conducted a study on gender impact of public expenditure. Both the institutions jointly prepared the Poverty Reduction Strategy Paper for Pakistan.

The **National Commission on the Status of Women** is a statutory body created in 2000 to review policies, programmes and other measures taken by the Government for women to create gender equality.

It is also mandated with reviewing laws, rules and regulations affecting the status of women with a view to make them more effective, look into the mechanisms and institutional procedures for redressal of violations of women's rights.

Following devolution of the women's development function to provinces in the wake of the 18th Amendment, provinces have established separate Women's Development departments to undertake policy making this area. However, KP does not have a separate Directorate or Department for Women's Development, although a separate Directorate for Women's Sports having been established in the province.

12.4 Public expenditure review

The public expenditure review analyses the degree of overlap between CC-relevant public expenditures, poverty and gender related expenditures. This chapter will draw on the methodology explained in "Incorporating Gender and Poverty Analysis in the Climate Public Expenditure and Institutional Review – a methodological note" (UNDP 2014) and the Pakistan CPEIR Federal and Khyber Pakhtunkhwa (2015).

Prior to presenting the data analysis, it is pertinent to give a brief overview of the methodology employed and to highlight its major limitations with respect to establishing a strong overlap between CC, poverty and gender expenditures. The UNDP methodological note outlines three options for poverty and gender analysis of climate public expenditure, and recommends countries adopt one of these options depending on its "budgetary institutions, data availability and level of disaggregation by gender and poverty". A review of the existing public financial management systems in Pakistan indicates that options 2 and 3 cannot be used. The second option requires poverty and gender budget and expenditure analysis at project and ministry level using weights determined through a consultative process. However, this process has not been carried out in Pakistan before and the required information is not available. The third option is based on the assumption that gender and poverty budgets are already available with project level disaggregation, which is not applicable in case of Pakistan.

The study has thus made use of option 1 as outlined in the note, which requires ministry-wise gender and poverty expenditure data. However, further modification has been made in option 1 as the ministry-wise expenditure data was only available for poverty budgetary expenditures. Due to non-availability of ministry-wise data on gender related expenditures, we used estimates of overall average share of gender related expenditure of the federal ministries, obtained from an earlier study[111] commissioned by the Ministry of Finance.[112] These methodological limitations need to be kept in mind while interpreting results of the poverty and gender analysis of climate public expenditures, presented in the subsequent paragraphs.

An analysis of the data relating to total public expenditure, and climate change expenditure (as assessed by the lead consultant based on the CC relevance of various development projects or activities), expenditure on poverty reduction as reported by the Office of the Controller General of Accounts by Ministries, and share of the expenditure having an impact on gender mainstreaming (based on Finance Division's Study) as percentage share of total public expenditure are presented below.

111 Khan, Iram., Ministry of Finance, Gender Responsiveness in Federal Budget for Fiscal Year 2011-12

112 The gender expenditure share of each federal ministry estimated for FY 2011/12 in the cited study has been used, under the assumption that expenditure patterns have not changed significantly in the ensuing years, as the year 2011/12 was after the devolution of responsibilities to provincial governments through the 18th Amendment in 2010.

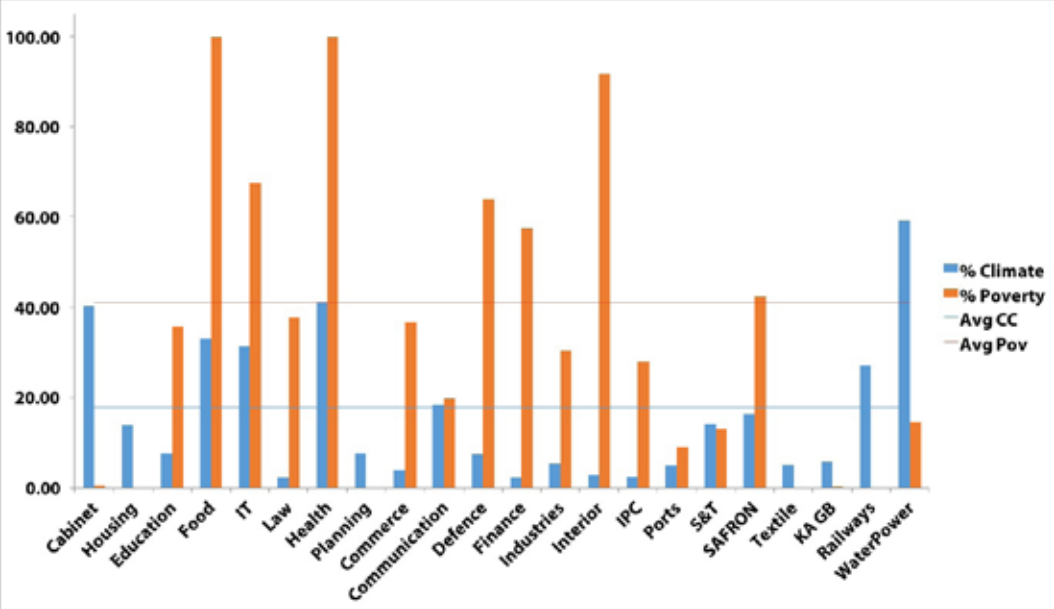
Table 12.1: Climate public expenditure, gender and poverty analysis*

Ministry	Total public expenditure 2014/15 (PKR millions)	Climate expenditure share in total public expenditure (%)	Poverty expenditure share in public expenditure (%)	Gender related expenditure share in public expenditure (%)	CC Exp Share of Ministry in Total CC Public expenditure (%)
M/o Water & Power	272,815.90	59.06	14.39	19.52	48.14
M/o National Health, Regulation & Coordination	26,213.48	41.17	100.03	18.47	3.22
Cabinet Secretariat including Atomic Energy Commission and CDA	187,433.37	40.21	16.71	7.30	22.51
M/o Food Security & Research	3,988.47	32.96	100.00	4.73	0.39
M/o Information Technology & Telecom	3,638.31	31.35	67.51	3.88	0.34
M/o Railways	120,841.04	27.13	0.00	7.75	9.80
M/o Communication including NHA	78,837.00	18.27	19.71	17.87	4.30
M/o States & Frontier Regions	60,311.81	16.22	42.34	6.86	2.92
M/o Science and Technology	6,729.61	14.02	12.96	4.15	0.28
M/o Housing & Work Division	11,667.41	13.86	0.00	9.46	0.48
M/o Panning & Development	2,684.53	7.62	0.00	13.86	0.06
M/o Federal Education and Professional Training	4,168.46	7.56	35.58	13.32	0.09
M/o Defence including SUPARCO	8,751.40	7.31	63.99	8.22	0.19
M/o Kashmir Affairs and Gilgit-Baltistan	12,634.72	5.58	0.26	18.80	0.21
M/o Industries and Production	2,157.55	5.31	30.40	6.89	0.03
M/o Ports and Shipping	2,589.04	4.80	8.91	2.52	0.04
M/o Textile Industry	415.95	3.88	0.00	5.76	0.00
M/o Commerce & Textile Industry	5,760.05	3.78	36.61	2.51	0.07
M/o Interior and Narcotics Control	88,567.15	2.72	91.73	2.64	0.72
M/o Inter-Provincial Coordination	2,841.95	2.47	27.90	7.32	0.02
M/o Law, Justice & Human Rights	10,060.59	2.16	37.69	2.72	0.06
M/o Finance, Revenue, Economic Affairs, Statistics & Privatization Commission	977,765.43	2.09	57.51	6.01	6.10
Total/Average	1,890,777.63	17.7	42.5	8.79	100.00

* Based on UNDP (2014) methodology

The data in table 12.1 indicates that 70 per cent of total CC-relevant expenditure incurred by the Federal Government is spent by two ministries (viz. MoPW and the Cabinet Secretariat including CDA and Pakistan Atomic Energy Commission). Five ministries[113] make up 90 percent of all climate-relevant expenditure incurred by the Federal Government, while the rest is distributed across 17 other ministries/agencies. The data also indicates that out of the seven ministries with highest climate-relevant expenditure (close to average climate relevance weight[114] of 17.7 percent); only three[115] have high poverty-centric expenditure incidence which is close to the average poverty relevant weight[116] of 42 percent. On the same pattern, of the seven ministries with most climate-relevant expenditure, three[117] ministries have high gender relevant expenditure share above the average gender relevant expenditure share of close to 9 percent. This is more clearly presented in the figure 12.1 given below.

Figure 12.1: Climate and poverty relevant expenditure of federal ministries (as percent of the total expenditure of each ministry)



Climate-relevant expenditure through a total of seven ministries, therefore, have high poverty expenditure share than the average as illustrated in table 12.2a.

Table 12.1 also reflects that the share of climate-relevant public expenditure in respect of the Ministries of Water and Power, National Health, Regulation and Coordination, Cabinet Secretariat, Food Security and Research, Information Technology and Telecom and Railways as the percentage of their overall public expenditure exceeded 25 percent, which is significant. The share of the Ministry of Health in absolute terms having more than 40 percent climate relevance of its expenditures comes to around PKR 10.8 billion compared to the Ministry of Finance, which has climate relevance of only 2.3 percent but its climate-relevant expenditure, in absolute terms comes to PKR 20 billion.

The entire expenditures of the Ministries of Health and Food Security and Research, are considered poverty relevant, as reported by the CGA (Table 12.2a). This apparently indicates an overlap in the climate-relevant expenditures of these two ministries with poverty expenditure at 41 percent and 33 percent, respectively. On the other hand, Ministry of Railways' expenditure has zero relevance for poverty, even

113 M/o Water & Power, Railways, Finance, IT & Telecomm and Cabinet Division

114 Average arrived at by dividing total climate change expenditure with total expenditure of all the federal ministries

115 M/o Health, Food Security, IT &Telecomm

116 Average arrived at by dividing total poverty related expenditure with total expenditure of all the federal ministries

117 M/o Water & Power, Health, Communications

though that organization employs a large unskilled or low-skilled labour force. Apart from Health and Food Security, Ministries of Interior (92 percent), Defence (64 percent) and Finance (57 percent) are among those having the highest poverty relevant public expenditure. Thus the probability of poverty relevance of these ministries with climate relevance is higher.

Table12.2a: Climate-relevant ministries with high poverty related expenditures*

S No	Name of Ministry	Poverty Expenditure Share in public expenditure (percent)	Climate Change Expenditure in public expenditure (percent)
1	M/o National Health, Regulation & Coordination	100.00	41.17
2	M/o Food Security & Research	100.00	32.96
3	M/o Interior and Narcotics Control	91.73	2.72
4	M/o Information Technology & Telecom	67.51	31.35
5	M/o Defence including SUPARCO	63.99	7.31
6	M/o Finance, Revenue, Economic Affairs, Statistics & Privatization Commission	57.51	2.09
7	M/o States & Frontier Regions	42.34	16.22
8	M/o Law, Justice & Human Rights	37.69	2.16
9	M/o Commerce	36.61	3.78
10	M/o Federal Education and Professional Training	35.58	7.56
11	M/o Industries and Production	30.40	5.31

* Based on UNDP (2014) methodology

The potential of climate-relevant expenditures to have gender incidence seems however to be weaker as shown in table 12.2b. The average gender incidence of total spending in Pakistan comes out higher than 8.8 percent. The data analysis shows that only three ministries with climate relevance higher than the average (17.8 percent) have a high gender incidence of at least 8.8 percent: the Ministries of Water and Power, Health, and Communication. Two ministries, i.e. Communication and Kashmir Affairs and Gilgit-Baltistan, represent only 4.5 percent of total climate-relevant expenditures (in terms of percentage share of CC-related expenditure in total climate change expenditure of all federal ministries).

Table 12.2b: Climate-relevant ministries with high gender incidence*

S No	Name of Ministry	Gender Exp (percent)	CC Exp (percent)
1	M/o Water & Power (Water & Power Sector)	19.52	59.06
2	M/o Kashmir Affairs and Gilgit-Baltistan	18.80	5.58
3	M/o National Health, Regulation & Coordination	18.47	41.17
4	M/o Communication including NHA	17.87	18.27
5	M/o Planning & Development	13.86	7.62
6	M/o Federal Education and Professional Training	13.32	7.56
7	M/o Housing & Work Division	9.46	13.86
8	M/o Defence including SUPARCO	8.22	7.31
9	M/o Railways	7.75	27.13
10	M/o Interprovincial Coordination	7.32	2.47
11	Cabinet Secretariat including Atomic Energy Commission and CDA	7.30	40.21
12	M/o Industries and Production	6.89	5.31

* Based on UNDP (2014) methodology

The analysis also reveals that ministries in key climate change adaptation sectors such as agriculture and infrastructure have lower than average gender incidence in terms of the share of their gender related expenditure.

An alternate statistical analysis employing the correlation technique was also carried out to find the statistical association between climate and poverty/gender expenditures across the federal ministries using the data from Table 12.1. The analysis does not indicate any linkage between climate expenditure and poverty expenditures across the various institutions. However, there was a positive significant association between percentage expenditure on CC and percentage expenditure on gender across the federal ministries in table 12.1[118]. This suggests that ministries with higher CC percent funding also tend to have higher percentage gender expenditures. Thus, across these institutional entities, there seems to be initial evidence of a link between CC and gender in terms of expenditures, although it is important to note that it is not clear if these are overlapping expenditures (providing joint CC and gender benefits) or not overlapping (separate expenditures related to CC and gender) or partially overlapping.

Following the methodology for gender and poverty analysis of climate-relevant expenditure (given in option 1 in the UNDP's methodological note)[119] this chapter next makes an effort to estimate the overlap between climate expenditure on the one hand and poverty and gender on the other. The analysis above considered the poverty and gender incidences of ministries with high climate relevance (defined as close

118 The existence of positive correlation between climate and gender expenditures does not imply causality between the two series.

119 Briefly the methodology for calculating overlap range of climate-relevant expenditures with gender (or poverty) co-benefits consists of first finding the minimum climate-relevant expenditures with gender (or poverty) co-benefits for each ministry and assigning a zero or a positive gender (or poverty) weight for higher than non-climate weight. Maximum climate-relevant expenditures is assigned when climate-relevant weight is higher than the gender (or poverty) weight, all the gender (or poverty) expenditures is taken to be within climate expenditures and hence gender (or poverty) weight is taken as the maximum value. When climate-relevant weight is lower than the gender (or poverty) weight, climate expenditures is taken as the maximum estimate for gender (or poverty) responsive climate expenditures.
Source: Incorporating Gender and Poverty Analysis in the Climate Public Expenditure and Institutional Review: A Methodological Note (Draft) October 29, 2014 (https://www.climatefinance-developmenteffectiveness.org/sites/default/files/documents/20_02_58/UNDP_Gender_Poverty_Climate_Finance_Methodological_DRAFT-Note-28102014.pdf)

to average climate relevance of 17.8 percent). If climate-relevant expenditures in such ministries are more likely to have a positive impact on poverty or gender inequity, this could not be stated with certainty.

It is, therefore, important to verify whether climate-related expenditures are actually overlapping with expenditures that have a positive impact on poverty reduction and gender equity. The formulae used to derive the minimum and maximum amounts of expenditures in a ministry that is or could be potentially be both (i) climate-relevant and gender responsive and (ii) climate-relevant and poverty-focused are explained in box 8 of the UNDP Methodological Note.[120] The minimum and maximum overlap between climate and gender as well as climate and poverty is calculated in table 12.3 below.

Table 12.3: Climate-relevant expenditures with poverty and gender incidence*

Ministry	Total Expenditure 2014/15	Climate and Gender overlap		Climate and Poverty overlap	
		Min (%)	Max (%)	Min (%)	Max (%)
Cabinet Secretariat including Atomic Energy Commission and CDA	187,433.37	0.00	7.30	0.00	16.71
M/o Housing & Work Division	11,667.41	0.00	9.46	0.00	0.00
M/o Federal Education and Professional Training	4,168.46	0.00	7.56	0.00	7.56
M/o Food Security & Research	3,988.47	0.00	4.73	32.96	32.96
M/o Information Technology & Telecom	3,638.31	0.00	3.88	0.00	31.35
M/o Law, Justice & Human Rights	10,060.59	0.00	2.16	0.00	2.16
M/o National Health, Regulation & Coordination	26,213.48	0.00	18.47	41.20	41.17
M/o Planning & Development	2,684.53	0.00	7.62	0.00	0.00
M/o Commerce	5,760.05	0.00	2.51	0.00	3.78
M/o Communication including NHA	78,837.00	0.00	17.87	0.00	18.27
M/o Defence including SUPARCO	8,751.40	0.00	7.31	0.00	7.31
M/o Finance, Revenue, Economic Affairs, Statistics & Privatization Commission	977765.4325	0.00	2.09	0.00	2.09
M/o Industries and Production	2,157.55	0.00	5.31	0.00	5.31
M/o Interior and Narcotics Control	88,567.15	0.00	2.64	0.00	2.72
M/o Inter-Provincial Coordination	2,841.95	0.00	2.47	0.00	2.47
M/o Ports and Shipping	2,589.04	0.00	2.52	0.00	4.80
M/o Science and Technology	6,729.61	0.00	4.15	0.00	12.96
M/o States & Frontier Regions	60,311.81	0.00	6.86	0.00	16.22
M/o Textile Industry	415.95	0.00	1.26	0.00	0.00
M/o Kashmir Affairs and Gilgit-Baltistan	12,634.72	0.00	5.58	0.00	0.26
M/o Railways	120,841.04	0.00	7.75	0.00	0.00
M/o Water & Power	272,815.90	0.00	19.52	0.00	14.39

* Based on UNDP (2014) methodology

120 ibid

Of the 17 ministries that have incurred climate-related expenditure and may have some positive poverty co-benefits (table 12.3), only four ministries are providing climate-related services with maximum poverty co-benefits of above 17.8 percent. The number of ministries increases to eight if the criterion is reduced to 10 percent. Two ministries, viz. Ministry of Food Security and Research, and National Health Regulation and Coordination, are providing climate-related services with poverty co-benefits with absolute certainty. The ten ministries having higher overlap are highlighted in table 12.4. As indicated above, the exclusion of the Ministry of Railways, for instance, points to a flaw in assigning climate and poverty relevance or in tracking of their expenditures. It points to the need for a more extensive debate amongst the stakeholders in looking at their roles and re-defining relationships with poverty and gender.

Table 12.4: Climate-relevant expenditure with poverty co-benefits

Name of Ministry	Total Expenditure 2014/15	Climate and Poverty	
		Min overlap (%)	Max overlap (%)
M/o National Health, Regulation & Coordination	26,213.48	41.20	41.17
M/o Food Security & Research	3,988.47	32.96	32.96
M/o Information Technology & Telecom	3,638.31	0.00	31.35
M/o Communication including NHA	78,837.00	0.00	18.27
Cabinet Secretariat including Atomic Energy Commission and CDA	187,433.37	0.00	16.71
M/o States & Frontier Regions	60,311.81	0.00	16.22
M/o Water & Power	272,815.90	0.00	14.39
M/o Science and Technology	6,729.61	0.00	12.96
M/o Federal Education and Professional Training	4,168.46	0.00	7.56
M/o Defence including SUPARCO	8,751.40	0.00	7.31

Similar analysis carried out for the gender incidence in ministry-level expenditure shows that none of the ministries, considered in our data analysis provide climate-related services with gender co-benefits with absolute certainty, and only nine of the 22 ministries are likely to have significant (>7 percent) positive gender co-benefits (table 12.5). Higher climate change and gender overlap in the Ministry of Water and Power compared to Health Services and non-inclusion of the Ministry of Food Security points to the inherent weakness in the methodology or assigning gender relevance to the expenditures for such ministries. While supply of electricity or provision of health services have high bearings for women, food security is also important as this ministry's function leads to improved agricultural productivity and stabilizing prices of food products, which are more of a concern for poorer females.

Table 12.5: Climate-relevant expenditure with gender co-benefits

Name of Ministry	Total Expenditure 2014/15	Climate and Gender overlap	
		Min overlap (%)	Max overlap (%)
M/o Water & Power	272,815.90	0.00	19.52
M/o National Health, Regulation & Coordination	26,213.48	0.00	18.47
M/o Communication including NHA	78,837.00	0.00	17.87
M/o Housing & Work Division	11,667.41	0.00	9.46
M/o Railways	120,841.04	0.00	7.75
M/o Planning & Development	2,684.53	0.00	7.62
M/o Federal Education and Professional Training	4,168.46	0.00	7.56
M/o Defence including SUPARCO	8,751.40	0.00	7.31
Cabinet Secretariat including Atomic Energy Commission and CDA	187,433.37	0.00	7.30
M/o States & Frontier Regions	60,311.81	0.00	6.86

12.5 Findings

This study is the first of its kind in Pakistan to identify and quantify the linkages between public expenditures on climate change, poverty reduction and gender empowerment. As highlighted at the outset, due to a host of data constraints and methodological limitations, this preliminary analysis only encompasses public expenditures at the federal level of government scale. This section presents some important system-wide recommendations based on this analysis for mainstreaming climate change, poverty and gender related concerns in the development planning framework of Pakistan and for ensuring maximum synergies between public investments in these three domains.

Before moving on to the recommendations, the main findings with regards to the ministry-wise overlap between climate change and poverty-relevant expenditures and similarly for the overlap between climate change and gender expenditures are highlighted. This also serves to illustrate some of the limitations of the methodology employed as well as that of the data available. The analysis indicates that expenditures of two federal ministries, viz, the Ministry of National Food Security and Research and the Ministry of National Health Services Regulation have the highest CC and poverty co-benefits; at the minimum 30 percent of climate-relevant expenditures of these two ministries have poverty co-benefits, while at the maximum these joint benefits can be as high as 41 percent. It is, however, pertinent to point out that as the share of these two ministries in total climate change expenditures is very small, standing at 3.6 percent, the absolute amount of climate change and poverty joint benefits is likely to be very small in monetary terms. In contrast, the CC-relevant expenditures of the Ministry of Water and Power, which has the major share in CC-relevant expenditures at the federal level at 48 percent, are likely to have poverty co-benefits up to a maximum level of 14.3 percent. In absolute monetary terms this lower proportion of co-benefits of climate change and poverty are much more in comparison to those of the two ministries having the highest co-benefits in percentage terms as mentioned above.

Another point worth highlighting is that in absolute terms the expenditures of the Ministry of Finance were the highest in the budget for FY 2014/15, amounting to PKR 977.7 billion, with 57 percent of these expenditures being poverty relevant. However, the overlap between Ministry of Finance's CC and poverty expenditures only amounted to a maximum of 2.1 percent of expenditures or PKR 20.4 billion. Moreover, a detailed analysis of MoF expenditures for FY 2014/15 shows that PKR 88.6 billion were spent through

the BISP which is the largest safety net programme at the national level, and the amount spent can be considered fully poverty-relevant. However, since data on overall BISP expenditures is not available separately, their climate relevance or poverty and gender overlap cannot be estimated. Thus, this example serves to clearly highlight the limitation of the methodology in establishing proper linkages between climate and poverty relevant expenditures.

12.6 Recommendations

In order to have a more meaningful analysis of the complementarities between CC and poverty-relevant expenditures, it is recommended that such an analysis be carried out at the national level (encompassing CC and poverty relevant expenditures of both the federal and provincial governments). This is likely to give a clearer picture of the climate and poverty linkages, as most pro-poor and gender mainstreaming functions have been devolved to provincial governments in the wake of the 18th Amendment. This can be judged from the fact that out of the PKR 2,162 billion pro-poor expenditures reported for FY 2014/15 at the national level by the PRSP Secretariat, the share of expenditures incurred at the federal level amounted to 30 percent only, with the remaining 70 percent expenditures being made by the four provincial governments.

Another recommendation relates to improving the generation of poverty relevant expenditure data at both the federal and provincial levels of government by mainstreaming PRSP pro-poor expenditure tracking in the Ministry of Finance. Presently, the data on 17 pro-poor expenditure heads is being compiled by the PRSP Secretariat at the Ministry of Finance. The Secretariat however is operating the task at the project scale rather than functioning as an integral part of the MoF. The Secretariat is financed through a project which ended June 2017. The fate of the Secretariat remains ambiguous at this time. In this regard, it is proposed that an automated system be developed and housed within, perhaps, the Budget Wing of MoF for generating the poverty expenditure reports on a periodic basis, using the previously defined expenditure codes captured in the 17 pro-poor sectors.

It is also recommended that the ministry/ department-wise breakup of the expenditures under the 17 heads should also be generated on a regular basis both for the federal and provincial governments. These ministry-wise expenditures can then easily be compared with the climate change expenditures for which a coding scheme is being developed by the Ministry of Finance in collaboration with the Ministry of Climate Change, which will help in tracking climate change expenditure ministry-wise on a regular basis. Details of this initiative have already been discussed in chapter 6.

In terms of gauging the effectiveness of climate-relevant expenditures on gender empowerment, it is important to point out that presently no system for generating gender-relevant public expenditures exists at the federal and provincial levels of government. As a result, it is not possible to systematically monitor the complementarities between climate and gender-relevant expenditures. It is pertinent to point out here that a pilot project on Gender Responsive Budgeting Initiative was undertaken by the Ministry of Finance with technical assistance from UNDP over a three year period, starting in 2005. The ultimate objective of the project was to mainstream collection of gender-relevant expenditures through the annual budget initially at the federal level. For this purpose, gender expenditures of federal ministries were to be made part of the annual budget call circular. However, the gender disaggregated reporting of budgetary expenditures could not be mainstreamed. It is recommended that a system for gender-based reporting of budgetary expenditures be developed and mainstreamed both at the federal and provincial levels of government, so that regular reporting on gender related expenditures is available. Since MTBF data is available at aggregate level, there is a need to constitute a committee comprising of representative from Ministry of Climate Change, Planning Commission, Ministry of Finance, provincial governments and other relevant organizations to analyse the MTBF data and come up with climate relevance of overall public expenditure and its overlap with poverty and gender empowerment.

In line with the earlier sets of recommendations, for a more meaningful examination of the joint benefits of climate and poverty relevant expenditures through a national level analysis, it is proposed that such a national level analysis should also be carried out for assessing the co-benefits between climate and gender-relevant expenditures. This would give more insightful results as women's development has been devolved to the provinces as a result of the 18th Amendment and the majority of gender-related expenditures are made at the provincial level. However, in the absence of a system for tracking gender-related budgetary expenditures, such an analysis would not be possible.

The studies be commissioned for developing a system for classification of federal and provincial development budget for identifying poverty-relevant and gender-relevant expenditures at the project level on similar lines to the CC classification developed here. This would allow each development project to be classified and quantified in terms of its CC, poverty and gender relevance and enable a more rigorous poverty and gender analysis of climate public expenditure, using option 2 as discussed in the methodological note.

In the medium term, this classification system can be formally adapted for assigning CC, poverty and gender relevant weights to each development project at the project inception stage. For this to happen, this system needs to be in place both at the federal level in MPDR as well as in the P&D departments in all four provinces. The concerned technical sections responsible for assessing the CC, poverty and gender relevance of development projects, should use this classification system while assessing the relevance of each project against these three concerns. Once functional, such a system would give project level information on CC, poverty and gender relevance on a regular basis, which would allow the use of option 3 as outlined in the methodological note, which is able to better capture the complementarities between CC, poverty and gender related public expenditures. Eventually, it would be advisable to have climate change, poverty and gender analysis of all development projects at the appraisal (PC-I) and evaluation (PC-V) stages to ensure clear project level linkages between these three dimensions.

Social and cultural barriers which in most cases prevent women from actively participating in advance planning of climate induced disaster risks needs to be tackled through the design and implementation of appropriate education and awareness programmes.

Finally we need to ensure that climate change financing in the country should create an opportunity to promote poverty reduction and strengthen gender equity. Towards this end, there is need to assign task to already established research bodies, including PIDE, PERI etc. to conduct analysis of the available data and advise the concerned agencies to take steps to improve the allocation of budgeting in such a manner that the projects and activities that are more relevant.

CHAPTER 13 – CONCLUSIONS AND RECOMMENDATIONS

The CPEIR is the first attempt in Pakistan to gauge the level and nature of climate-related expenditures as a proportion of the overall national and provincial budgets. The exercise brought together different stakeholders from across government to understand and examine the level of climate-related public expenditure, as well as the institutional and policy context within which Pakistan's response to CC is taking place. The CPEIR highlights, among other things, the crosscutting nature of CC and its impact across different sectors thereby requiring a comprehensive response from different parts of the government. It reveals in particular the ways in which CC financing takes place directly or indirectly, through the broader process of public budgeting and expenditure at national and provincial levels. This section presents the main findings from the analysis and suggests a number of recommendations that will help strengthen the governance of CC finance in Pakistan in the future.

13.1 Expenditure findings and conclusions

The CPEIR study concludes that at the national level (federal, four provinces and three regions combined), climate-relevant expenditure (development and current budget) increased from PKR 330.4 billion to 572.5 billion during 2011/12 to 2014/15, at an AAGR of 20.1 percent during the period, higher than the 11.1 percent AAGR of GDP (fc)121 at market prices. As a ratio of the GDP, the share of CC-related expenditures during the four year period are between 1.52 and 2.08 percent. The four year average CC-relevant expenditure at national level is around 7 percent of the country's total aggregated budget and this share during 2014/15 at national level is 8.5 percent. The table below gives a summary of CC-related expenditure (both current and development), both aggregated and broken down by federal and sub-national governments during the four studied years.

Table 13.1: Pakistan – Climate-relevant expenditure

Provinces	2011/12	2012/13	2013/14	2014/15
Federal	6.5%	5.8%	6.2%	8.1%
Khyber Pakhtunkhwa	7.2%	5.3%	7.1%	9.7%
Balochistan	7.3%	10.4%	11.1%	11.3%
Punjab	6.2%	7.1%	8.2%	9.3%
Sindh	5.7%	4.2%	4.3%	6.9%
FATA	13.1%	12.5%	11.6%	11.9%
Gilgit-Baltistan	16%	19%	20%	28%
Azad Jammu & Kashmir	9.2%	14.0%	12.5%	16.9%
National	**6.7%**	**6.1%**	**6.7%**	**8.5%**

121 The GDP at factor cost is also called "net value added" method. Net Value added=Gross Value Added- Value of intermediate Consumption. The sum of net value added in various economic activities is known as GDP at factor cost. This plus indirect taxes less subsidies on products is GDP at market price.

At the federal level, between 5.8 and 8.1 percent of total federal expenditure in the four studied years were spent on climate-related interventions. The relative proportion of the climate-relevant budget spent on adaptation and mitigation varied significantly across the studied years; adaptation varied between 25 and 60 percent and mitigation between 30 and 71 percent. The variance and inconsistent trends in spending on CC adaptation and mitigation, and the oscillating balance between adaptation and mitigation, could be attributed to changing priorities of the government, the 18th Amendment and occurrence of natural calamities that tilted the balance towards adaptation-centric spending

Moreover, the majority of federal development expenditure relevant to CC mitigation was in the energy category (57 percent, 2014/15 data). Significant contributions to mitigation-relevant spending also came from the transport category (10 percent). The adaptation focus during 2014/15 was on health and social services (16 percent), water resources (11 percent) and disaster preparedness (5 percent). The highest percentage of climate-relevant projects tended to be in the MCC, MoWP and the Kashmir Affairs and Gilgit-Baltistan Division. In terms of actual expenditures, around 70 percent of the total climate-relevant actual development expenditure during 2014/15 is split between two ministries, the MoWP (at 47 percent, including WAPDA) and the Cabinet Division (at 22 percent, including the Atomic Energy Commission). In the four provinces, climate-relevant expenditure varied from a low of 4.1 percent (Sindh, 2012/13) to a high of 11.3 percent (Balochistan 2014/15) of respective budgets of the provinces. It ranged from 7.0 to 9.0 percent in fifty percent of the years for all the four provinces under review. The degree of climate relevance of projects varies in all provinces.

In a few of the departments under review in the provinces, the percent of climate-relevant projects exceeds 50 percent of the total projects and remains consistently high and stable across the four years. Generally, projects in Environment, Forestry, Irrigation and Energy departments score high in climate relevance in all provinces. The major portion of climate-relevant development expenditure of all provinces went towards the water resources sector, except Punjab where transport, health and social services formed the main focus of climate-relevant spending.

Furthermore, the main thrust of climate-relevant expenditure in all provinces was towards adaptation activity during the four studied years (Sindh between 79 and 92 percent, Balochistan between 70 and 90 percent, Punjab between 61 and 76 percent, and KP at 68 percent). In contrast, mitigation constituted between 30 and 71 percent of the climate-relevant expenditure at the federal level during the four studied years.

The financial resources required for a comprehensive and effective climate change response are substantial. According to a UNFCCC funded assessment,[122] the estimated cost of climate change mitigation in Pakistan stands at $17 billion for the period up to 2050, while the cost of adaptation during the same period is estimated to be $7–14 billion annually. The figures are only indicative, but do reflect the quantum of investment and commitment required to address the CC challenge. Currently CC expenditure both on mitigation and adaptation (investment and re-current) is to the tune of only US $5.0 billion. Apart from the existence of a narrow fiscal space, there are, however, a number of challenges related to implementation of CC-related investments: overriding and pressing governmental challenges such as security and energy supply, leadership and decision-making to prioritize CC responses, coordination and facilitation of CC across sectors and provinces, and the development of sector/provincial CC policies and strategies.

The MoF's role in PFM is crosscutting and critical. It leads the process of finalizing non-development expenditures and performs an important role in the approval process of development expenditures. International partners like the European Union, UK Aid and others have provided considerable support for improving institutional capacity for PFM. One of the critical initiatives has been the MTBF, which is now in

122 Malik Amin Aslam Khan, Pervaiz Amir, Shakeel Ahmad Ramay, Zuhair Munawar and Vaqar Ahmad, "National economic and environmental development study (NEEDS)", Report (Islamabad, Ministry of Environment, 2011). Available from https://unfccc.int/files/adaptation/application/pdf/pakistanneeds.pdf.

place in the Federal Government and constitutes a major step forward for output-based budgeting; the MoF monitors the budget formulation process for compliance of the ministerial budgets to the strategic objectives of respective ministries. The MPDR at the federal level and P&DD at the provincial level play a key role in development planning. The MPDR in the past has taken steps to mainstream critical issues like gender and environment. The MoF and MPDR therefore need to make concerted efforts to integrate CC into budgetary and planning processes. Similarly, provinces need to enhance their project formulation, technical and monitoring capacity to identify and implement projects/programmes that address mitigation and adaptation to specific climate change pressures in their respective provinces.

13.2 Policy and institutional findings and conclusions

There have been significant developments on the CC policy and institutional landscape in Pakistan in recent years, including following formulation of the National Climate Change Policy in September, 2012, and the development of a comprehensive Framework for its implementation and mainstreaming in 2013. However, in the backdrop of the devolution of environment and CC to the provinces through the 18th Amendment, progress on the implementation of the NCCP has been slow.

Consequent to this, all provinces except Balochistan are in the process of developing their respective climate change policies, using the NCCP as the guiding framework, while tailoring their policies to address pressing CC issues across their respective jurisdictions. The institutional framework is also being strengthened at the provincial level to deliver effective response to emerging challenges, although this level of institutional development varies considerably across the four provinces.

The CC mandate between different tiers of Government is evolving in the post-18th Amendment period. The Federal Government is currently steering the process through the MCC, providing a good institutional base. Sindh has taken a very progressive decision and has established a Department of Climate Change, Environment and Coastal Development by renaming its previous Environment Department. KP and Punjab have established dedicated CC cells in their EPA and Planning Departments, respectively, while Balochistan is in process to evolve some dedicated CC institutional arrangement. In time, these emerging institutional arrangements are likely to position CC more centrally within all provincial administrations as well as providing a clearer institutional link with the MCC at the federal-level.

More recent initiatives to strengthen the institutional arrangements for national CC response include the Pakistan National Climate Change Council and Pakistan Climate Change Authority, proposed to be established under provisions of the Climate Change Act initially approved by the federal cabinet and later after lengthy debate approved by the parliament. The Pakistan Climate Change Council is expected to be a high-level forum for mainstreaming climate change concerns into planning of federal and provincial ministries, departments and agencies. The Council, to be chaired by the Prime Minister, will include as members all relevant federal ministers, as well as Chief Ministers of all provinces and concerned provincial departments. The Pakistan Climate Change Authority (PCCA) would be mandated to formulate comprehensive adaptation and mitigation policies, plans and programmes to address effects of climate change and meet Pakistan's obligations under international agreements pertaining to climate change, within the guiding framework of the NCCP. It would be responsible for establishing institutional and policy mechanisms for implementation of federal and provincial adaptation and mitigation policies and plans.

At the federal level, some recent initiatives have been undertaken to strengthen the institutional arrangements for NCCP delivery:

- The CCI has approved REDD Plus National Strategy proposed by the Ministry of Climate Change. The strategy aims to stop deforestation activities in the country and enhance forest cover;
- Pakistan has established a Fund for Disaster Risk Management with the help of ADB;

- NDMA in collaboration with Climate and Development Knowledge Network (CDKN) and LEAD Pakistan has developed a Disaster Risk Insurance Framework (DRIF) for Pakistan for protection of the vulnerable, low income populations in the aftermath of extreme weather events; and
- An ambitious Prime Minister's Green Pakistan programme has been launched.

The Government has also developed a long term development framework — Vision 2025 — to serve as a critical guidepost for the development of an effective strategy and roadmap to reach national goals and aspirations. It recognizes climate change and acknowledges the need to build and strengthen adaptation capacity to climate change, especially amongst the poorest and most vulnerable populations. It calls for devising policies and plans to meet the challenges posed by climate change and implementation of well-defined mitigation and adaptation strategies.

There is an increased opportunity to mainstream CC into policymaking, given some useful developments in CC management, improvements in the overall economic environment, a politically stable government and various reform initiatives. Mainstreaming and integration of climate change concerns across different sectors is expected to be further strengthened from Pakistan's signing of the SDGs. The SDGs comprise of 17 goals covering 169 targets, with Goal 13 explicitly requiring signatory states to "take urgent action to combat climate change and its impact".

13.3 Recommendations

A. Integrating CC into budgetary and planning processes

The CPEIR demonstrates that a significant percentage of the public exchequer is allocated to CC. The Federal Government has been spending 5.8–8.1 percent of its budget on CC during the four years under review. However, this is likely happening without the Government realizing the quantum of investment it is making. Sectoral expenditures and programmes are driven by sectoral policies. Indeed, some or more of CC-related investments accrued in the budgets presented in this CPEIR are coincidental to the main sectoral purpose for which they were planned. CC may have had no role in the formulation and planning of these investments even though they can be recognized as climate-relevant. The lack of a CC angle in many sectors means that the MTBF of different ministries do not actually account for CC.

The MoF, MPDR and MCC need to make concerted efforts to integrate CC into planning and budgeting as these are currently disjointed domains because of existing institutional arrangements, and further fragmented when it comes to crosscutting issues like CC. The fundamental requirement is to make CC a salient issue in planning and budgeting in all relevant sectors cross-government. However, the way in which CC is expressed in each sector is different and thus appropriate and differential "sectoralisation" is required for CC to have tenacity at the line ministry level. There is therefore a need to build a nexus of sector plans which are aligned with the MTBF of sector ministries, the MCC and NCCP and Framework for Implementation. A similar effort at integrating CC into the planning and budgeting cycle at the provincial level is also required.

Some important reforms are presently underway, at the federal level (and in some provinces), to drive the integration of climate change into the planning and budgeting system, such as the CCFF. CCFF is under development with the support of UNDP and primarily aims to provide a structured response to climate change financing through a systematic tracking, managing and reporting processes for the climate-related expenditure in the national budget and at the line ministry level.

To date, several initial core stages to complete and implement the framework have been completed. The initial stage of conceptualization and consultation with the relevant ministries and stakeholders, for example, is complete and the draft framework is presented to the CCFF Steering Committee for the approval. Moreover, using the current PFM system as an entry point, CC is incorporated into fiscal policy framework as an annexure in the budget brief of 2016/17, and budget call circular 2016/17 is also updated

to add the CC dimension. To link CC policy with budgets, the Minister for Climate Change has approved incorporation of CC into PC-I from March 2017, and MPDR has agreed in principle.

The CCFF provides a number of benefits. It will create an enabling environment to mainstream CC into sectoral policies, strategies and action plans. By doing so, it will provide a structured response to established vulnerability and help in getting international climate funding from GCF and other funding windows.

The flow of international mitigation and adaptation finance to Pakistan have been less than $500 million[123] up to 2013, including bilateral flows, which is much less than the resources required for taking up adaptation and mitigation activities. Currently, apart from GEF and other sporadic support from donors like UK Aid, the World Bank and UNDP, Pakistan, unlike Bangladesh and some other countries, has not been able to garner and make effective use of global climate finance. In view of the high cost of mitigation and adaptation, there is a need for a prioritized mainstreaming of CC in the national budget and a need for tapping international sources of CC finance. This can be advanced through the following actions:

i. **Support CC integration in the planning process (by the MPDR and P&D departments)**. CC is not a formal part of the planning process. In order to integrate CC into planning, CC appraisal should be included in PC-Is[124] so that the DDWP, PDWP and CDWP can consider this facet at the time of project approval. At the federal level, the MPDR, in coordination with the MoF, should ensure that the MTBF of CC-relevant ministries/departments have CC-related outputs/outcomes. A similar process needs to ensue at the provincial level through the P&D Departments in coordination with the Finance Department. Currently, the MTBFs of sector ministries tend to concentrate on their own sector priorities as the main drivers for the derivation of their planned expenditures. The Government can also consider the inclusion of the CC factor in the monitoring and evaluation formats, in PC-III–PC-V.

ii. **Develop a detailed guidebook for planning wings**. Such a document could be used to train officials in filling-out and appraising CC components in the PC-I–PC-V formats.

B. Strengthening the climate institutional framework

CC-related institutions continue to evolve, owing to the increased global emphasis on CC, the gradual increases in local awareness and because of the 18th Amendment. The assignment of responsibilities between the Federal Government and the provincial governments is also in the process of formation and transformation. Policymaking on CC and the implementation of international agreements and conventions is considered to be assigned to the Federal Government. On-the-ground implementation of CC policy is mainly located at the provincial level. While there is a need to bring further clarity on broader issues about the CC mandates of different tiers, institutional responsibilities to steer the NCCP and Implementation Plan should be pursued vigorously in line with the given timelines for different milestones.

i. **Track climate finance investments by NGOs, donors and private sector**. Besides public expenditure on CC-relevant tasks in the country, a significant amount is being spent by NGOs, donors and private sector on CC response in the country. Their contributions (even if off-budget) should be tracked accounted and acknowledged for a more comprehensive picture of climate finance investments in Pakistan (federal and provincial). Further, such tracking would help in better utilization of resources by avoiding duplication and focusing on priority challenges.

123 LEAD, "How can Pakistan leverage climate finance?", May 2013. Available from http://www.lead.org.pk/attachments/updates/318%20%282%29.pdf.

124 National Climate Change Policy Implementation Committee which met recently under the Chairman Federal Minister Climate Change recommended the inclusion of CC information in PC-I.

C. Strengthening institutional CC-relevant entities

The CPEIR concludes that some ministries like Water and Power and the Cabinet Division at the federal level, and Agriculture, Irrigation and Power at the provincial level, are making investments in mitigation and adaptation, but the inconsistency reflects a clear focus, which results in less-than-optimum results. This lack of focus is a result of a disconnect between CC and different sectors, and an inadequate capacity and understanding of CC handling. This capacity gap exists both at the policy and operational level, thus impeding CC mainstreaming into the wider development agenda, sectoral programmes and budgeting thereof. The MCC should provide this support to the federal and provincial ministries but has not been able to do so effectively mainly because of capacity constraints. Now as the provinces have started demonstrating their ownership of the CC agenda it is necessary that this ownership be taken forward and be aligned in the right direction.

i. **Strengthen the technical and professional capacity of MCC**. This may be done by enhancing the professional base of the ministry and by providing support in translating into action the Framework for the Implementation of the Climate Change Policy. In order to ensure accountability and effective monitoring of actions, the MCC should be provided support in integrating framework activities into the MTBF, thereby turning output targets into KPIs. Institutionally, the MCC is well-placed federally to champion CC if capacity building and coordination can position CC as an entity outside environment, but within wider Government planning processes. An assessment of the institutional setup of the MCC vis-à-vis its role as the lead on CC policy, is also recommended to fill the gaps where needed. Necessary institutional strengthening and adjustments should be made for it to fulfil its mandate.

ii. **Provide technical support to the provinces in the development of detailed action plans for NCCP implementation**. All four provinces and federally administrative regions which are at different stages of institutional development should be provided institutional support in the form of legal and regulatory instruments, given their interest in CC. The action plans should be further linked with the MTBF.

iii. **Provide support to CC-relevant ministries for the incorporation of climate-responsive budgeting**. The CPEIR could serve as one basis for the selection of ministries/departments for capacity building. The capacity building of such ministries to factor in CC-friendly initiatives in planning and budgeting, and tracking expenditures is important. Now as Phase II of the CPEIR is completed, the Government should plan capacity building exercises of selected functionaries at the provincial and local government level. Initial prioritisation of institutional units on which to target training can be linked to the existing scale of climate-relevant activities identified in this CPEIR.

iv. **Support the NCCP Implementation Committee and Climate Change Think Tank**. Provide support to activate these committees, focused on facilitating the implementation and decision-making process.

v. **Develop synergies between different programmes**. A mechanism should be constituted for all stakeholders for a more rigorous response to the CC challenge. The working group could include representatives of the MCC, MoF, key relevant ministries, different funding windows like GEF, the private sector and relevant donors. This will help synthesize and develop synergies between efforts from different players and also channelize finances in accordance with Government priorities, thereby helping avoid the duplication of efforts. There are currently different donors working on CC issues. UK Aid is developing a large programme called Disaster Relief and Rehabilitation, UNDP is making interventions through GLOF and GEF, and the World Bank and ADB are also working on CC. Synergies need to be built between the Economic Affairs Division, the MCC and relevant ministries. Improved coordination and harmonisation will accrue value-added benefits.

vi. **Support Parliament by increasing awareness in tracking climate investments through domestic and international sources to strengthen its oversight role**. There are standing Committees on Climate Change in the Senate and National Assembly. Parliamentarians in general and members of

these Committees in particular, should be provided support through information sessions, workshops and debates on CC concepts and effective CC finance pathways.

D. Monitoring and evaluating CC-relevant work

UNDP is currently assisting MoF and MCC to develop a mechanism for the identification and monitoring of CC-related expenditures in Pakistan. The CPEIR exercise is an attempt to estimate Government expenditures on the basis of defined criteria. The presence of such a mechanism would provide an opportunity to the Government, as well as to the independent analysts, for evaluation of the Government's progress in CC budgetary commitments. A clear assignment of all expenditures is challenging and may partially lead to subjective results. Nonetheless, a system would enable the Government and other stakeholders to tap CC expenditures through coding and tracking. This will be instrumental in monitoring Government interest in and capacity to implement CC programmes. It will also help track actual expenditures incurred. Such a system would also demonstrate Government commitment to CC issues.

i. **Identify, prioritize and synthesize key adaptation and mitigation activities with budgets and MTBF frameworks for selected relevant ministries**. The Framework for the Implementation of the NCCP is a good starting point to integrate CC into sector priorities, identify activities for adaptation and mitigation, cost of the activities, and formally synthesize them into budgetary systems. The Government could simulate the long-term costs of adaptation and mitigation. There is already a UNFCCC study that makes projections on possible annual costs for adaptation and mitigation, but it does not delve into outputs and activities. It will be useful if key adaptation activities could be picked up on a pilot basis, e.g., agriculture, because of its importance to the economy and because of its vulnerability to changing monsoon and weather patterns. Another example is the energy sector where significant investments are being made both on core and alternative energy sources.

E. Sensitizing policymakers and increasing public awareness on the need for CC investment

Pakistan is at a nascent stage in taking up the CC challenge. There has been significant CC work in other regional countries such as Bangladesh, Nepal and India. Even though the CPEIR study indicates climate-related expenditures within the Government, CC has not been able to trigger a policy debate on its importance and the implications of ignoring it. To date Government efforts and commitment and the level of policy discourse over CC financing do not match the challenge that Pakistan faces.

CC is not an entrenched phenomenon at the policy, institutional or operational level. The understanding of CC and range of possible approach to tackle it is therefore weak. Long-term capacity building is required across different tiers of Government (federal to TMA level). This will become even more critical in view of the new systems and processes that are being proposed to integrate CC into planning and budgeting. The process should begin with arrangements for informed policymaking and subsequently qualified and informed public sector officials.

i. **Sensitize policymakers and stakeholders to the importance of CC and explain the rationale for CC expenditures**. Parliamentarians and other key decision-makers do not fully understand the importance of CC. Though it has already materialized in the form of explicit and implicit costs to the economy it is not yet considered a priority area. It is important for decision-makers to become CC advocates, given Pakistan's vulnerability. The present Government's commitment to undertaking infrastructure projects and industrialization is also expected to raise carbon emission levels, which makes it all the more important to put mitigation measures in place. Some options are to:

- Establish parliamentary/provincial caucuses that focus on integrating CC in national budgetary systems;

- Develop a communications strategy for informing stakeholders and the public of CC issues;
- Identify a CC ambassador to stress the importance of CC investments.

ii. **Develop a media strategy for CC awareness**. A media engagement strategy could be put in place to disseminate information on the importance of CC investments. This could include documentaries and print and electronic media information.

iii. **Recommend that key officials and stakeholders engage with CC institutions in other countries**. Officials from relevant ministries and departments could be provided trainings and exposure visits to other countries to understand and observe current trends in mitigation and adaptation systems. This could also result in regional cooperation on integrating CC finance into mainstream processes like planning and budgeting.

iv. **Develop a knowledge bank**. The Government's and other entities' capacity is limited in terms of CC delivery. This is partly because of a lack of professional training and a paucity of CC information. To address this, the Government should:

- Develop a hub that serves as an information repository of knowledge sources;
- Develop a database of local and international CC programmes and activities to help determine possible funding options;
- Develop a database/information network of ongoing CC seminars and conferences;
- Revisit the GCISC to see if it can perform some of the aforementioned functions.

v. **Commission CC studies for informed policy decisions**. The Government should commission studies in different subject areas of the sector. Possible study areas include the following:

- An exploration of the possibility of using CC as an indicator for incentivizing the sub-national Government towards climate-friendly initiatives and actions.
- An assessment of the causalities between CC and social sector development and poverty reduction. This will strengthen the case for CC expenditures.
- Studies to tap new avenues and align new initiatives with sector priorities, and integrate public revenues with other climate fund windows.
- Studies to examine public-private partnerships for mitigation and adaptation activities
- A comprehensive study to assess the carbon footprints of public sector climate negative activities at federal and provincial levels.

vi. **Assess CC funding adequacy, efficiency and effectiveness.** Once the implementation of the CCFF is underway, future editions of climate expenditure reviews should begin to address the issues of a) adequacy of CC funding, b) allocative efficiency across CC themes and c) assess efficiency and effectiveness in the use of public resources in different sub-sectors. In the context of climate change, instruments to measure adequacy for funding need to be developed/programmed and KPI for inputs, output, impact and outcome are required to monitor the projects/programmes and assess their efficiency and effectiveness over the medium to long term. In this regard, the under formulation Punjab Climate Change Policy can be a guide in assessing adequacy and developing a checklist of KPIs.

F. Strengthening linkages between CC, poverty reduction and gender empowerment

In order to mainstream CC, poverty and gender-related concerns in the development planning framework of Pakistan and to ensure maximum synergy among public investments in these three domains, the following set of recommendations are offered:

i. **Improve the generation of poverty relevant expenditure data at both the federal and provincial levels of government by mainstreaming PRSP pro-poor expenditure tracking in the MoF**. Presently, the data on 17 pro-poor expenditure heads is compiled by the PRSP Secretariat at the MoF. It has been operating on a project basis since the initiation of the PRSP process in the early part of this millennium, rather than as an integral part of the MoF.

ii. **Regularly generate ministry/ department-wise breakup of expenditures under the 17 heads for both federal and provincial governments**. These ministry-wise expenditures can then easily be compared with climate change expenditures for which a coding scheme is being developed by the Ministry of Finance in collaboration with the Ministry of Climate Change, which will help in tracking climate change expenditure ministry-wise on a regular basis.

iii. **Develop a system for gender based reporting of budgetary expenditures at federal and provincial levels of government, so that regular reporting on gender related expenditures is available**. Since MTBF data is available at aggregate level, there is a need to constitute a committee comprising of representatives from MCC, Planning Commission, Ministry of Finance, provincial governments and other relevant organizations to analyse the MTBF data and come up with the climate relevance of overall public expenditure and its overlap with poverty and gender empowerment.

iv. **Commission studies for developing a system of classification of poverty-relevant and gender-relevant expenditures at the federal and provincial levels**. In the medium term, this classification system can be formally adapted for assigning CC, poverty and gender-relevant weights to each development project at the project inception stage. Once functional, such a system would give project level information on CC, poverty and gender relevance on a regular basis.

On a final note, the focus of the CPEIR approach is on the "supply-side" of national climate finance. This CPEIR recognises the need for a more active and deliberative process across sectors and provinces to upscale and enhance the focus of the financing of climate-related activities. As outlined, this involves awareness, institutional shifts and alignments and improving the penetration of the NCCP across government. However, outside the realm of the CPEIR, there is a need for consideration of the downstream effects or impacts of these more focused and up-scaled investments. This is through a monitoring and evaluation system encompassing climate resilience or mitigation impacts at the project level and an assessment of effectiveness and efficiency of those interventions as well identification of interventions with maladaptive or negative unintended secondary effects. The combination of a well-found "supply-side" management and receiving feedback on the impact of those investments to permit refinement and re-orientation, provides a holistic system for ameliorating the profound effects that CC will have on Pakistan.

CHAPTER 14 – A SUPPLEMENTARY ANSLYSIS OF CLIMATE CHANGE EXPENDITURE FOR 2015-16

Transition from CPEIR to climate change expenditure coding and tracking system

The Climate Public Expenditure and Institutional Review (CPEIR) was carried out in 2015 which covered the federal government, KP and the three federally administered regions for the FY 2008-09 to 2012-13. In the second round, the analysis was carried out for the federal government, four provinces and the three federally administered regions, thus it covered the whole of Pakistan. This analysis covers the period from 2011-12 to 2014-15.

To identify and classify climate-relevant expenditure, the CPEIR used following criteria/methodology:

- **Identification criterion** – Every expenditure is assessed to see if it is climate-relevant;
- **Classification Criteria** – Climate-relevant expenditure is categorized into one of the following four categories:
  - Adaptation
  - Mitigation
  - Supporting areas
  - Adaptation and mitigation (joint)
- **Relevance Criteria:** if an expenditure is assessed to be climate –relevant, it is ranked as "high, medium, low or marginally relevant" and assigned corresponding percentage. The highest percentage being more than 75% and the lowest being 10% or lower.

In addition to the CPEIR, the government has also established a Climate Change Financing Framework to provide a menu of reforms for:

- Incorporating CC lens in the planning cycle;
- Mainstreaming climate change in budgeting, including MTBF and other budgetary processes and instruments;
- Monitoring system for climate change expenditure tracking;
- Oversight and Accountability

In order to achieve the last two objectives, the MoCC and MoF with technical support of the UNDP developed a Coding and Tracking system for CC expenditure information and reporting. Further, the MoCC has finalised with the assistance of the office of the Controller General of Accounts (CGA) an IT-based climate-responsive expenditure tracking and reporting system for the national and sub-national governments that draws on expenditure data maintained by the CGA. The CGA team has "configured" the system using SAP Business Planning Consolidation (BCP) module for tracking climate change relevant expenditure. . The system uses the same typology and classification envisaged under the CPEIR process. Howver, It gives the option of realigning or fine tuning the classification. This system will be extremely useful in:

- Providing transparent and reliable database
- Live and current analysis against post dated analysis of CPEIR
- Informed decision making on basis of updated database and analysis
- Structured reporting on climate change related projects and expenditures

The climate-relevant expenditure data for 2014-15 and 2015-16 for the federal government is already uploaded to the system whereas the uploading of comparable data for other parts of Pakistan is in process. This chapter is a fine illustration of the transition from the manual CPEIR to IT-driven system based analysis of CC expenditures. The results are comparable because both the manual and the IT-based system essentially use the same expenditure classification system.

This chapter has two parts. The first provides an analysis of the federal government based on the coding and tracking system for FY 15-16 (which includes 4 typologies[125]) whereas the second one is an analysis of the provinces and the regions following a mix of the CPEIR methodology and the coding and tracking system. The data used for analysis was obtained from the CGA and the analysis has been carried out on the actual expenditures.

Objective

This narrative serves three purposes. First, it analyses and updates climate-relevant expenditure for fiscal year 2015-16 at national level[126]. The CPEIR covers the fiscal years from 2011-12 to 2014-15. Second, it demonstrates the capability of SAP system to generate climate-relevant expenditure data for policy makers and other stakeholders. And finally it shows ways in which an IT-based system can facilitate the federal government in tracking country's progress against international commitments under the climate change agenda.

Expenditure Analysis

14.3.1 Federal Government

CC-Relevant Expenditure Analysis

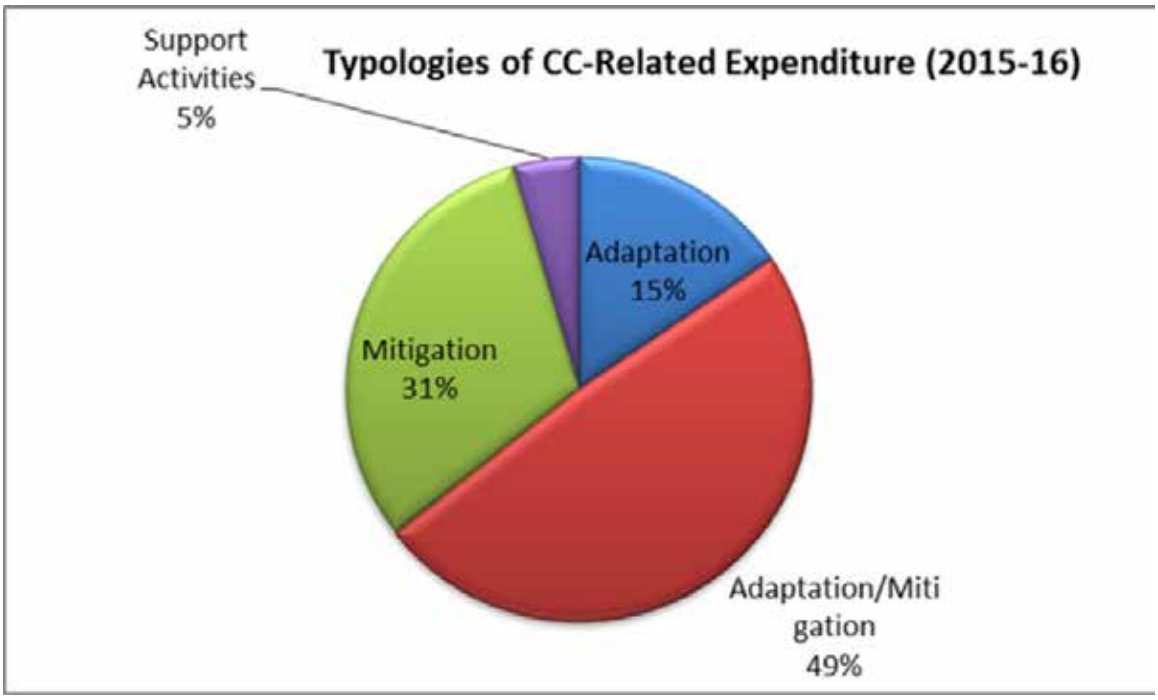
The SAP expenditure data for 2015-16 shows that the federal government's budget was PKR 4,269 billion, out of which the share of current expenditure was Rs 3,329 billion (78%) and that of development expenditure was PKR 939 billion (22%). The revised estimates for 2015-16 indicates that the federal government actually spent PKR 4,166 billion during the year, out of which approximately PKR 272 billion or 6.5% went into CC-related activities.

For 2014-15, the CPEIR assessed that at the federal government level CC expenditures were 8% of the total expenditures. The percentage of CC relevant expenditures as a percentage of total expenditures for FY 15-16 is 6.5%. This does not necessarily reflect that the CC-related expenditure has decreased in 2015-16 compared to the previous year. The difference appears to arise because the CPEIR for FY 14-15 factored in expenditure incurred under Cabinet Division by Atomic Energy Commission which, being an off-balance sheet item, is not covered in the SAP system for 2015-16. Currently, the expenditure tracking system does not capture off-balance sheet items.

125 The typology of adaptation/ mitigation for federal government has been retained because firstly it is in line with the Coding and Tracking design and secondly compared to the provinces the federal government has a higher number of projects that have both adaptation and mitigation component, therefore,this typology has been used for federal government but not provices.

126 The analysis for FY15-16 has been done on the basis of approved coding framework and has been shared with the Ministry of Climate Change.

The pie chart shows the break-up of PKR 272 billion into different typologies:



This section presents an analysis of federal government spending on each of the above-mentioned typologies as classified in the National Climate Change Policy and CPEIR. Subsequent to the analysis with regards to typologies, the analysis of CC relevant budget with regards to economic classification in budget and SAP has also been done. The analysis also looks into changes in execution of CC-related budgets and the impact thereof on CC-related spending.

Adaptation

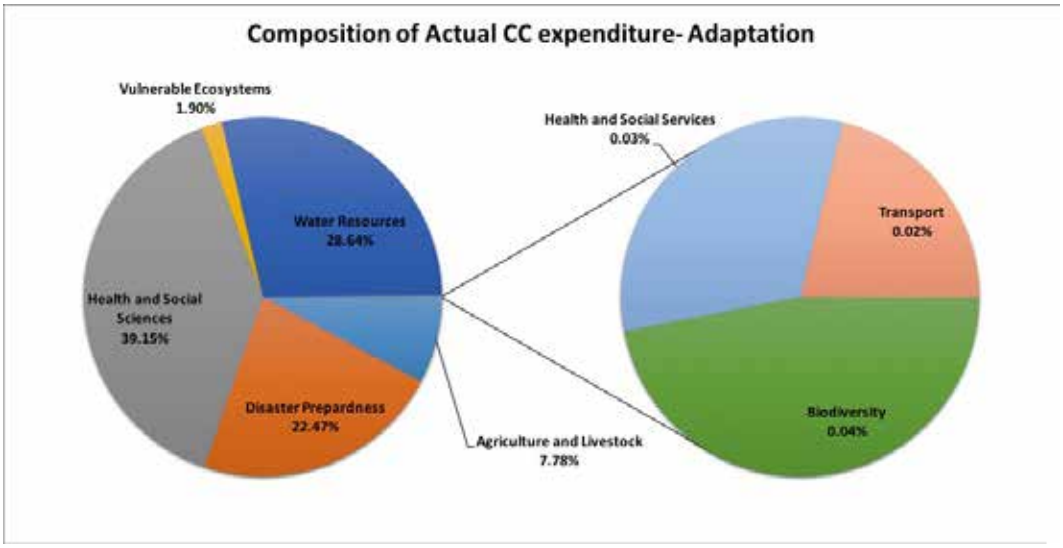
The budgeted and actual expenditures on adaptation for the year 2015-2016 are summarized in the table.

Climate change adaptation expenditures (All amounts in PKR)

Element	Original Budget	Estimated CC Expenditure	Revised Budget	Actual CC Expenditure
Agriculture and Livestock	7,966,811,000	4,202,779,350	6,212,157,053	3,289,902,168
Biodiversity	65,354,000	40,879,000	22,828,675	16,991,175
Disaster Prepardness	16,021,010,000	8,726,694,550	17,338,418,546	9,503,164,028
Health and Social Sciences	56,731,818,670	15,008,149,401	55,720,280,933	16,555,395,147
Health and Social Services	-	-	115,718,059	11,571,806
Transport	131,208,000	57,802,000	30,708,200	7,677,050
Vulnerable Ecosystems	3,832,623,000	935,663,900	3,545,578,410	802,213,775
Water Resources	19,593,274,000	12,697,736,950	18,729,018,457	12,112,494,254
TOTAL	**104,342,098,670**	**41,669,705,151**	**101,714,708,333**	**42,299,409,403**

In 2015-16, the federal government allocated PKR 104 billion under eight sectors which had CC-relevant adaptation activities. The estimated allocation for adaptation activities against this provision was PKR 41.6 billion. The federal government actually spent PKR 42.2 billion on CC-related adaptation activities. While the federal government spent PKR 101.74 or 3.5% less than the original budget under these heads, it still managed to spent slightly more than the estimated amount on CC-adaptation activities.

The composition of actual expenditure on all elements related to 'adaptation' is shown in the pie chart. It indicates health and social services, water resources and disaster preparedness as three areas where most of the budget related to adaptation CC was spent.



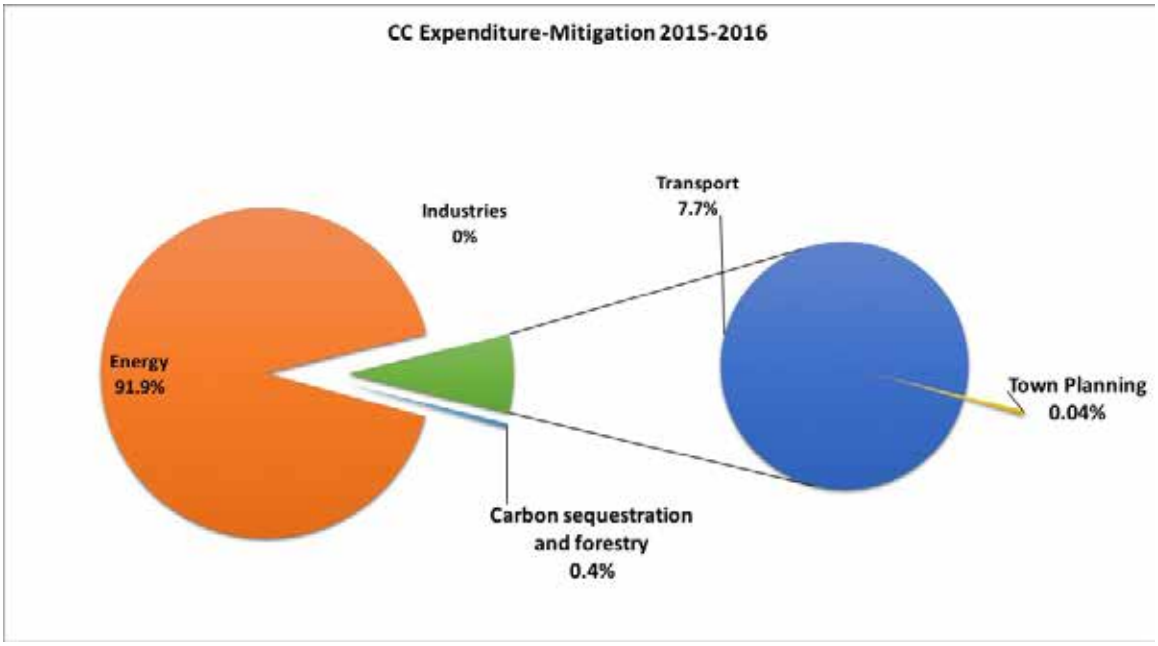
Mitigation

The budgeted and actual expenditures on 'Mitigation' for the year 2015-2016 are summarized in the table.

Carbon sequestration and forestry	520,129,000	392,034,750	452,632,343	339,474,257
Energy	52,830,198,000	43,626,640,150	95,323,121,874	77,519,123,559
Industries	120,000,000	60,000,000	-	-
Town Planning	101,000,000	35,350,000	100,000,000	35,000,000
Transport	113,000,000,000	28,100,000,000	25,830,471,000	6,455,117,750
TOTAL	**166,571,327,000**	**72,214,024,900**	**121,706,225,217**	**84,348,715,567**

The original budget for these sectors was PKR 166.5 billion whereas the federal government actually utilized PKR 121.7 billion. The original budget allocations for CC-related mitigation activities were PKR 72.214 billion or 43% of the budget for these sectors. Against this, the federal government actually spent PKR 84.35 billion on mitigation actions, which was 69% of total allocation for these five sectors. This shows that while federal government actually spent less than the amount originally allocated for these sectors, it still spent more on CC-related mitigation activities than the original budgetary allocations suggested.

The composition of actual CC expenditure on 'mitigation' activities is depicted in the pie chart.



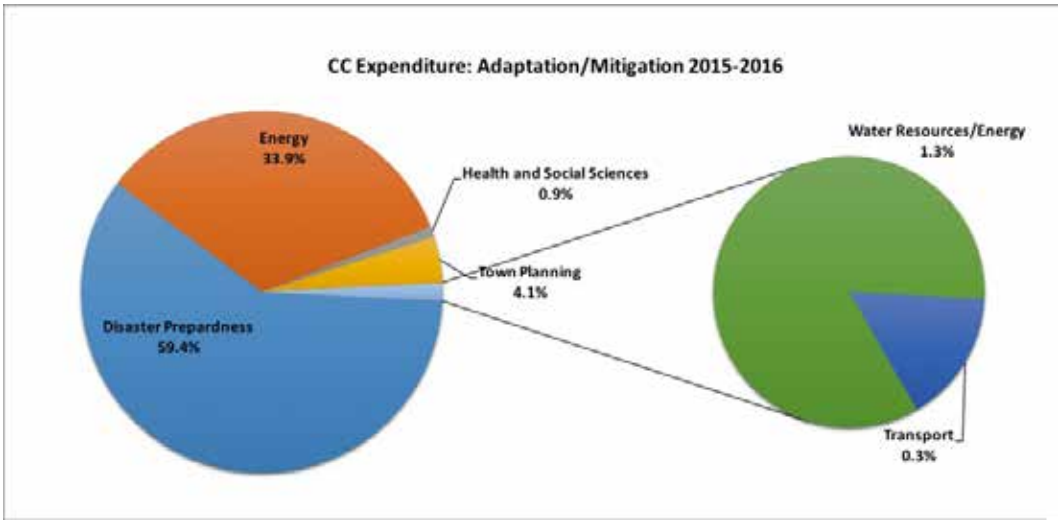
It can be seen that 91.9% of the actual expenditure related to mitigation falls in the energy sector.
The second major area is transport on which about 7.7% of the actual spending related to mitigation activities was incurred.
The pie chart also highlights the area of industry on which nothing was spent and carbon sequestration and forestry and town planning contributing a little to the cause of mitigation.

Adaptation / mitigation

The budgeted and actual expenditures on adaptation/mitigation for 2015-16 are summarized in the table.

Climate change adaptation/ mitigation expenditures (All amounts in PKR)				
Element	**Original Budget**	**Estimated CC Expenditure**	**Revised Budget**	**Actual CC Expenditure**
Disaster Preparedness	995,080,953,000	92,960,940,350	976,200,877,864	78,980,682,794
Energy	238,027,000,000	75,188,400,000	196,629,932,992	45,046,811,933
Health and Social Sciences	2,000,000,000	600,000,000	4,300,000,000	1,230,000,000
Town Planning	19,431,371,000	5,521,387,100	19,342,535,286	5,494,918,692
Transport	2,268,098,000	578,725,500	1,242,926,083	334,612,625
Water Resources/ Energy	3,130,000,000	2,454,000,000	2,280,000,000	1,774,000,000
TOTAL	**1,259,937,422,000**	**177,303,452,950**	**1,199,996,272,225**	**132,861,026,044**

The original budget for the sectors relatable to this joint category of expenditure was PKR 1,259 billion of which PKR 177 billion (or 14%) was meant for CC-related mitigation/adaptation activities. Against this CC-related provisions, the federal government actually spent about PKR 133 billion. Actual expenditure on CC_related mitigation/adaptation actions was 11% of the revised budget or actual spending. Thus, while the revised budget declined by 5% (from PKR 1,259 billion to PKR 1,199 billion), the reduction in spending on CC-related mitigation/adaptation actions was roughly 25%, which was significant.
The composition of actual climate change expenditure on adaptation/mitigation is illustrated in the pie charts:



Disaster preparedness used up 59.4% of the total CC actual expenditure whereas energy with its share of 33.9% is second larges component of expenditure under this category. Some other smaller areas were town planning (4.1%), health and social science (0.9%), water resource/energy (1.3%) and transport (0.3%).

Supporting areas

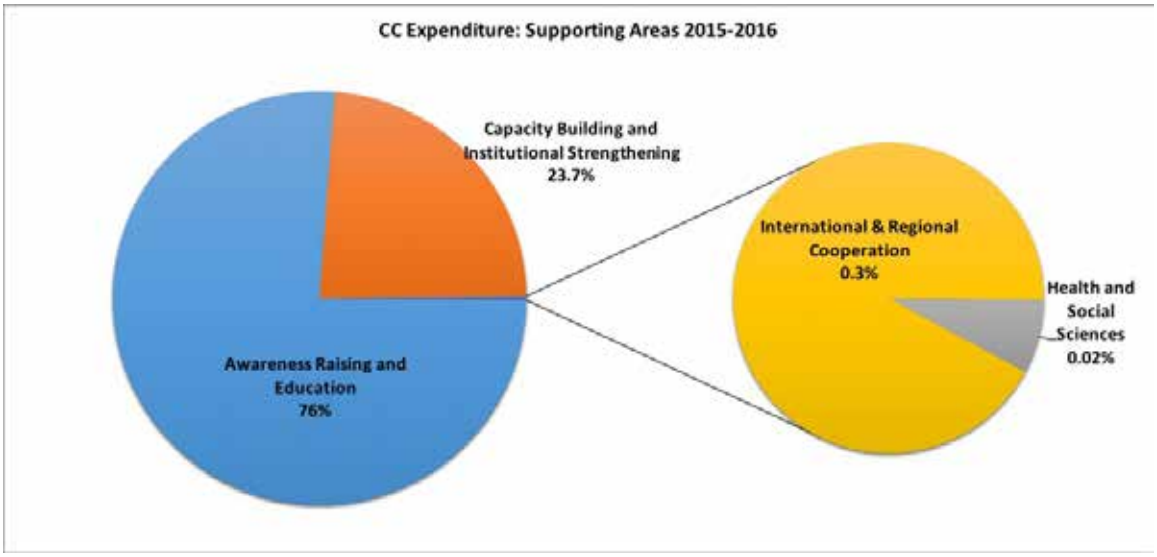
The budgeted and actual expenditures on 'supporting areas' theme for the year 2015-2016 are summarized in the table:

Climate change supporting areas expenditures (All amounts in PKR)

Element	Original Budget	Estimated CC Expenditure	Revised Budget	Actual CC Expediture
Awareness Raising and Education	78,017,982,000	7,909,093,700	94,618,632,289	9,503,251,219
Capacity Building and Institutional Strengthening	16,755,956,000	2,872,639,200	18,118,711,435	2,957,407,335
Health and Social Sciences	23,555,000	2,355,500	29,037,642	2,903,764
International and Regional Cooperation	27,845,000	22,245,000	38,037,337	34,690,986
TOTAL	**94,825,338,000**	**10,806,333,400**	**112,804,418,703**	**12,498,253,305**

In 2015-2016, the federal government allocated an amount of PKR 94.8 billion for supporting areas such as *institutional mechanisms, capacity enhancement, education, negotiations etc. Out of this, an amount of* PKR 10.8 billion (11%) was relatable to CC-related supporting activities. The federal government actually spent 112.8 billion ---19% more than its original budget on supporting actions of which an amount of PKR 12.5 billion was CC-related. The federal government actually spent 16% more funds on CC-related supporting areas than it originally planned.

The pie chart decomposes this expenditure into different categories:



Expenditure under supporting areas fall into four categories. Awareness raing and education constituted 76% of climate-relevant support activities. This followed capacity building/institutional development that cosumed rougly 23.7% of the budget allocated for supporting activies. The other two sectors contributing to the actual CC expenditure relating to support theme are international regional cooperation and health and social sciences comprising of 0.3% and 0.02% respectively.

Summary analysis of federal government:

Row Labels	Sum of Budget	Sum of CC_Budget	Sum of Actual	Sum of CC_Actual
Defence Affairs & Services	784,989,367,000	39,050,000,000	789,332,852,088	39,251,135,484
Economic Affairs	236,683,642,000	48,539,560,050	182,816,861,296	29,226,457,298
Education Affairs and Services	97,880,515,000	7,376,311,000	117,378,348,651	9,070,509,697
Environment Protection	1,095,072,000	234,880,600	1,040,861,715	197,976,510
General Public Service	3,000,613,020,000	197,029,940,851	2,897,866,127,803	181,399,514,741
Health	32,292,839,000	8,559,898,200	35,789,008,015	11,287,324,314
Housing and Community Amenities	4,321,494,000	108,366,950	4,753,047,456	130,319,111
Public Order and Safety Affairs	99,608,134,000	171,881,750	123,079,476,460	122,526,495
Recreation, Culture and Religion	8,370,576,000		10,298,836,447	
Social Protection	2,886,347,000	922,677,000	3,899,841,521	1,321,640,670
Grand Total	**4,268,741,006,000**	**301,993,516,401**	**4,166,255,261,452**	**272,007,404,319**
Climate Change Relevant Expenditures		**7.1%**		**6.5%**

The total actual budget for the federal government as per SAP was Rs 4268 billion of which the climate change related allocations were 7.1%. The actual expenditure of the federal government during FY15-16 was Rs 4166 billion of which the CC actual expenditures were Rs 272 billion. **Thus the federal government CC related actual expenditures were 6.5% percent of total expenditures.**

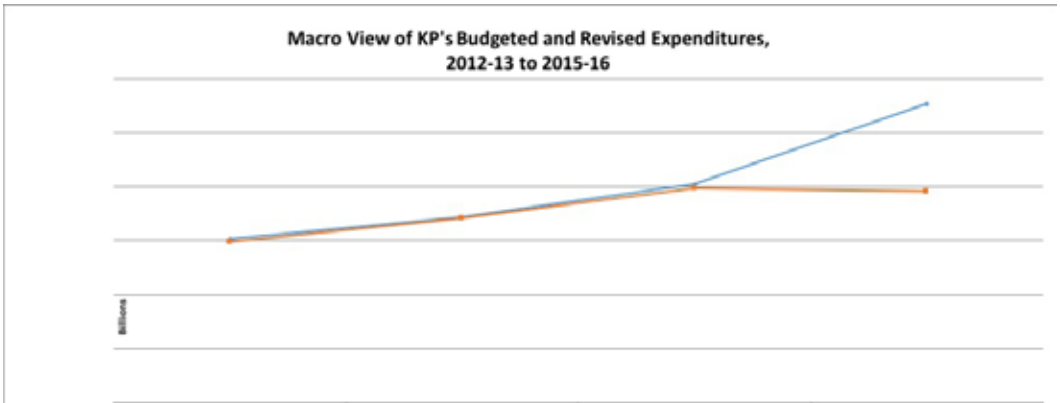
PROVINCIAL ANALYSIS

Khyber Pakhtunkhwa

Total provincial budgetary allocations and actual expenditures vs the preceding years

Total provincial budgetary allocation of Khyber Pakhtunkhwa including current and development budget for the year 2015-2016 was PKR 554.85 billion. Out of this original budget about PKR 391.75 was actually spent which was 29% less than the estimate. The spending in 2015-16 was even 2.5% less than the amount spent (about PKR 397.7 billion) in the preceding year.

During the last 4 years, provincial budgetary Khyber Pakhtunkhwa went up by an average annual growth rate of (AAGR) of 23% with the most obvious uplift of 37% in the year 2015-16. In comparison, the actual expenditures of the province grew by the average rate of 10% every year, other than 2015-16 where an unusual fall in actual expenditures was recorded. The macro view of KP's original budgets and actual expenditures from 2012-13 to 2015-16 is depicted below.



	2012-2013	2013-2014	2014-2015	2015-2016
Original	303.00	344.00	404.81	554.85
Actual	297.07	341.85	397.74	391.75

Climate Change expenditures as a Percentage of Total Expenditures

Of the total original budget allocation of PKR 554.85 billion, the total CC budget was estimated to be PKR 39.85 billion for the year 2015-16, including development and current expenditures. During the year, PKR 34.83 billion were actually spent on the CC related tasks out of total actual expenditures of PKR 391.75 billion. **This means that total CC expenditures were 8.9% of the total actual expenditure incurred during the year**.

The actual development expenditure was PKR 112.73 billion---36.7% less than the budgeted allocation of PKR 178.24 billion.In terms of percentage, the government spent 19% of the actual expenditure on climate related activities compared to the 14% estimated expenditure on this score.

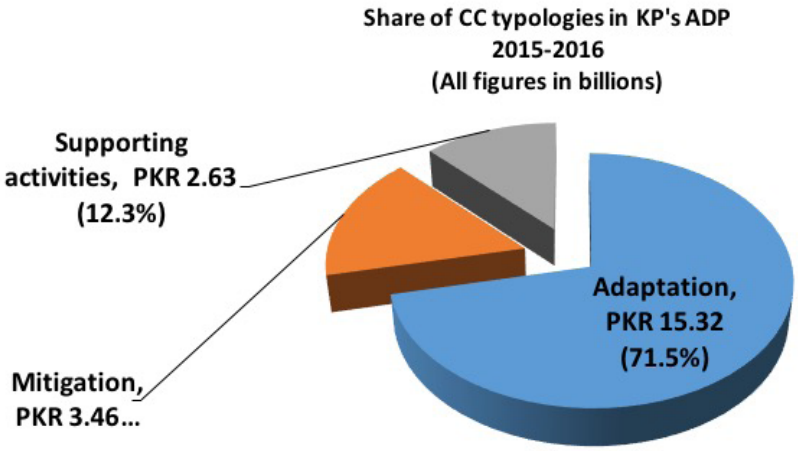
The actual current expenditure was PKR 279.02 billion against the current budget of PKR 376.6 billion (26% less than estimated). The actual CC expenditure (Current) was PKR 13.42 billion (about 5% less) compared to the CC budget allocation(Current) of PKR 14.10 billion.

Development Budget Share with Regards to Different Typologies

The CC related actual development expenditure for the three broader categories of CC,
Adaptation, Mitigation and Supporting activities during the year 2015-2016 was PKR 21.41 billion
Analysis of the 2015-16 development budget shows 'Adaptation' to be the dominant theme in KP's CC budget, making-up 71.5% (PKR 15.32 billion) of the total climate-relevant investment. The expenditures

were concentrated in the areas of water resources, disaster preparedness, health and social services and transport. 'Mitigation' emerged as the second most significant category, after adaptation in terms of the actual CC expenditure. During the year, PKR 3.46 billion (about 16.2% of actual CC expenditure in ADP) were spent on mitigation. The expenditures were concentrated in the areas of 'Town planning' and 'Energy' with carbon sequestration contributing a small share as well. .

'Supporting activities' received an allocation of around 12.3% (PKR 2.63 billion) from the development budget of 2015-16. Most of this allocation was used up in awareness raising & education etc.

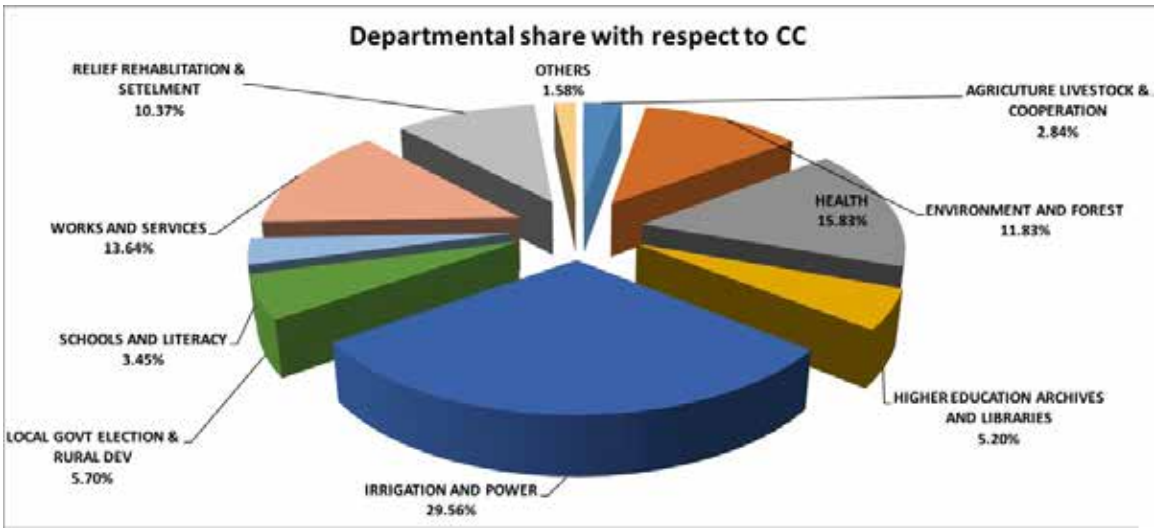


Departmental shares with respect to CC

There are 22 departments in total and out of them 18 have been allocated share of CC expenditures.

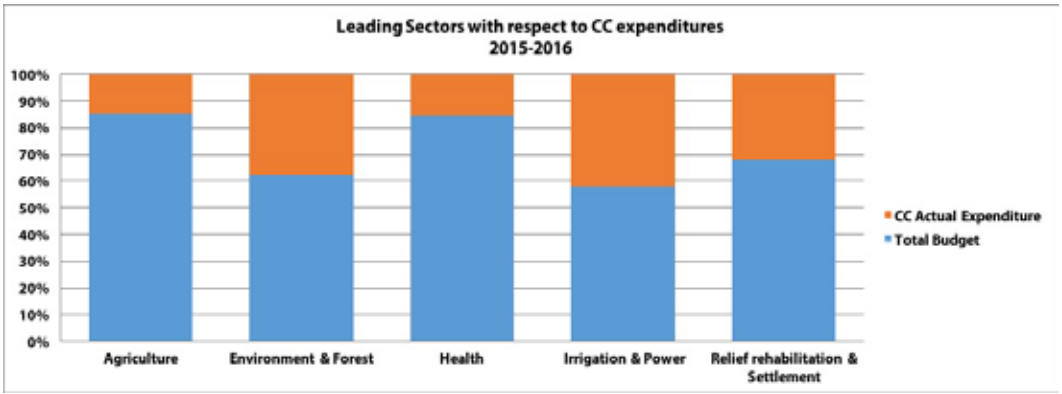
The total budget allocation including the development and current budget (CC relevant department budget only) was PKR 288.61 billion against which an amount of PKR 34.83 billion was actually spent on CC activities by all the departments.

DShares of major departments in CC expenditure are shown in the pie chart below:



Leading sectoral allocations with respect to CC

The sectors with a high CC share in their respective budgets have been identified by comparing the actual amount spent on CC by the sector against their budget allocations.



Number and percentage of CC related projects

Climate-related projects of KP in 2015-16 make up 82% of the total development projects. Total number of projects in the year were 5,275 and 4,322 of them were related to CC. This suggests that climate-relevant projects and investments are common and widely spread across the provincial government's portfolio.

3 departments had 99% of their projects related to CC. 'Health' department had 313 projects in total and 310 related to CC. 'Higher education' department had 246 (out of 249) projects related to CC. In 'School and Literacy' department about 318 out of 330 projects were initiated to benefit the three themes of CC.

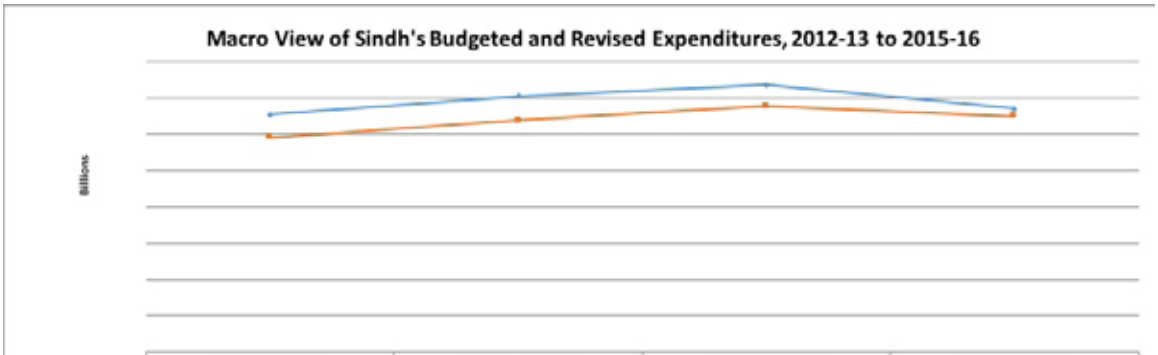
The two major departments with 98% of their projects related to CC were 'Environment and Forest' and 'Irrigation and Power' with 213 out of 217 and 649 out of 663 projects related to CC activities respectively. In 'Agriculture Livestock', 312 projects were related to CC which makes up about 97% of the total number of 322 projects. 'Relief rehabilitation & Settlement' had 71 out of the 75 projects related to CC (95%). 'Food department' had 45 out of 48 (94%) projects related to CC.

Most of climate change related projects belonged to the sector 'Works and Services'. About 1351 projects belonged to this sector and out of these 1046 (77%) were related to the CC themes. 'Population welfare' department had a total of 62 projects and out of them 55 (89%) projects were CC related. The department with least of its projects related to CC tasks was 'Information and public relation' and 2 out of its 13 projects (15%) were CC relevant.

II. SINDH

Total Provincial Budgetary Allocations and Actual Expenditures vs Preceding Years

Total provincial budgetary allocation for both current and development budget for 2015-2016 was PKR 670 billion. Against this provision, an amount of PKR 649 billion was actually spent. The spending was 3% less than the original estimate. In terms of expenditure, the province spent 4% less in 2015-2016 compared to financial year 2014-15 in which it spent 677 billion. During the last 4 years, provincial budget increased by an average annual growth rate (AAGR) of 1% after taking into account the fall in budgetary allocation of 9% in the year 2015-16. Actual expenditure, to the contrary, grew 3% annually except for the year 2015-16 in which the expenditure went down by around 4%. The figure shows the trend of budget and expenditure in the past four years.



	2012-2013	2013-2014	2014-2015	2015-2016
Original	654	704	735	670
Actual	591	638	677	649

Climate Change expenditures as a Percentage of Total Expenditures

Of the total original budget allocation of PKR 670 billion in 2015-16, the total budget relatable to CC (both development and current sides) was PKR 63 billion. Against this, an amount of PKR 47 billion was actually spent on the CC related activities out of the total actual spending of PKR 649 billion. **This means 7.2% of the actual expenditure in 2015-16 was related to CC.**

The budget allocated PKR 142 billion for development against which the province actually spent 100 billion or 30% less than the allocation. The share of CC related activites in actual development spending worked out to be PKR 12.2 billion (12.3% of development budget) as opposed to the target amount of PKR 19 billion (13.4%). The budget allocated PKR 528 billion for current expenditure against which the government actually spent PKR 550 billion or 4% more than the original budget. The actual CC expenditure (Current) was PKR 35 billion (about 21% less) in contrary to the CC budget (Current) of PKR 44 billion.

Development Budget Share with regards to Different Typologies

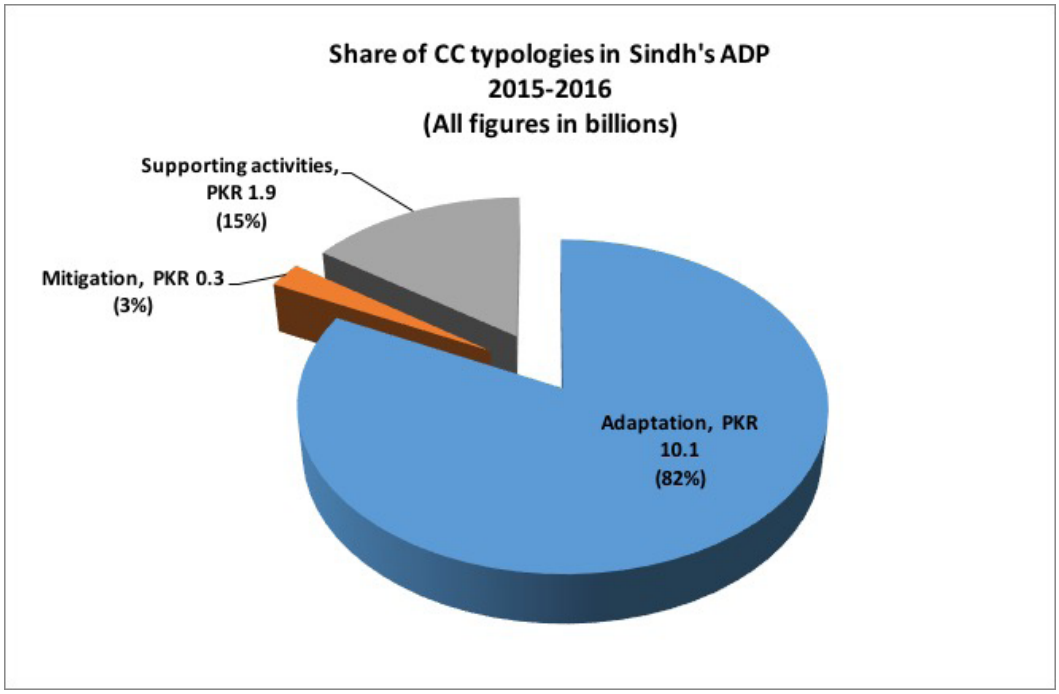
The CC related actual development expenditure for the three broader categories of CC,

Adaptation, Mitigation and Supporting activities during the year 2015-2016 was PKR 12.2 billion

Analysis of the 2015-16 development budget shows 'Adaptation' to be the dominant theme in Sindh's CC budget, making-up 82% (PKR 10 billion) of the total climate-relevant investment. This expenditure was concentrated in the areas of water resources, disaster preparedness, health and social services and transport.

Unlike other provinces, 'Supporting activities' theme emerged as the second most significant theme in Sindh, after adaptation in terms of the actual CC expenditure. During the year PKR 1.9 billion (about 15% of actual CC expenditure in ADP) were spent on the activities related to this theme. This was contributed predominately by awareness raising & education.

The CC 'Mitigation' theme appeared to be the lowest one in terms of CC expenditures with the spending of around 3% (PKR 0.3 billion) from the actual CC expenditures. Major contribution to this response theme was from the 'Town planning' and 'Energy' etc**.**



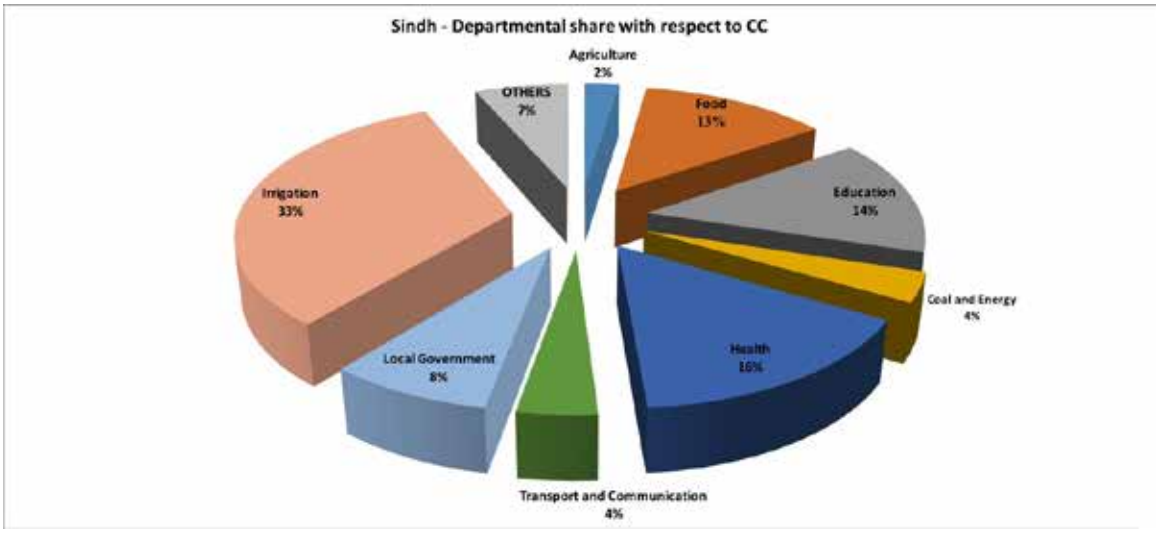
Departmental Shares with respect to CC

There are 21 departments in total which have been allocated the share of CC.

The total budget allocation including the development and current budget (CC relevant only) was PKR 448 billion. PKR 47 billion were actually spent on CC activities by all the departments. 'Irrigation' department contributed to 33% of the actual CC expenditure by spending PKR 15.3 billion for the purpose. 'Health' and 'Education' departments are also 2 major departments who have spent about PKR 7.2 billion (16%) and PKR 6.74 billion (14%) respectively towards the CC themes.

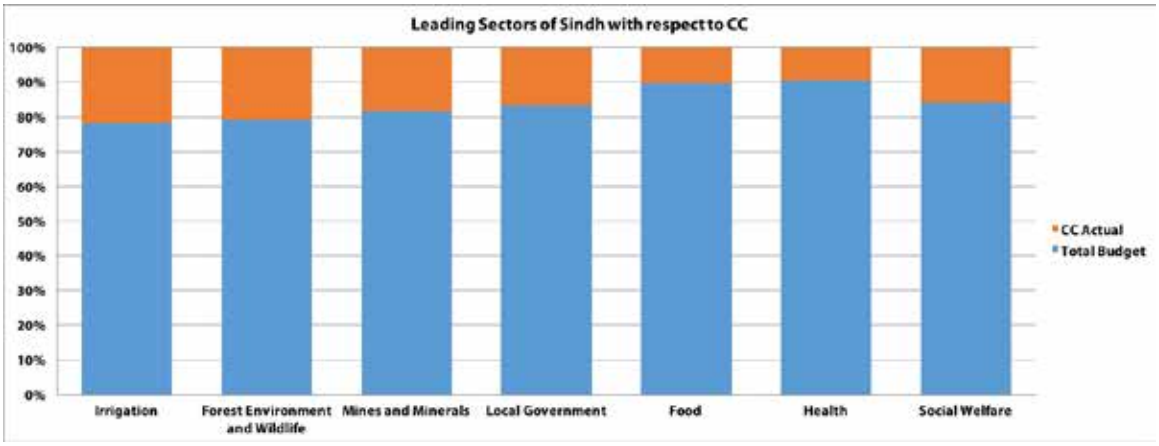
The other departments in terms of their major share in CC expenditures were 'Food' with annual spending of PKR 6.13 billion (13%), 'Local government' with spending of PKR 3.78 billion (8%), 'Coal and Energy" with its investment in CC of PKR 1.68 billion (4%), 'Transport and communication' with its share of PKR 1.84 billion (4%) and 'Agriculture' with actual CC expenditures of PKR 1.15 billion (3%). All the departments with 1% or less share in CC related actual expenses have been aggregated together as 'Others' in the pie chart (Figure 3) below which involves; 'Planning and development', 'Population welfare', 'Public health, 'Forest environment and wildlife, Livestock and fisheries', 'Mines and minerals' and 'Industries' etc. It is pertinent to note that 'Information science & technology' and 'Tourism' departments only spent PKR 4 million (0.01%) and PKR 24 million (0.05%) respectively towards the CC cause.

Detail of the departmental shares of major departments has been shown in the pie chart below:



Leading Sectoral Allocations with respect to CC

The sectors with a high CC share in their respective budgets have been identified by comparing the actual amount spent on CC by the sector against their budget allocations.



Number and percentage of CC related projects

The provincial Annual Development Plan (ADP) covers development projects in a wide range of sectors. Climate-related projects of Sindh in 2015-16 make up 82% of the total development projects. Total number of projects in the year were 2,047 and 1,685 of them were related to CC, however, the level of relevance varied.

3 departments had 100% of their projects related to CC. 'Forest environment and wildlife' department had 15 projects all related to CC. 'Food' department had 2 projects both related to CC. Similarly, In 'Cooperative' department only 1 project was initiated to benefit the three themes of CC.

Four major departments with most of their projects related to CC were 'Education' having 94% (183 out of 195), 'Health' having 97% (116 out of 120), 'Irrigation' having 95% (307 out of 324) and 'Transport and communication' having 98% (603 out of 618) of their projects dedicated to CC. In 'Agriculture', 28 projects were related to CC which makes up about 90% of the total number of 31 projects. 'Livestock and fisheries' had 27 out of the 28 projects related to CC (96%). 'Social welfare' had 6 out of 7 (86%) projects related to CC tasks.

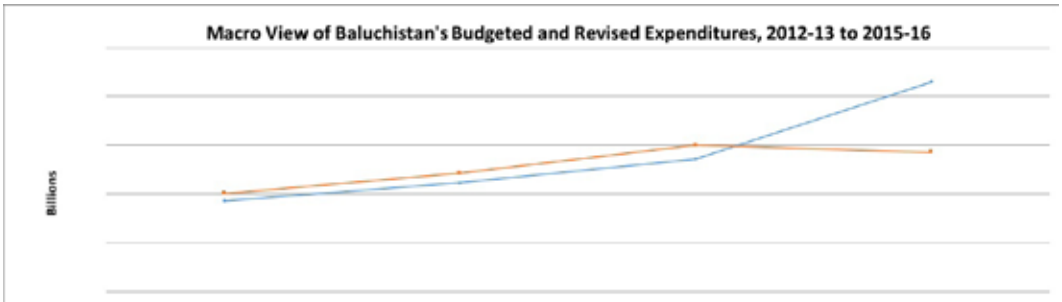
Out of the remaining sectors, most of climate change related projects belonged to the sector 'Local government'. About 338 projects belonged to this sector and out of these 225 (67%) were related to the CC themes. 'Public health' department had a total of 200 projects and out of them 115 (58%) projects were CC relevant. The department with least of its projects related to CC tasks was 'Tourism' and 6 out of its 67 projects (9%) were CC relevant.

III. Balochistan

Total Provincial Budgetary Allocations and Actual Expenditures vs the Preceding years

Total provincial budgetary allocation of Baluchistan including current and development budget for the year 2015-2016 was PKR 265 billion. Against this provison, about PKR 192.6 billion---or 27% less than the provision was actually spent. The spending in 2015-16 was even 4% less than the amount spent (about PKR 199.6 billion) in year 2014-2015.

During the last 4 years, provincial budgetary allocation of Baluchistan went up by an average annual growth rate of (AAGR) of 24% with the most obvious uplift of 43% in the year 2015-16. In comparison, the actual expenditures of the province ggrew 9% every year, other than 2015-16 in which an unusual fall in actual expenditure was recorded. The macro view of Baluchistan's original budgets and actual expenditures over the past 4 years can be seen in the line chart below:



	2012-2013	2013-2014	2014-2015	2015-2016
Original	143.00	161.20	185.80	265.00
Actual	150.40	171.00	199.60	192.60

Climate Change expenditures as a percentage of total expenditures

Of the total original budget allocation of PKR 264,970 billion, the CC budget was estimated to be PKR 34.69 billion for the year 2015-16, including development and current expenditures. During the year, PKR 23.12 billion were actually spent on the CC related tasks out of total actual expenditures of Rs 192.60 billion. **This means that total CC expenditures were 12% of the total actual expenditure incurred during the year**.

The actual development expenditures appeared to be 19% less than development budget i-e PKR 60.54 billion compared to the budgeted allocation of PKR 74.5 billion. The share of CC related expenditure in this pie was PKR 12.81 billion which is 21.2% of actual expenditure against development budget.

The actual current expenditure was PKR 132.1 billion against the current budget of PKR 190.5 billion (31% less than estimated). The actual CC expenditure (Current) was PKR 10.31 billion, about 46% less than the original CC budget allocation of PKR 19.05 billion.

Development Budget Share with regards to different typologies

The CC related actual development expenditures for the three broader categories of CC i.e

Adaptation, Mitigation and Supporting activities was PKR 12.81 billion.

Analysis of the 2015-16 development budget shows 'Adaptation' to be the dominant theme in Baluchistan's CC budget, making-up 82% (PKR 10.51 billion) of the total climate-relevant investment. Adaptation expenditure mainly constituted tasks involving water resources, transport, health & social services, and disaster preparedness.

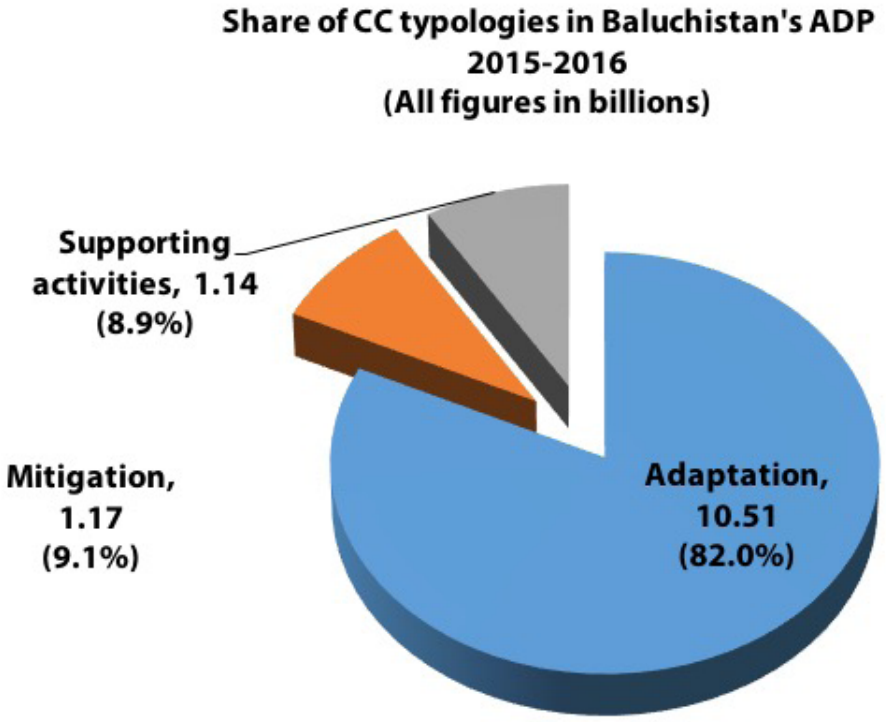
'Mitigation' theme emerged as the second most significant, after adaptation in terms of the actual CC expenditure. During the year PKR 1.17 billion (about 9.1% of actual CC expenditure in ADP) were spent on the activities related to this theme. Major contribution to this response theme was from the 'Town planning' and 'Energy' etc.

'Supporting activities' related expenditure received the lowest allocation of around 8.9% from the development budget of 2014-15. This was mostly contributed by activities Water resources and Transport etc.

Departmental Shares with respect to CC

There are 20 departments in total and out of them 18 have been allocated share of CC. There are 2 departments; 'Home' and 'Law department' who have not been assigned anything for CC purposes.

The total budget allocation including the development and current budget (CC relevant only) was PKR 185.6 billion. PKR 23.12 billion were actually spent on CC activities by all he departments. 'Irrigation & Power' department has



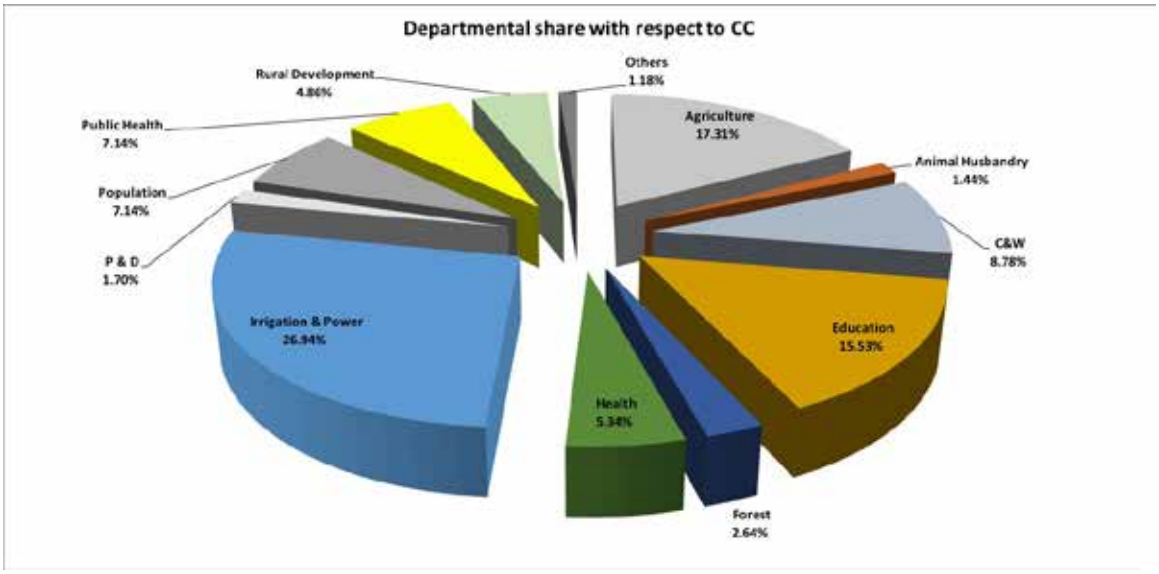
contributed to 26.94% of the actual CC expenditure by spending PKR 6.23 billion for the purpose. 'Agriculture' and 'Education' are also 2 major departments who have spent about PKR 4.0 billion (17.31%) and PKR 3.59 billion (15.53%) respectively towards the CC themes.

The other 3 major departments in terms of their share in CC expenditures are 'C & W', 'Population' and 'Public Health' with annual spending of PKR 2.03 billion (8.78%) by 'C & W', and PKR 1.65 billion (7.14%) for each of the other 2 departments. All the departments having less than 1% share in CC related actual expenses have been aggregated together as 'Others' in the pie chart (Figure 3) below which involves; Fisheries, Industries, Lab and Man power, Mines and Minerals, social Welfare and sports & recreation etc. It is pertinent to note that 'Inform Technology' has spent nothing towards the CC cause.

Detail of the departmental shares of major departments has been shown in the pie chart below (Figure 3)

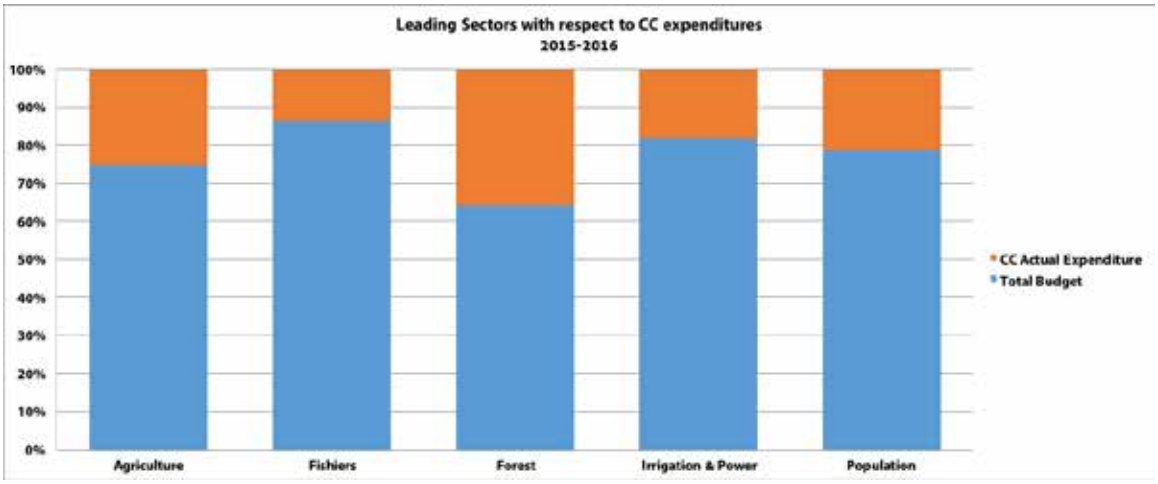
Leading Sectoral Allocations with respect to CC

The sectors with a high CC share in their respective budgets have been identified by comparing the actual amount spent on CC by the sector against their budget allocations.



Number and percentage of CC related projects

The provincial Annual Development Plan (ADP) covers development projects in a wide range of sectors. Climate-related projects in 2015-16 make up 82% percent of the total development projects. Total number of projects in the



year were 3,544 and 2,890 of them were related to CC. This suggests that climate-relevant projects and investments are common and widely spread across the provincial government's portfolio.

'Forest' department had 53 projects all related to CC and with a high relevance to CC. 'Irrigation & Power' department had 328 (out of 464) projects related to CC with high relevance percentage of 70%. In 'Agriculture' about 96% (318 out of 330) projects were initiated to benefit the three themes of CC. Again the agriculture projects highly relevant to CC was high (49%).

In 'Public Health', 355 projects were related to CC which makes up about 96% of the total number of 370 projects in this sector and the relevance of projects to CC was medium (26%). 'Population' had 169 out of the 201 projects related to CC (84%) with medium relevance (32%) to CC activities. 'Fisheries' with 28% medium relevance had 8 out of 11 projects related to CC.

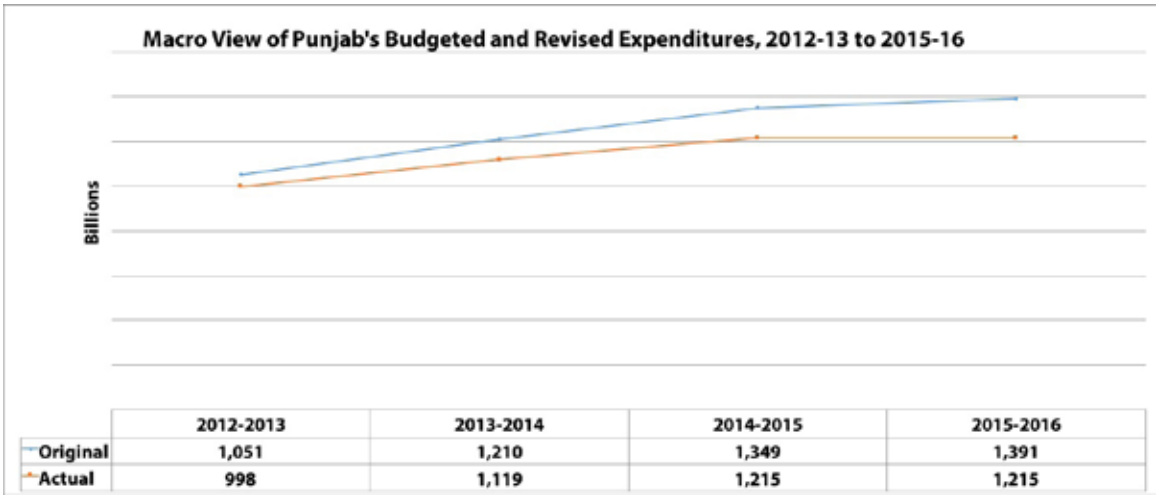
Most of climate change related projects belonged to the sector 'Education'. About 643 projects belonged to this sector and out of these 579 (90%) were related to the CC themes but their relevance was low with only CC 11% CC relevant.

III. PUNJAB

Total Provincial Budgetary Allocations and Actual Expenditures vs Preceding Years

Total provincial budgetary allocation for current and development budget for the year 2015-2016 was PKR 1,391 billion. Out of this, about PKR 1,215 billion—or 13% less than the original allocation was actually spent. During the last 4 years, provincial budget increased 10% per annum except for the year 2015-16 where the increase recorded in budget was only 3% compared to the year 2014-15. Actual expenditure against the budget during 2011-12 to 2013-14 increased around 6.9% annually. The amount spent during the year 2015-2016, however, remained at the same level that was registered for 2014-15 i.e. PKR 1,215 billion.

The macro view of Punjab's original budgets and actual expenditures over the past 4 years can be seen in the line chart below:



	2012-2013	2013-2014	2014-2015	2015-2016
Original	1,051	1,210	1,349	1,391
Actual	998	1,119	1,215	1,215

Climate Change Expenditures as a Percentage of Total Expenditures

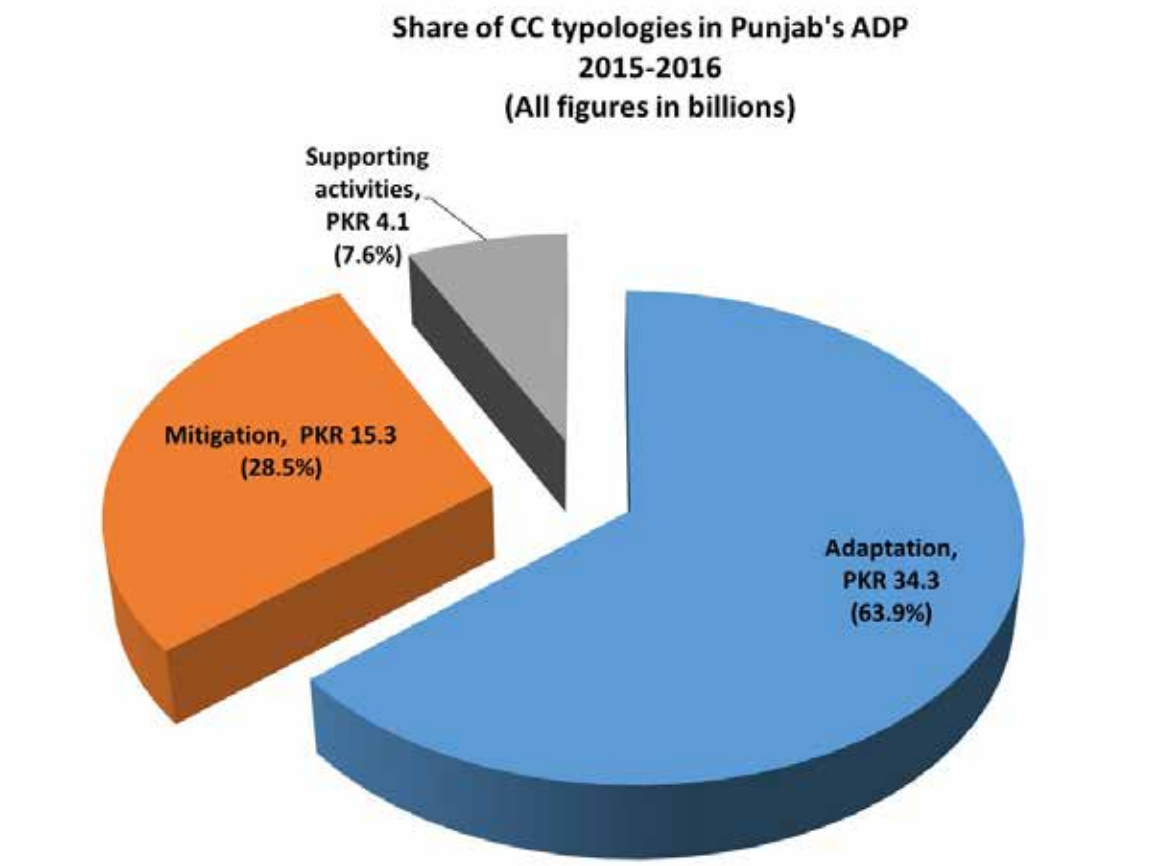
Of the total original budget allocation of PKR 1,391 billion the total CC budget was estimated to be PKR 205 billion for the year 2015-16, including development and current expenditures. During the year, PKR 167 billion were actually spent on the CC related tasks out of total actual expenditures of PKR 1,215 billion. **This means that total CC expenditures were 13.7% of the total actual expenditure incurred during the year**.

The actual development expenditures appeared to be 8% less than development budget i-e PKR 328 billion compared to the budgeted allocation of PKR 355 billion. However, the Government of Punjab still managed to spend more than the planned development budget on climate related activities (16.4% of actuals instead of 15.4% of budget).

The actual current expenditure was PKR 887 billion against the current budget of PKR 1,036 billion (14% less than estimated). The actual CC expenditure (Current) was PKR 113 billion (about 25% less) in contrary to the CC budget (Current) of PKR 151 billion.

Development Budget Share with regards to Different Typologies

The CC related actual development expenditure for the three broader categories of CC,
Adaptation, Mitigation and Supporting activities during the year 2015-2016 was PKR 53.7 billion.
Analysis of the 2015-16 development budget shows 'Adaptation' to be the dominant theme in Punjab's CC budget, making-up 63.9% (PKR 34.3 billion) of the total climate-relevant investment. This budget mainly went into water resources, disaster preparedness, health and social services and transport.
'Mitigation' theme emerged as the second most significant, after adaptation in terms of the actual CC expenditure. During the year PKR 15.3 billion (about 28.5% of actual CC expenditure in ADP) were spent on the activities related to this theme. 'Town planning' and 'Energy' were major sectors receiving funds under this theme with carbon sequestration getting comparatively small share.
The CC 'Supporting activities' theme has emerged as the lowest one in terms of budgetary allocations in year 2015-16 getting only 7.6% (PKR 4.1 billion) from the development budget. The funds under this category were largely meant for awareness raising & education and capacity building and institutional strengthening etc.

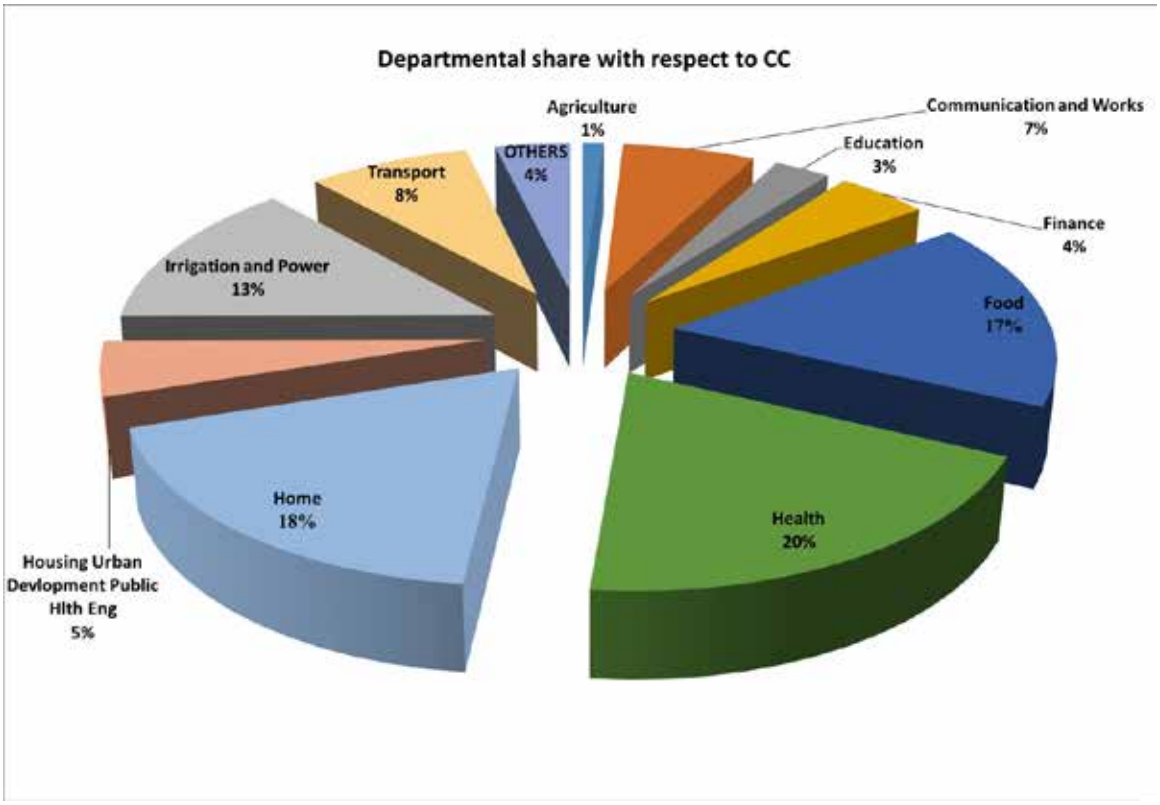


Departmental shares with respect to CC

There are 24 departments in total which have been allocated the share of CC.

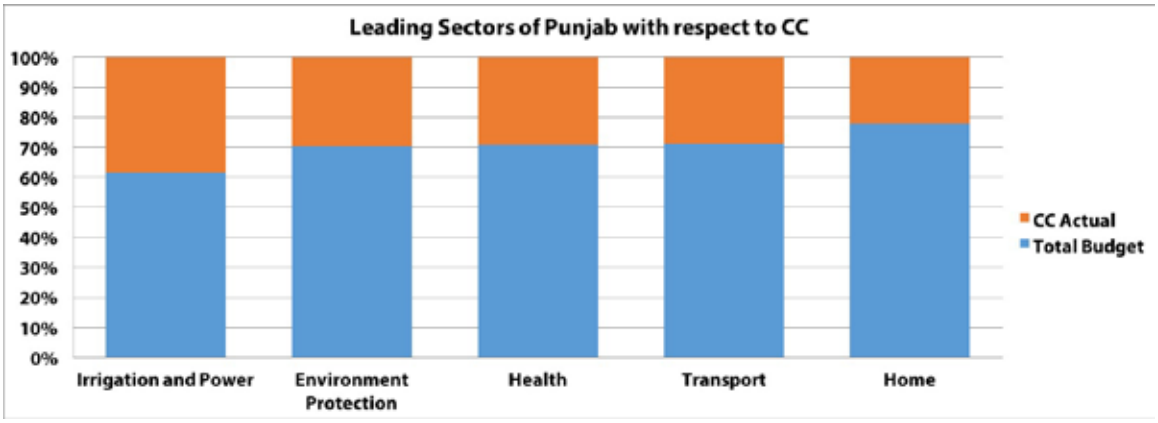
The total budget allocation including the development and current budget (CC relevant only) was PKR 1,338 billion. PKR 167 billion were actually spent on CC activities by all the departments. 'Health department contributed to 20% of the actual CC expenditure by spending PKR 32.86 billion for the purpose. 'Home' and 'Food' departments are also 2 major departments who have spent about PKR 30.7 billion (18%) and PKR 28.32 billion (17%) respectively towards the CC themes.

The other departments in terms of their major share in CC expenditures were 'Irrigation and Power' with annual spending of PKR 22.24 billion (13%), 'Transport' with spending of PKR 13.36 billion (8%), 'Communication and works' with its investment in CC of PKR 10.99 billion (7%), 'Housing urban development public health' with its share of PKR 8.17 billion (5%), 'Finance 'with its share of PKR 7.58 billion (5%) , 'Education' with its share of PKR 4.66 billion (3%) and 'Agriculture' with annual spending of PKR 1.73 billion (1%). All the departments having less than 1% share in CC related actual expenses have been aggregated together as 'Others' in the pie chart (Figure 3) below which involves; 'Planning and development', 'Population welfare', 'Livestock and dairy development', 'Forestry, wildlife and fisheries',



'Environment protection' etc. It is pertinent to note that 'Social welfare' and 'Youth affairs' only spent PKR 6 million (0.004%) and PKR 3 million respectively towards the CC cause.

Detail of the departmental shares of major departments has been shown in the pie chart below:



Leading Sectoral Allocations with respect to CC

The sectors with a high CC share in their respective budgets have been identified by comparing the actual amount spent on CC by the sector against their budget allocations.

The provincial Annual Development Plan (ADP) covers development projects in a wide range of sectors. Climate-related projects of Punjab in 2015-16 make up 64% of the total development projects. Total number of projects in the year were 6,948 and 4,428 of them were related to CC. This ratio is less as compare to the other provinces like KP and Baluchistan.

3 departments had 100% of their projects related to CC. 'Population welfare' department had 64 projects all related to CC. 'Environment protection' department had 3 out of 3 projects related to CC. Similarly, In 'Cooperatives' department all 3 projects were initiated to benefit the three themes of CC.

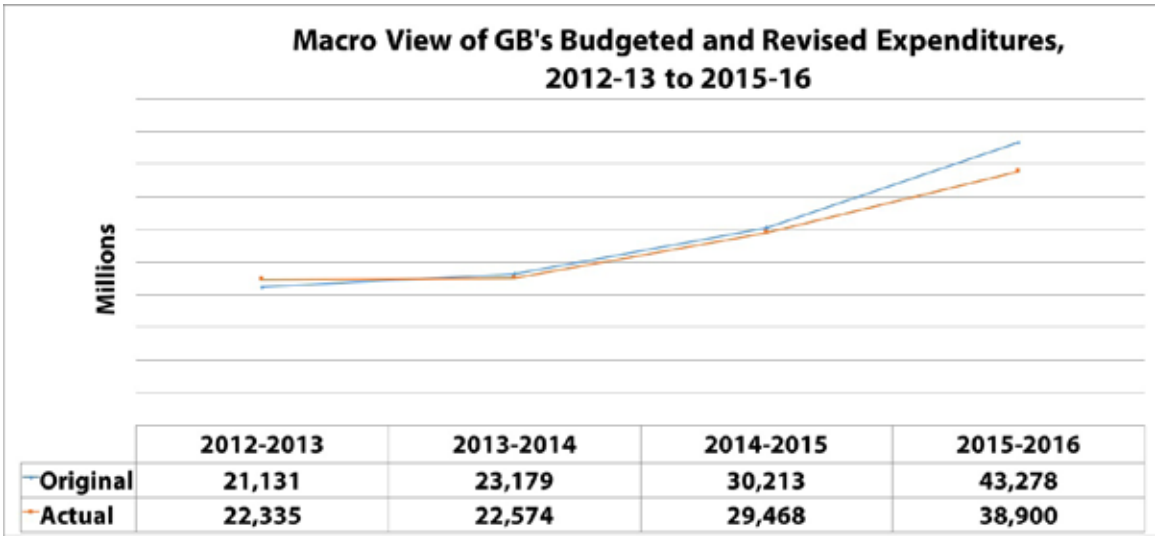
The three major departments with most of their projects related to CC were 'Education' having 98% (311 out of 318), 'Health' having 97% (232 out of 239) and 'Irrigation and power' having 96% (249 out of 259) of their projects dedicated to CC. In 'Agriculture', 42 projects were related to CC which makes up about 95% of the total number of 45 projects. 'Finance' had 83 out of the 89 projects related to CC (93%). 'Social welfare' had 9 out of 10 (90%) projects related to CC tasks.

Most of climate change related projects belonged to the sector 'Communication and works'. About 2818 projects belonged to this sector and out of these 1681 (60%) were related to the CC themes. 'Housing urban development' department had a total of 1615 projects and out of them 1134 (70%) projects were CC relevant. The department with least of its projects related to CC tasks was 'Youth affairs, sports' and 3 out of its 196 projects (2%) were CC relevant.

V. Gilgit Baltistan

Total Provincial Budgetary Allocations and Actual Expenditures vs the Preceding Years

Total provincial budgetary allocation of Gilgit Baltistan including current and development budget for the year 2015-2016 was PKR 43,278 million. Out of this original budget about PKR 38,900 million—or 10% less than the original budget was actually spent. The actual spending in 2015-2016 was 32% higher than the amount spent (about PKR 29,468 million) in year 2014-2015.



	2012-2013	2013-2014	2014-2015	2015-2016
Original	21,131	23,179	30,213	43,278
Actual	22,335	22,574	29,468	38,900

During the last 4 years, the budgetary allocation of Gilgit Baltistan went up by an average annual growth rate (AAGR) of 23% with the most obvious uplift of 43% in the year 2015-16. In comparison, the actual expenditures of GB grew by an average rate of 21.2% every year. The macro view of GB's original budgets and actual expenditures over the past 4 years can be seen in the line chart below:

Climate Change Expenditures as a Percentage of Total Expenditures

Of the total original budget allocation of PKR 43,278 million, the total CC budget was estimated to be PKR 11,619 million for the year 2015-16, including development and current expenditures. During the year, PKR 10,055 million were actually spent on the CC related tasks out of total actual expenditures of PKR 38,900 million. **This means that total CC expenditures were 26% of the total actual expenditure incurred during the year**.

The actual development expenditures appeared to be 31% less than development budget i-e PKR 9,601 million compared to the budgeted allocation of PKR 13,887 million. Of this amount, the share of CC-related expenditure was estimated at PKR 3,359. This comes to 35% of total spending against development budget.

The actual current expenditure was PKR 29,299 million against the current budget of PKR 29,391 million (only 0.3% less than estimated). The actual CC expenditure (Current) was PKR 6,696 million (almost same) in contrary to the CC budget (Current) of PKR 6,698 million.

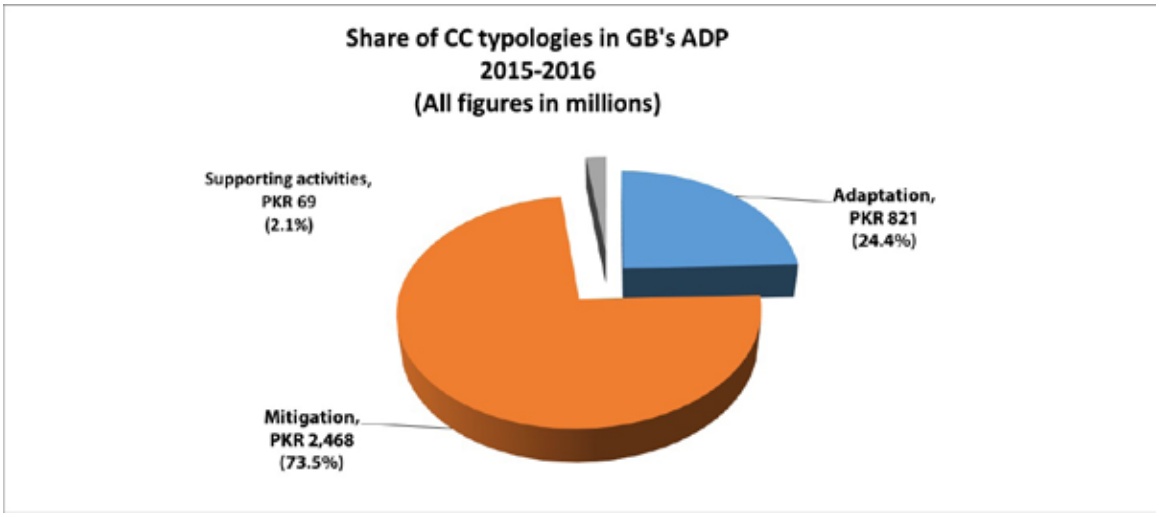
Development Budget Share with regards to Different Typologies

The CC related actual development expenditure for the three broader categories of CC,

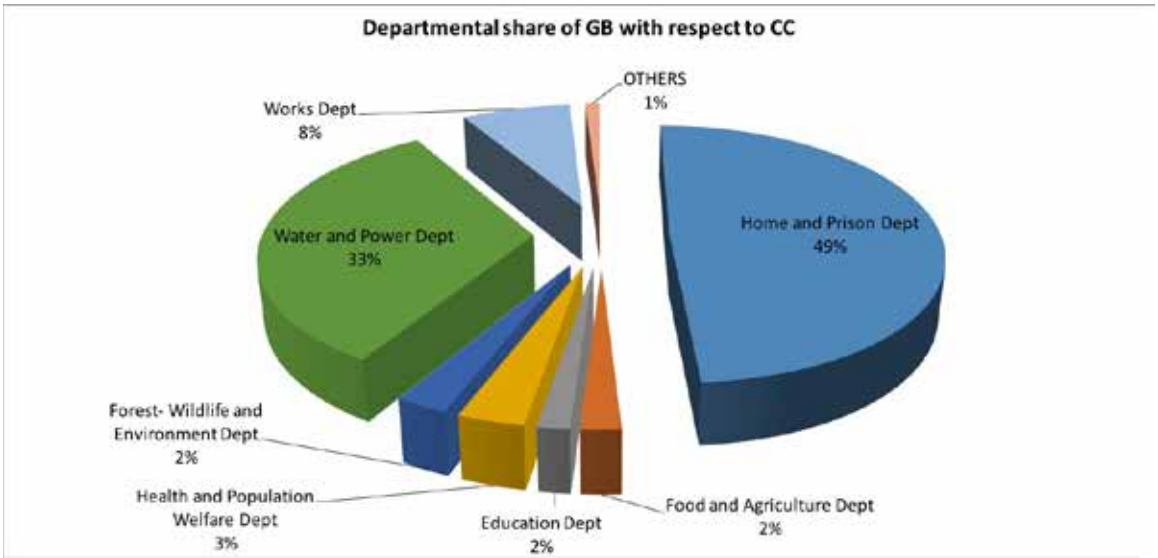
Adaptation, Mitigation and Supporting activities during the year 2015-2016 was PKR 3,359M.

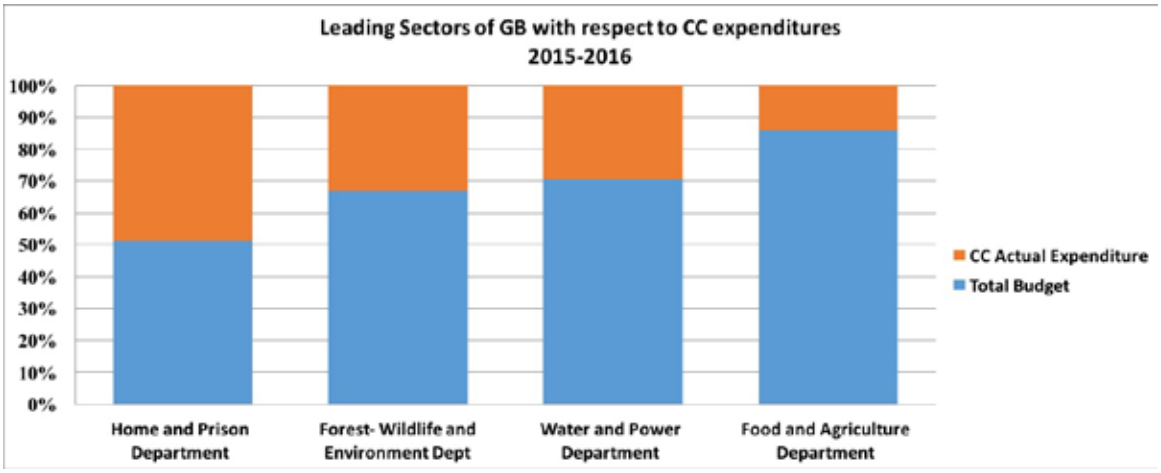
Analysis of the 2015-16 development budget shows that unlike other provinces, 'Mitigation' appeared to be the dominant theme in GB's CC budget, making-up 73.5% (PKR 2,468 million) of the total climate-relevant investments. Mitigation, the dominant theme in terms of CC expenditure, was formed mainly from tasks in Energy sector, town planning and transport etc.

'Adaptation' theme emerged as the second most significant, after mitigation in terms of the actual CC expenditure. During the year PKR 821 million (about 24.4% of actual CC expenditure in ADP) were spent on the activities related to this theme. Major contribution to this response theme was from the 'Health and social services', 'Disaster preparedness', 'Forestry' and 'Water resources' etc.



The theme with the smallest budgetary allocation i.e. 'Supporting activities' received the allocation of around 2.1% (PKR 69 million) from the development budget of 2015-16. This was contributed predominately by 'Awareness raising & education' and 'Capacity building & institutional strengthening'.





Departmental Shares with Respect to CC

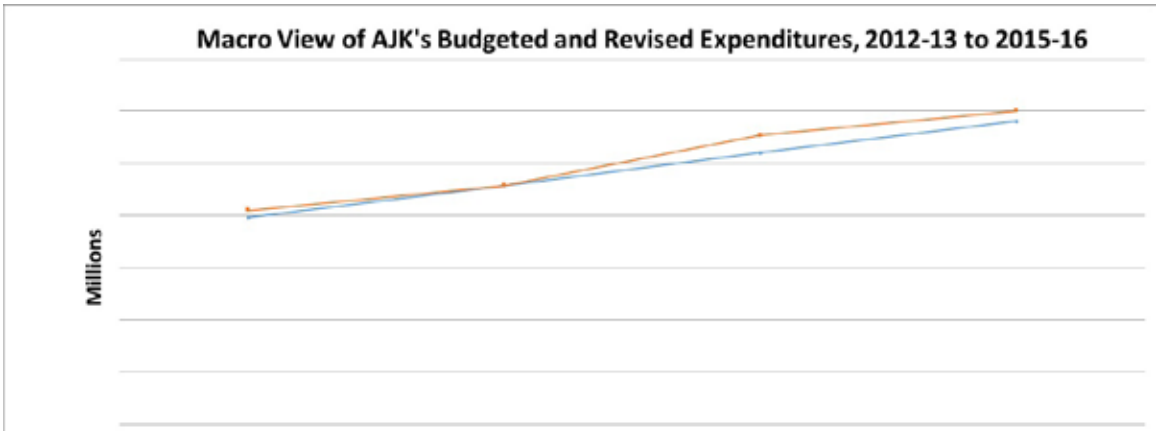
There were 10 departments in Gilgit Baltistan with share of CC-related budgets.

The total budget allocation including the development and current budget (CC relevant departments only) was PKR 33,666 million. PKR 10,055 million were actually spent on CC activities by all the departments. 'Home and Prison' department has contributed to 49% of the actual CC expenditure by spending PKR 4,929 million for the purpose. 'Water and Power' and 'Works department' are also 2 major departments who have spent about PKR 3,297 million (32.8%) and PKR 767 million (7.63%) respectively towards the CC themes.

The other departments in terms of their major share in CC expenditures are 'Food and Agriculture' with annual spending of PKR 202 million (2.01%), 'Education department' with spending of PKR 162 million (1.61%), 'Health and population welfare' with its share of PKR 334 million (3.33%) and 'Forest-Wildlife and environment department' with annual spending of PKR 261 million (2.60%). All the departments having less than 1% share in CC related actual expenses have been aggregated together as 'Others' in the pie chart (Figure 3) below which involves; 'Planning & development ', 'Local Govt. Rural Dev. and Census', 'Minerals, Industries, Commerce'.

Leading Sectoral Allocations with Respect to CC

The sectors with a high CC share in their respective budgets have been identified by comparing the actual amount spent on CC by the sector against their budget allocations.



	2012-2013	2013-2014	2014-2015	2015-2016
Original	49,597	55,685	62,000	68,000
Actual	50,952	55,685	65,306	69,985

Number and Percentage of CC Related Projects:

The provincial Annual Development Plan (ADP) covers development projects in a wide range of sectors. Climate-related projects of GB in 2015-16 make up 74% of the total development projects. Total number of projects in the year were 1,144 and 843 of them were related to CC. This suggests that climate-relevant projects and investments are common and widely spread across GB's portfolio.

Forest-Wildlife and environment department had 26 project and all of them were related to CC (100%). 'Health and population welfare' department had 114 projects in total and 113 related to CC (99%). 'Food and agriculture' department had 80 (out of 83) projects related to CC (96%). In 'Education' department about 90% (108 out of 120) projects were initiated to benefit the three themes of CC.

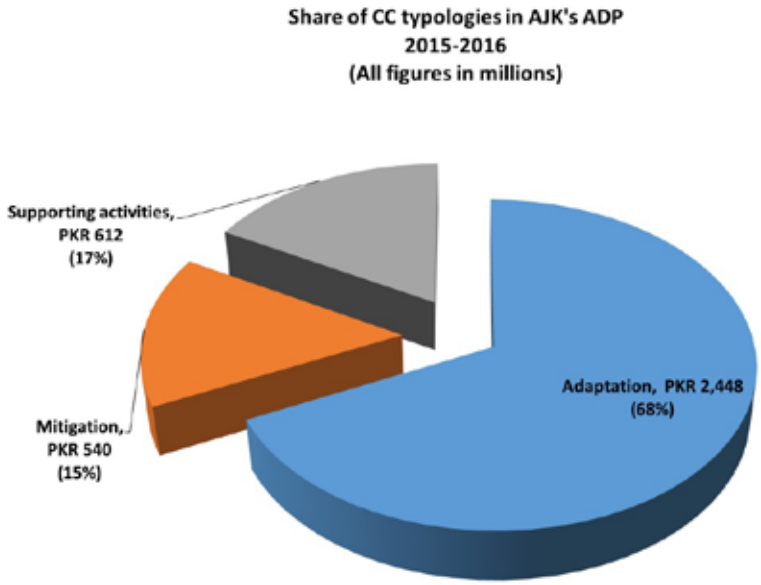
In 'Water and Power', 88 projects were related to CC which makes up about 75% of the total number of 118 projects. Most of climate change related projects belonged to the 'Works department'. About 571 projects belonged to this sector and out of these 402 (70%) were related to the CC themes. 'Planning and development' department had a total of 26 projects and out of them 13 (50%) projects were CC related. The department with least of its projects related to CC tasks was 'Minerals, Industries, Commerce' and 2 out of its 26 projects (8%) were CC relevant.

VI: AJK

Total Provincial Budgetary Allocations and Actual Expenditures vs the Preceding Years

Total provincial budgetary allocation of Azad Jammu and Kashmir including current and development budget for the year 2015-2016 was PKR 68,000 million. Against this, PKR 69,985 million—or 3% more than the budget estimate was actually spent. The actual spending during the year 2015-2016 was 7.2% higher than the amount spent in the year 2014-2015 (about PKR 65,306 million).

During the last 4 years, provincial budget of AJK increased by an average annual growth rate (AAGR) of 11% with the uplift in budgetary allocation of 10% in the year 2015-16. In comparison, the actual expenditures of the AJK went up by the average rate of 11% every year, taking into account a noticeable increase of 17% in actual expenditures in year 2014-15. The macro view of AJK's original budgets and actual expenditures over the past 4 years can be seen in the line chart below:

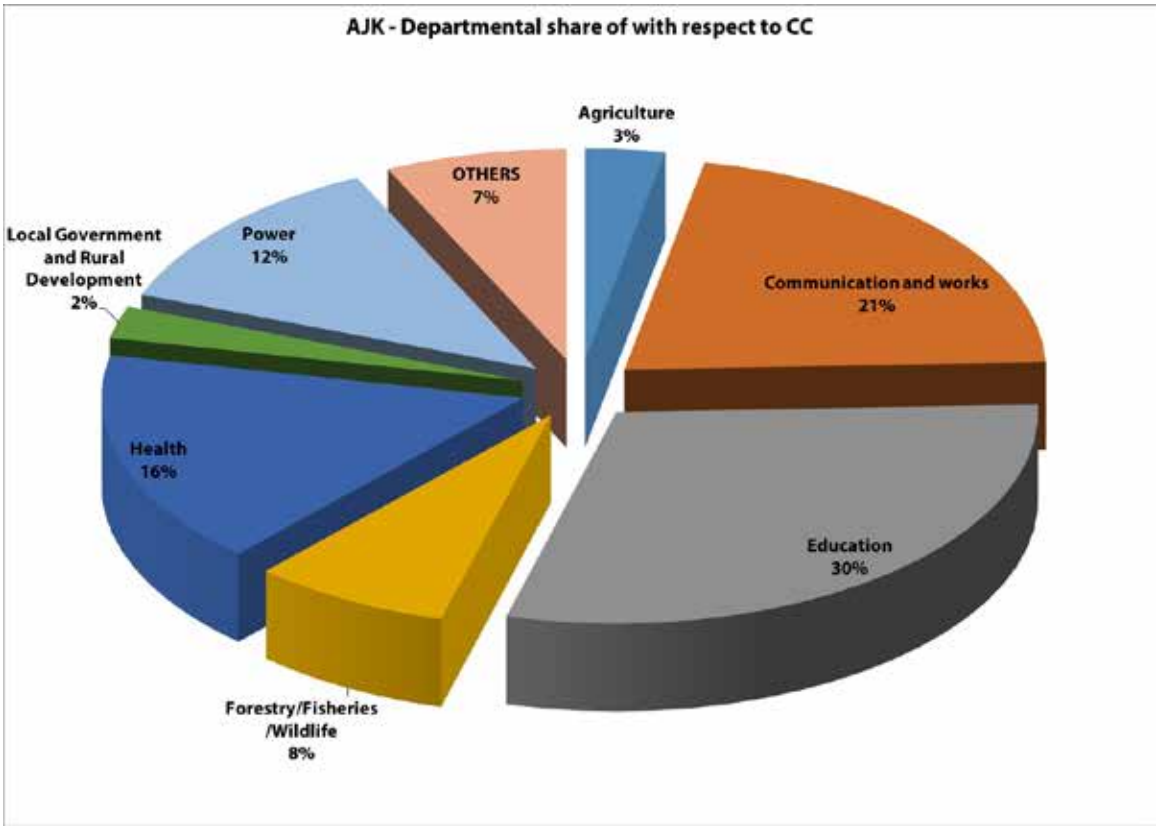


Climate Change Expenditures as a Percentage of Total Expenditures

Of the total original budget allocation of PKR 68,000 million, the total CC budget was estimated to be PKR 14,204 million for the year 2015-16, including development and current expenditures. During the year, PKR 10,128 million were actually spent on the CC related tasks out of total actual expenditures of PKR 69,985 million. **This means that total CC expenditures were 14.4% of the total actual expenditure incurred during the year**.

The actual development expenditure appeared to be 10% less than development budget i-e PKR 10,370 million compared to the budgeted allocation of PKR 11,500 million. However, the Government of AJK still managed to spend PKR 3,600 million against the estimated expenditure of PKR 3,106 million on CC related activities. Thus, despite sizable cut in actual development budget, the government managed to spend more in both absolute and percentage terms against development budget on CC related activities.

The actual current expenditure was PKR 59,615 million against the current budget of PKR 56,500 million (6% more than estimated). The actual CC expenditure (Current) was PKR 6,528 million (about 41% less) in contrary to the CC budget (Current) of PKR 11,098 million.



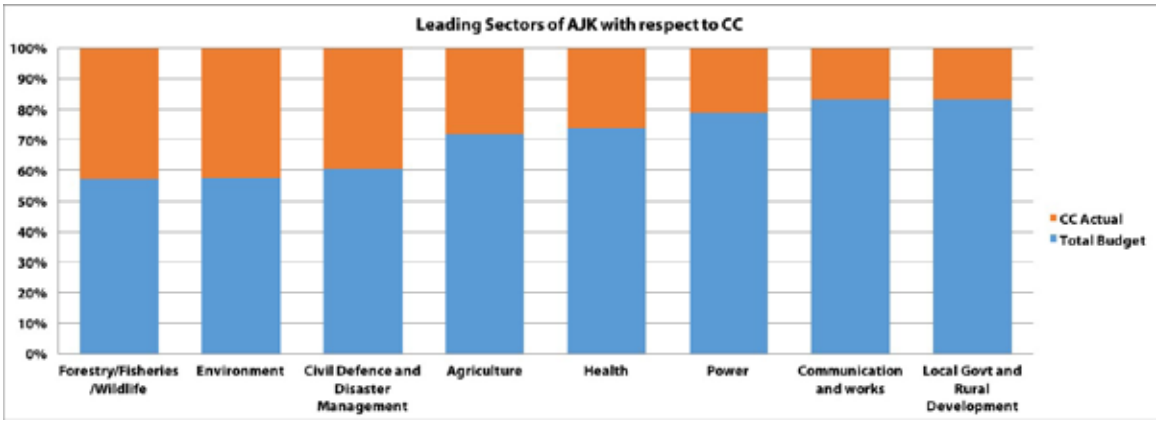
Development Budget Share with regards to Different Typologies

The CC related actual development expenditure for the three broader categories of CC,

Adaptation, Mitigation and Supporting activities during the year 2015-2016 was PKR 3,600 million..

Analysis of the 2015-16 development budget shows 'Adaptation' to be the dominant theme in AJK's CC budget, making-up 68% (PKR 2,448 million) of the total climate-relevant investment. Adaptation, the dominant theme in terms of expenditure, was formed mainly from tasks in water resources, disaster preparedness, health and social services and transport, biodiversity etc.

'Supporting activities' theme emerged as the second most significant in AJK after adaptation in terms of the actual CC expenditure. During the year PKR 612 million (about 17% of actual CC expenditure in ADP) were spent on the



activities related to this theme. This was contributed predominately by 'awareness raising & education' and 'capacity building and institutional strengthening'.

The CC 'Mitigation' theme appeared to be the lowest one in terms of CC expenditures with the spending of around 15% (PKR 540 million) from the actual CC expenditures. Major contribution to this response theme was from the town planning, transport, energy and carbon sequestration and forestry etc.

2015-2016				
		Billions	Billions	%
Sr No	Province/Territory	Actual Expenditures	CC Actual Expenditures	CC Exp as % of Toal Exp
1	Federal	4,166	272	6.5%
2	Punjab	1,215	167	13.7%
3	Khyber Pakhtunkhwa	392	35	8.9%
4	Baluchistan	193	23	11.9%
5	Sindh	649	47	7.2%
6	Gilgit Baltistan	39	10	25.6%
7	Azad Jammu and Kashmir	70	10	14.3%
8	FATA	49	5	10.2%
TOTAL		6,773	569	8.4%

Departmental Shares with respect to CC

There are 15 departments with CC-related budget.

The total budget allocation including the development and current budget (CC relevant only) was PKR 50,191 million. PKR 10,128 million was actually spent on CC activities by all the departments. 'Education' department contributed to 30% of the actual CC expenditure by spending PKR 3,022 million for the purpose. 'Communication and works' and 'Health' departments are also 2 major departments who have spent about PKR 2,171 million (21%) and PKR 1,670 million (16%) respectively towards the CC themes.

The other departments in terms of their major share in CC expenditures were 'Power' with annual spending of PKR 1,248 million (12%), 'Forestry/Fisheries /Wildlife" with spending of PKR 773 million (8%), 'Agriculture' with its investment in CC of PKR 309 million (3%) and 'Local government and rural development' with actual CC expenditures of PKR 251 million (2%). All the departments with 2% or less share in CC related actual expenses have been aggregated together as 'Others' (7% aggregate) in the pie chart below (Figure 3) which involves; 'Civil defense and disaster management', 'foreign funded projects', 'Environment', 'Physical planning and housing', 'IT' and 'Industries' etc. It is pertinent to note that 'Social welfare and women development' department only spent PKR 43 million (0.4%) towards the CC cause.

Detail of the departmental shares of major departments has been shown in the pie chart below:

Leading sectoral allocations with respect to CC

The sectors with a high CC share in their respective budgets have been identified by comparing the actual amount spent on CC by the sector against their budget allocations.

Number and percentage of CC related projects

Annual Development Plan (ADP) covers development projects in a wide range of sectors. Climate-related projects of AJK in 2015-16 make up 86% of the total development projects. Total number of projects in the year were 706 and 604 of them were related to CC.

6 departments had 100% of their projects related to CC. 'Agriculture' department had 41 projects all related to CC. 'Civil defense and disaster management' department had 2 projects both related to CC. In 'Education' department 77 projects were initiated to benefit the three themes of CC. Environment had 5 projects all related to CC. 'Forestry/ Fisheries /Wildlife' and 'Health' departments had 29 and 16 projects respectively all related to CC.

Four major departments with most of their projects related to CC were 'Communication and works' having 99% (326 out of 330), 'Development Authorities/ R & D' having 68% (17 out of 25), 'Social Welfare & Women Development' having 78% (7 out of 9) and 'Local Government and Rural Development' having 61% (11 out of 18) of their projects dedicated to CC. In 'Foreign funded', 2 projects were related to CC which makes up about 50% of the total number of.

CONCLUSION

Pakistan spent PKR 569 billion in CC related activities in 2015-16 through centralized accounting entities . The composition of CC-expenditure at national level shows that federal government, with its 48% share in total CC-related spending, continues to lead actions toward meeting the country's international obligations under climate change agenda.

The results of the climate change expenditure analysis for FY 15-16 are generally consistent with the trends highlighted in the CPEIR for FY 14-15 and preceding years. . The consistency can be seen in terms of the percentage share of CC expenditures, in terms of the trends of share of different typologies i.e provinces having a higher share of adaptation and federal government having a higher share in mitigation, The above table reflects that the percentage share of CC expenditures in 2015-16 at the national level as a percentage of total expenditures is 8.4%; this is close to the CC expenditure share in 2014-15.

The expenditure tracking and coding system which has been used for the analysis of the federal government in full and the provincial government partly provides the government a handy tool and capability to track the CC related expenditures on a contious basis. It provides sound basis for evidence-based decision making in the challenging area of climate change. However, it is important that an analysis of the trends and focus of expenditure is also carried out to see whether the expenditures are in ine with priority of the government and if there is any realignment required or not.

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