



**Government of Islamic Republic of Afghanistan
Ministry of Agriculture, Irrigation and Livestock**

National Comprehensive Agriculture Development Priority Program 2016 – 2021

*A STRATEGIC FRAMEWORK FOR
AGRICULTURE SECTOR DEVELOPMENT AND REFORM*

AUGUST 2016

Foreword

Agriculture is the single most important sector of the Afghan economy. The importance and associated statistics on what agriculture contributes to the country is well known and documented. What seems to have escaped planners, including some of us at the Ministry, is the coping strategies of farmers and their resilience in the face of droughts, shortages of inputs and the sheer inertia of having to deal with confusing bureaucratic rules and regulations. The time has come for us to think of farmers and their needs, irrespective of their land holdings, as key strategic enablers and contributors to the national economy. They deserve our support and attention in ways that has not been considered in the past.

The potential for our farmers to produce surplus and added value crops are not in doubt. What is of critical importance is our ability to create conditions and structures that are responsive and supportive of their efforts. I believe that a major effort should be undertaken to move the Ministry and its constituent institutional structures closer to farmers creating a culture and service orientation that is 'farmer centric'. In presenting this strategic document, National Comprehensive Agriculture Development Priority Program (2016-2021), it is my hope that we can create conditions and a blue print for the future in the coming years that will see a dramatic rise in production and value creation.

As we move towards a more rationalized production policy, I want to emphasize the need to address poverty among our subsistence farmers and our itinerant herders. The safety net that the Government will provide should serve as a platform, to graduate farmers and herders towards self-sufficiency and surplus creation through the development of value chain and private sector initiatives. I envisage that over time many of the services that the Ministry currently provides will be taken up by private service providers allowing for us to focus on regulatory policies, standard setting and quality control.

I am excited by the possibilities emerging in Afghanistan's agricultural landscape and I am convinced that we are on the cusp of important transformative change. I would like to gratefully acknowledge the steadfast support of the international community on this important journey. I would like to also thank my colleagues in Ministry of Agriculture, Irrigation and Livestock for their untiring efforts in developing this document.

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Minister of Agriculture, Irrigation and Livestock

Abbreviations and Acronyms

ADB	Asian Development Bank
AFSANA	Afghanistan Food Security and Nutrition Agenda
AIP	Agricultural Industrial Parks
AISA	Afghanistan investment Support Agency
ANDMA	Afghanistan National Disaster Management Authority
ANDS	Afghanistan National Development Strategy
ARD	Agriculture and Rural Development
CCDC	Clustered Community Development Councils
CDC	Community Development Councils
CN	Counter Narcotics
DAIL	District Agriculture, Irrigation and Livestock
EPRR	Emergency preparedness, Response and Resilience
FAO	Food and Agriculture Organization
FRC	Farmers Resource Center
FTE	Full Time Employment
GDP	Gross Domestic Product
GIS	Geographic Information System
GoIRA	Government of the Islamic Republic of Afghanistan
HED	Home Economics Department
IA	Irrigation Association
IASRC	Independent Administrative Reform and Civil Service Commission
IASC	Integrated Agricultural Service Center
JICA	Japan International Cooperation Agency
MAIL	Ministry of Agriculture, irrigation and Livestock
MEW	Ministry of Energy and Water
MIS	Management Information System
MoCI	Ministry of Commerce and Industry
MoE	Ministry of Economy
MoF	Ministry of Finance
MRRD	Ministry of Rural Rehabilitation and Development
MT	Metric Tonne
M&E	Monitoring and Evaluation
NADF	National Agricultural Development Framework
NIP	National Irrigation Program
NLDP	National Livestock Development Program
NPP	National Priority Program
NRM	Natural Resource Management
NRVA	National Rural Vulnerability Assessment
NWP	National Wheat Program
OFWM	On-Farm Water Management
PAIL	Provincial Agriculture, Irrigation and Livestock
PD	Planning Directorate
PPP	Public Private Partnership
SGR	Strategic Grain Reserve
SME	Small and Medium Enterprise
SWC	Sector Wide Coordination
UNMACA	United Nations Mine Action Coordinating Agency
USAID	United States Agency for International Development
WB	World Bank

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Executive Summary

Afghanistan's agriculture importance and its central role in creating national wealth and providing employment opportunities are undisputed. However, a critical assessment about the future of agriculture and its transformative potential is needed. While a great deal has been achieved in recent years with international assistance, some problems in the area of needs-based capacity, results-based policy and implementation continue.

Afghanistan's agriculture future is faced with a paradox: a rural population that has literally doubled; shrinking access to arable land and an immediate need for employment with a youth cohort that is less inclined to stay on the farm. These factors are complicated further by outmoded agricultural practices and lack of inputs and access to greater mechanization. These and many other challenges are not insurmountable, they do however require a resetting of policies and practices in how agriculture is planned, designed, managed including the role of the Ministry in implementation of agricultural priorities. Furthermore, the realization of Sustainable Development Goals (SDGs) underpins the governments efforts to ensure a balanced and sustained development strategy.

The setting of seven immediate priorities by the President of Afghanistan is an important point of departure for the Minister of Agriculture Irrigation and Livestock MAIL. It is an opportunity to emphasize results and engage in key reforms that will yield targets set for the next five years (2017-2021). Much of the targets under the National Priority Programs hold true for the coming years that have been reduced from 22 to 12 and the current document lays out the reasoning and direction that MAIL will undertake in the coming years to deliver results and meet crucial agricultural priorities. The document presented here is referred to as the National Comprehensive Agriculture Development Priority Program (2017-2021). It is a strategic framework for agricultural development in which, the emphasis will shift towards a *farmer centric* view from the current *institutional* view.

In order to deliver on these priorities, the Ministry will embark on addressing three critical enabling factors: Firstly, MAIL must ensure implementation of an integrated service approach that places the farmer at its center. Secondly, investing limited resources in different sectors of agriculture must differentiate between, what is referred to as *Extensive Farming* and *Intensive Farming*¹. *Intensive* farming has the potential to earn the country-increasing amount of revenue, expand employment in secondary and tertiary production processes and provide greater return on investment. Afghanistan has a sizeable population of subsistence farmers who are engaged in *Extensive* farming; they too require investment ensuring that their struggle to achieve economic stability is addressed. Lastly, to achieve the above the Ministry and its various institutional structures must realign itself to deliver services and achieve significant increase in production and output in all areas of agricultural activities. Structures at the center must be downsized; provincial centers must be upgraded to become principal centers for knowledge dissemination to the districts where extension agents provide integrated agricultural services to farmers.

¹ Agricultural Sector Review; World Bank, 2014

At MAIL many are exploring new ways to make the institution responsive and farmer centric. Change is a subject of intense debate and discussion within the institution. Managers and technical staff are engaged in exploring innovative approaches to expedite and accelerate the process of change. That said, there are numerous impediments that impact on speed and direction of needed change; some structural and others procedural. With unemployment at record levels, the competition for jobs in the Ministry is often skewed by procedural rules that are open to manipulation by political elites resulting in delays and assignment of undeserving candidates. Despite these challenges MAIL recognizes that needed change must take place and lead to outcomes that will define the future direction of agriculture in the country.

Agricultural potential in Afghanistan is enormous. The assistance of government in realizing greater income for farmers through value chain enhancement and increasing reliance on the private sector and markets holds great promise. The Ministry and its various institutions are committed to supporting and realizing that potential. This strategic document is an attempt to explain both successes and challenges that the Ministry has faced and its attempt to redress and bring about needed change.

1 Introduction

1. Agriculture is the foundational basis of Afghan society. Approximately 80% of the population is engaged in agriculture directly or in secondary or tertiary activities. It is in this sector that the future of Afghanistan's wealth and potential for capital accumulation resides. While some of Afghanistan's former agricultural infrastructure has been restored, considerably more, remains to be done. As new possibilities in the development of infrastructure and technologies emerge, agricultural producers, processors and traders are demanding increased assistance in identifying new markets for their products. Agricultural practices in Afghanistan represent an evolving narrative – while some farmers continue to engage in subsistence farming, many are discovering that *intensive* farming is profitable, but only if Government invests in creating a range of services and enabling structures.
2. The seminal planning framework for development has been the Afghan National Development Strategy (ANDS-2008), within which, a National Agricultural Development Framework (NADF-2009) was developed. A series of 22 National Priority Programs (NPPs) were formulated following the Kabul Conference in 2010, of which the Ministry of Agriculture, Irrigation and Livestock (MAIL)'s priorities were reflected within two programs i.e. Agriculture and Rural Development (ARD) Cluster's NPP1 that dealt with water, irrigation and natural resources and ARD NPP2 that framed broader agricultural priorities in production, market development and food security, covering the period 2012-2014. This also includes the formulation of various agricultural sub-sectoral policies and strategies such as policies in wheat, poultry food and nutrition, women in agriculture, medicinal plants, etc.
3. The shift in emphasis reflects the views of the Government and Ministry's leadership, to realign the broader priorities of ministry of agriculture into seven key areas with specific focus on creating an enabling environment for farmers to create surplus in agricultural products; increase on and off-farm employment; and generate income through increased exports. Strategic Priorities identified in the NPP will continue to form the broader backdrop for agricultural development in order to underpin the capacity of MAIL to support and enable the achievement of targets under these priority areas.
4. The seven priorities cover key institutional and sectoral priorities for the MAIL in the areas of improved service delivery, food security, and greater productivity to enhance national revenue. The specific redirection of priorities is in the following sectors in the form of seven Strategic Priorities: (1) Irrigation; (2) Wheat and cereal production; (3) Horticulture value-chain; (4) Livestock Production; (5) Climate-sensitive Natural Resources Management; (6) Food and Nutrition Security and Resilience building; and (7) Institutional reform and capacity development. The above priorities will include many of the normative integrated activities such as Research and Extension, Integrated Pest Management; Input Delivery Systems; Quality Control; Quarantine; Farmer Organizations, Public & Private Partnerships; Data and Information; Policy and Legal Framework; and Governance and Coordination.

2 Situational Analysis

5. The implication for MAIL, in refocusing its efforts on the above priorities, will include a gradual shift from an overall sectoral approach to one, which focuses resources in areas that promises greatest returns on investment for the next 5 years.
6. Farmers' priorities will guide MAIL's institutional requirements including planning and support to the priority areas identified. To achieve these priorities, the Ministry and its

partners will continue to build on its foundational achievements, with renewed emphasis on its capacity to continue refining the institutional reform efforts to deliver the priorities proposed.

7. MAIL will seek to incorporate relevant Sustainable Development Goals (SDGs) in all its activities. Recognizing that poverty is a major challenge in Afghanistan, MAIL is focusing on Goal 1 of the SDGs and specifically on targets 5,6 and 7 on building resilience for the poor; mobilize resources to address poverty in all its forms and develop pro-poor policies that target gender and increased investment in providing opportunities to eradicate poverty. Similarly on Goal 2 MAIL is progressing with an aggressive program of enabling women to grow and increase food production, both at household level and on a commercial scale, providing women and other vulnerable groups with food security under targets 3 and 4. As part of a broader effort, the NPP will refer to specific elements of the SDGs in relevant sections that are being addressed within this document.
8. Based on data extrapolated from various MAIL source, there has been a steady growth in agricultural productivity since 2007. For example, wheat yield has risen 4.5% per year, although in a fluctuating trend every year, and has generated up to 1.3 million Full-Time Employment (FTE) jobs both on and off-farm. Agriculture holds great possibility for increasing and generating FTEs for the coming years. It will significantly contribute to growth in meeting SDG Goal10, target 1.
9. Similarly, horticultural activities have produced significant returns to farmers and traders. Over 2 million people are involved in this sector generating revenues in excess of \$700 million contributing to 6.7% of overall GDP and 34% of agricultural GDP.
10. Livestock production contributes 3.8% of National GDP and 15% of agricultural GDP valued at \$ 684 million. It employs 1.1 million men and women, particularly amongst the most economically impoverished. Exports from this sector continue to be modest, amounting to \$ 116 million per annum.
11. Total amount of land brought under irrigation is currently 2.4 million ha, resulting in an additional 350 thousand ha of fertile land. Allowing production to rise across the country, producing two crops per year and generating returns of \$350-\$400/ ha.
12. However, restoring agriculture will require more than just numbers. The World Bank in its Agricultural Sector Review (2014) document divides the challenges facing the agricultural sector into two major categories *Intensive agriculture (movers of agribusiness)* and *Extensive agriculture (targeting the poor)*. Firstly, approximately 33% of Afghans are food insecure², and chronic malnutrition rates are approximately 41%,³ to which agriculture bears a strong connection. Secondly, the largest impediment to realizing value chain enhancement in agriculture is the size of farms and farm-holding patterns in the country. Emphasis must be placed on organizing medium to large farm holders to create economies of scale where production inputs and outputs are rationalized to increase production and raise national incomes.
13. Secondly, farmers who engage in subsistence farming including landless farmers and itinerant *Kuchi* animal herders must be targeted by concerted efforts to address poverty alleviation through complimentary programs such as the Citizens Charter, and in the case of the *Kuchis* through expanded livestock extension efforts. Both strategies require addressing a host of issues such as legal land ownership, pasture and rangeland

² NRVA (2014)

³ National Nutrition Survey (2014)

management; rights of passage, access to water resources, provision of agricultural inputs; conflict resolution mechanisms, etc.

14. Based on Information Management System for Mine Action (IMSMA) maintained by UNMACA, about 77.7 sq. km agricultural land; 398.6 sq. km grazing area and 4.8 sq. km water sources are contaminated by mine and other Explosives Remnant of War (ERW). For the purposes of the cost-benefit analysis, it is assumed that agricultural areas will be put into productive use immediately after being cleared of mines. As farmers increase planting in newly irrigated lands the task of mine clearing must also proceed apace.

3 Institutional Context

15. Despite minor institutional gains through several change management exercises, challenges remain. MAIL continues to place disproportionate emphasis on structure and focus at the center. This is further compounded by an absence of technical capacities and regulatory enforcement in the provinces and limited capacity and outreach of extension services at the district level. Addressing these key challenges, apart from rationalizing investment priorities will require MAIL to refocus its efforts and to recalibrate its capacity and reform agenda, creating an enabling institutional strategy and a shift towards a program based structure. It is expected that normative programs will be reassessed and integrated in a broader framework that support the seven priorities.
16. To achieve the required synergy and streamlining of various programs that support the realignment of priorities, it is essential that MAIL address the current planning framework including *on budget* and *off-budget* projects and programs. On closer examination, it would appear that donors design many projects ostensibly with some input from MAIL. MAIL participation in many instances is often *post facto*. There may, in fact be legitimate reasons why MAIL participation is constrained, including the geographical absence of capacity, access to resources and current planning practices within the Ministry.
17. Similarly, the uncoordinated and ad-hoc nature of donor assistance has resulted in “boutique” projects, while approved by the MAIL, is not within the broader remit of program planning. Often donor efforts in providing funds to address a specific area of concern results in limited impact because of the absence of MAIL planning inputs. Apart from duplication and resources spread across different geographical areas, the consequence of an uneven approach to national development can contribute to perceptions of favoritism or worse, of neglect.
18. Donor supported projects often reflect a paradox: donor funds on offer are accepted because of a perceived reduction in donor funding and increase in stringent conditionalities imposed. The absence of a programmatic approach, in which donors, jointly with the Ministry can identify their project’s comparative advantage, would go far to address some of the duplication and idiosyncratic approaches currently in practice.

4 Opportunities

19. For a country like Afghanistan, agriculture is the best means to generate capital and surplus through value chain improvement and export. This is particularly true in horticulture, livestock and industrial crops. By upgrading orchards to acquire certified seed and saplings, the quality and yield of farmers can be greatly enhanced. Improving irrigation

conveyance systems including on farm water management, crop management and pest control can contribute to greater efficiency and lowering costs to farmers. Investing in better storage and reducing harvest loss including access to credit and a reliable transportation system (land and air) can result in accessing high- end markets. With Afghanistan's accession to the World Trade Organization significant opportunities present themselves to allow the country to meet standards and practices that would attract greater investment from member states in addition to meeting SDG Goal 10, target 9.

20. Recent years has seen remarkable growth in the production of industrial crops such as saffron, liquorice, pistachios, turmeric, pine nuts, ferula and an array of valuable medicinal crops. MAIL intends to provide technical assistance and support to marketing efforts in promoting medicinal and industrial crops.
21. By adding an additional 360,000 ha of horticultural land, it is estimated that more than 360,000 full time equivalent (FTE) jobs will be generated by 2024. It is estimated that by 2024 the horticulture sector alone would contribute \$3.23 billion compared to \$1.4 billion in 2012. Similarly, in the livestock sector it is expected that milk yield will increase to 1,200 liters/cow from the existing 400 liters/cow. Whilst the overall significance of expansion of livestock is primarily focused on providing interventions that address poverty alleviation, nonetheless it is projected to produce 604,000 new FTE and doubling poultry production resulting in contribution of a further \$274 million to the National GDP. This includes increased opportunities for exporting national products to neighboring countries.

5 Vision

22. Food and nutrition security, a balanced economic growth through agriculture, resulting in stability and economic empowerment of women and men.

5.1 Mission Statement

23. A farmer centric institution that is responsive and tailors its offerings to promote quality services; access to innovative technologies; rationalizes and increases production; regulates inputs; creates employment opportunities and contributes to economic growth and generation of capital across the country.

6 Strategic Sector Priorities

24. The National Comprehensive Agriculture Priority Program is viewed as a significant contributing factor to the overall security, good governance and economic development agenda of the Government of Islamic republic of Afghanistan. Built around the core national objectives of self-reliance and increased income and employment generation, the strategic framework sets seven key priorities.
25. These Strategic Priorities are (i) Improving Irrigation Systems; (ii) Wheat and Cereal Production; (iii) Development of Industrial and High Value Horticulture Crops and Vegetables; (iv) Livestock Development; (v) Climate-Change Sensitive Natural Resource Management; (vi) Food and Nutrition Security and Resilience Building and (vii) Institutional Reform. These will be referred to in detail in the document.

6.1 Strategic Priority 1: Improving irrigation systems

26. While acknowledged widely as priority in agriculture discourse and donor strategies, it has only recently been actively treated as such. Irrigated land will increase from 2.45 million ha to 2.7⁴ million ha in the next five years, impacting on an overall total of 650,000 households. However, adopting a farmer-centric approach in making available and distributing water, irrigation is beyond just physical works and will require concurrent social management interventions through Irrigation Associations and CCDCs.
27. Investment in irrigation and in agriculture provides a unique opportunity in Afghanistan to facilitate economic growth, increase rural employment and enhance food security especially in rural areas. Alongside the Ministry of Energy and Water (MEW), which manages primary irrigation infrastructure, MAIL is responsible for developing and managing irrigation systems and networks – these include on-farm water management, watersheds and rangeland water resources. MAIL aware of its commitment under SDG Goal 6, will address target 4 and 5 by ensuring an equitable approach to the provision of water access to all. Existing projects such as On Farm Water Management is an example of meeting that challenge. However, trans boundary issues are beyond the current remit of MAIL and are being addressed by other concerned Ministries. The OFWM project has a key community project where a significant start has been undertaken to address SDG Goal 6, target 8.
28. Over the next five years, MAIL is committed to an accelerated rehabilitation and construction program of physical works. This will be driven by the National Irrigation Program (NIP) targeting increase production and productivity through irrigation and improved water management practices with a long-term focus to achieve pre-war irrigated land of 3.1 million ha in the next ten years. In addition, the physical works will encompass both rehabilitation and new construction.
29. Achieving the aforementioned target will require creating inter-ministerial coordination between MAIL, MEW and MRRD at the national planning stage in Kabul, and at the implementation level at sub-district level. Working closely with MEW and MRRD, MAIL will also ensure the true custodians of the water at village level have the required technical support to assist in the construction of tertiary water structures, handed over to Irrigation Associations (IAs), once completed. MAIL and the IAs will build the understanding of farmers to adopt improved farm practices focused on increasing agricultural production and productivity through more efficient methods of water utilization. The NIP comprises three pillars, as summarized below (a detailed program document is attached as Annex).
30. **Component-1: Irrigation Physical Works** to achieve 3.1 million ha irrigated land (pre-war status) through restoration and bringing new areas under irrigation by 2025 (Improved irrigation services for additional 900,000 ha through rehabilitated irrigation schemes, and 120,000 ha new land under irrigation). This will contribute to increased production from the current 5.8 million Mt of food grains to 8 million Mt, providing a greater opportunity to reach food security for the population.
31. **Component-2: Enhance Irrigated Agriculture** will improve input support, research, transfer, and extension of irrigation related technologies. This will result in increased land and water productivity through water saving technologies, and expansion of irrigated areas through saved water.

⁴ National Irrigation Program (2016)

32. **Component-3: Institutional Strengthening (Public and Private Sectors)** will revolve around the establishment and reform of legislation, policies, institutions and improved management to promote investment in irrigation development and participation of private sector. This will result in more transparent frameworks, regulations, and a restructuring of Irrigation Department to implement irrigation development across Afghanistan. There will be significant emphasis not only on institutional strengthening of the Irrigation Directorate at all levels, but also establishment of Irrigation Associations at community level complimenting the emerging discourse on the future roles of CDCs through the Citizens' Charter.

6.2 Strategic Priority 2: Increased wheat production

33. Although maize and rice also form part of the national diet, wheat remains the primary strategic priority crop for food security and self-sufficiency in the country. However, the productivity per unit area is very low (2.5 MT/ha under irrigated and 1 MT under rain-fed conditions) compared to the neighboring countries amounting to a shortage of more than one million tons of wheat grain annually. Additionally, other challenges in absence of adequate machinery for timely harvesting, threshing, processing and storage, in pre and postharvest result in further losses of approximately 15-20%. MAIL is trying to systematically address this important challenge by improved extension methods and through demonstration plots to farmers thus meeting the SDG Goal 12, target 3.
34. The deficit amount of wheat production compensated for through annually commercial imports amounts to around 2 MT⁵ of wheat and wheat flour from neighboring countries. Production of rice and maize, the next most important crops, is also far from meeting consumption requirements. MAIL is developing a comprehensive rice strategy that includes focus on improved cultivation techniques and varieties (1 million ton 2021) that would attract the private sector to further develop rice value chain.
35. The overall objective of the National Wheat Program (NWP) is the sustainable development of the wheat sector in order to achieve self-sufficiency, improve food security and better response in cases of emergency and crises across the country. This will involve improving productivity, and will require taking a more pro-active approach in partnering with the private sector at one end, and facilitating farmers to achieve economies of scale through well-tailored agricultural packages at the other. Both of these tasks face numerous challenges in acquiring high quality agricultural inputs, incentivizing private sector investment to strengthen market elements of the value chain and ensuring aging seed is constantly replenished by new high-yield location- specific varieties.
36. The next five years will see MAIL address a number of systemic and technical challenges in a more coherent manner in order to meet its original intention of reaching the production target of 5.9 million MT. Given the economic and dietary importance of wheat, MAIL is committed to a strategy that involves addressing chronic food insecurity, storage of grain surplus and the availability of high quality certified seed. In the next five years, MAIL anticipates an expansion of additional 110 thousand hectares of irrigated and rain-fed under wheat cultivation, increase current yield for irrigated land from 2.45 to 3.1 MT per ha and rain-fed from 1.03 to a minimum of 1.3

⁵ USDA Statistics 2015

MT per ha. Strategies for dry-land farming will also be expanded in order to effectively utilize the land where irrigation shortages continue to occur.

37. Additionally, good practices in conservation agriculture will be promoted in approximately 250,000 hectares of rain-fed and irrigated lands. The main focus of the program will be in 16 wheat growing provinces of the country including (Faryab, Jawzjan, Balkh, Baghlan, Kunduz, Takhar, Badakhshan, Herat, Ghor, Kabul, Paktia, Ghazni, Nangarhar, Kunduz, Helmand and Parwan Provinces), but indirectly practical focus will be on all provinces of the country. (A detailed program document is attached as Annex)
38. The NWP will be undertaken in two phases, with the first phase (2017-2018) focusing on short-term objectives. Hence, Phase I will mostly work on aligning available technologies in order to reduce the wheat yield gap. These technologies will be further disseminated to farming communities through extension services, using a combination of Regional Research Stations and selected staff at the Provincial Agriculture, Irrigation and Livestock Department (PAIL) through the technical hub of Farmers Resource Centers (FRCs). This will entail strengthening human resource capacity to conduct wheat research and seed production programs, in order to provide effective public services in a sustainable manner. Effective linkages will be strengthened at the District Agriculture, Irrigation and Livestock Departments (DAILs) through the Extension Directorate, where Integrated Agricultural Service Centers (IASCs) will reach out to farmers and private sector agents, promoting best practices. Alongside the on-going activities started under the first phase, the second phase (2019-2021) will focus on longer-term objectives involving standardization and expansion of the adaptive research, and basic research activities (e.g. molecular breeding) in order to develop new varieties and effective service delivery and sustainable wheat sector development within the country.
39. Storage and Strategic Grain Reserves (SGR) will remain a high government priority, with a minimum 200,000 MT of SGR capacity, within which MAIL will play a crucial role of incentivizing farmers and serve as an emergency food security instrument alongside the Emergency Preparedness and Response program. In turn, other ministries will ensure market and pricing stability, availability to market, and control emergency, and crises to balance food security, and price stabilization through market support mechanisms.
40. The longer-term view adopted by MAIL is to create an environment where the private sector begins to take an increasing lead in harnessing the potential of semi-commercial and small commodity producers into commercial enterprises aimed at accelerated cereal, rice and maize production. Domestic industries such as milling of cereals will require further strengthening to reduce Afghan dependency on value-added commodities. This will allow MAIL to donate more resources and time to focus on research and development of new seed varieties, reduction of losses, provision of adequate storage and emergency distribution, regulatory and trade-related issues.
41. As with all the other Strategic Priorities, there will be an intrinsic reliance on adequate irrigation, timely availability of high quality inputs (certified seed, agronomic packages), agricultural credit packages, value-addition activities and a pronounced role for the private sector.
42. Given the scale and scope of this initiative, certain risks and assumptions have already been identified and mitigation measures recommended. As mentioned above, much of the success of the NWP depend upon the successful sequencing of other Strategic

Priorities. In addition, it will involve the active participation of other government ministries and departments as well as private sector stakeholders, which may become victim to bureaucratic machinations slowing down overall progress at policy and institutional level.

43. Improving coordination through high-powered inter-ministerial coordination committees with decision-making authority can mitigate the inter-ministerial concerns. Regular strategic planning, which is affiliated with a practical and workable vision based on administrative competence, accountability, transparency, orientation to results, participation of beneficiaries and good governance, which is a measure to encourage to fulfill donor's funding obligations. Identifying management processes (financial, logistical, and administrative) to accelerate business affairs for better implementation of the national wheat program.

6.3 Strategic Priority 3: Horticulture Value-chain

44. Industrial and high-value horticulture crops present a broad number of options that can be immediately capitalized upon. By re-organizing the mandate of selected MAIL Directorates, appropriate policies and institutional arrangements will be developed to encompass relevant policy development, research, technical assistance, the regulation of required inputs, credit/financing packages and other forms of support to farmers and stakeholders. In addition, there has been a marked increase in round the year expansion and production of vegetables over the last few years. With producers discovering new techniques (e.g. covered farming) they are producing high quality vegetables, if marketed, can provide expanded revenue streams at an extended commercial scale across the country. Again, the emphasis on the demand side will involve active engagement of the private sector, focusing on market development and value addition activities. As a crosscutting function, MAIL will adopt a strategy of rationalizing public and private sector roles, further establish regulatory frameworks and provide training and capacity building for a variety of local institutions and private sector agents. This is one sector, which has generated significant interest amongst investors.
45. Attracting youth who are less inclined to engage in farming, value chain provides an important opportunity to employ many. Providing opportunities through the private sector in product processing, packaging and other post harvest activities in agriculture can help in partially mitigating this phenomenon. MAIL is promoting these concepts in horticultural productive areas where financial viability of secondary and tertiary production are high.

6.3.1 High Value Horticulture Crops and Vegetables

46. Horticultural crops cover approximately 360,000 ha, accounting for 14% of the total irrigated land area, employing more than 2 million people, in the various steps of the value chain of which some 90,000 are in the non-farm economy⁶. Among the perennial horticultural crops of strategic importance are grapes, pomegranates, almonds, pistachios and vegetables- most of which are exported. The horticulture subsector

⁶ World Bank report 62323, (2011)

contributes US\$1.4 billion to the national GDP, equivalent to 34% of agricultural GDP and 6.7% of national GDP⁷.

47. The horticulture subsector has grown at the rate of 5.5% per year over the past decade⁸, and has the potential of expanding further, raising farm incomes, generating productive jobs and improving food security in the rural and urban communities if timely investment is made in agro-processing. Although the sub-sector has caught up with the pre-war levels of production, it is still characterized by low yields, lack of consistency in quality and quantity, poor post-harvest practices, and weak producer and marketing organizations. The main constraints on the production side include: (a) insufficient irrigated land (mainly because of rampant destruction and lack of maintenance of irrigation schemes, during the three decades of conflict); (b) inadequate supplies of improved crop varieties and certified seeds; (c) old orchards that need replanting with improved planting materials; (d) insecure property rights that discourage long-term investments in orchards; (e) insufficient access to credit; inadequate extension; and (f) poor on-farm management of water, crops, and pests.
48. On the marketing side, farmers have limited access to cold storage and refrigerated transport for perishable products. Post-harvest losses due to spoilage in cellars is in the range of 30 - 35%⁹. Modern cold storage plants are expensive to operate, and farmers lack the technical and financial resources to maintain such facilities, which have been built, in recent years on the outskirts of major cities. Further, maintaining a constant supply of electricity remains a major challenge in many areas, and the use of generators raises costs substantially. Transport costs are also high, and the lack of an effective grading system means that farmers do not receive prices that reflect the quality of the products they sell. Market opportunities are also constrained by limited agro-industrial capacity to process horticultural products (e.g. canning, freezing, drying, and juicing), while opportunities for export to high-end markets are constrained by poor grading, low phyto-sanitary standards, and limited air freight capacity.
49. According to the Agriculture Sector Review¹⁰ conducted by World Bank in 2014, with the current growth rate of 5.5% per year, the sub-sector is expecting an expansion covering 400,000 ha and contributes US\$1.6 billion annually to GDP by 2024. Additional expansion of the horticultural land -base is possible with the right investments in rehabilitation of irrigation schemes. Additional yield gains of 2% per year are feasible through better extension and adoption of improved orchard management and IPM practices. Together, the horizontal and vertical changes stated below could raise the GDP to about US\$3.23 billion by 2024 (compared to US\$1.4 billion in 2012).
50. The goal of the high value horticulture crops and vegetables program is to support the sustainable development of the horticulture sector with needs-based and demand-

⁷ Afghanistan: Horticulture Subsector Review (2014) World Bank

⁸ Afghanistan: Agriculture Sector Review (2014), Revitalizing Agriculture for Economic Growth, Job Creation and Food Security, World Bank Report No. AUS9779

⁹ Afghanistan: Agriculture Sector Review (2014), Revitalizing Agriculture for Economic Growth, Job Creation and Food Security, World Bank Report No. AUS9779

¹⁰ Afghanistan: Agriculture Sector Review (2014), Revitalizing Agriculture for Economic Growth, Job Creation and Food Security, World Bank Report No. AUS9779

* The area under horticultural crops is estimated at 228,000 ha by the Statistics and Marketing Directorate of MAIL

driven extension services aimed at increasing production and productivity with the ultimate aim of strengthening and diversifying the farmers' licit sources of livelihoods. These activities will meet SDG Goal 8, target 2. This will be achieved through eight strategic measures.

- **Expansion of the Horticulture Land-base (Horizontal Increase)** by 12,400 hectares per year through investments in the rehabilitation of the irrigation schemes, on-farm water management and adoption of water-use efficient irrigation systems;
- **Increase Productivity per Hectare (Vertical Increase)** by increasing production at the rate of 5 to 10% per year through a combined package of interventions including adaptive research, improved crop, including orchard and pest management. This would be underpinned by timely availability of high quality inputs, access to credit and a more effective extension system;
- **Develop Promising Value Chains** based upon the selection of a few fruit and nut crops in which Afghanistan has had an historical added advantage in the export markets. As with any export-orientated activity, a series of multi-ministerial consideration and collaborative mechanism will need to be developed to ensure an enabling environment for the growth of SMEs to take on a number of value-addition functions under a policy framework that encourages competition amongst domestic service providers to meet international norms and standards;
- **Infrastructure and Market Development** is closely linked to the above strategic measure, but with an increased emphasis on incentivizing the private sector to invest in more strengthening producer group familiarity with utilizing cold storage facilities, refrigerated transport and shipping, and processing of horticultural crops;
- **Embrace Standardization** through an aggressive investment in branding in tandem with establishing Quality Control and Organic Certification Laboratories. In addition, MAIL and its counterparts will develop export-orientated regulatory framework and enabling environment
- **Support the Private Sector** by MAIL will support renovation or upgrading of processing facilities through PPP initiatives with the assistance of the ministries of Commerce and Industry and Economy along with Afghanistan Investment Support Agency (AISA). In addition, specific rules and regulations, standards, quality control and associated measures will be set up and updated to promote production, processing as well as marketing, import and export of the necessary inputs and outputs and due investments will be stimulated. This will be in tandem with customized credit packages to meet requirements by SMEs for investment and working capital.
- **Develop the Nursery Industry** by increasing access to improved and certified seeds and planting materials. A certification scheme for fruit and nut trees offers farmers a choice over the many uncertified nurseries available, but little attempt has been made thus far to improve and certify the available vegetable seed varieties;
- **Expand the Area under Protected Agriculture** by expanding the growth of the off-season production of vegetable crops, which has been remarkable over the last decade. Based upon recent successes in Farah province, the Government will

encourage further production of vegetable crops under plastic greenhouses and tunnels through production of hybrid seeds and subsidized production of plastic sheeting, metallic tubing and drip irrigation pipes and fittings.

51. Farmers continue to face numerous challenges in acquiring high quality inputs in a timely manner. The markets are currently dominated by imported agricultural inputs of dubious content and quality. In order to provide these inputs in a demand driven manner, endemic issues around quality will require mitigation through enforceable regulatory and legislative actions under multi-ministerial ownership. Currently laws covering inputs such as seeds, pesticide, fertilizer are undergoing due diligence - these will need to be further enforced through regular monitoring, inspection laboratory testing; institutional capacities yet to be built. MAIL is will develop institutional reforms to shorten the process of seed distribution to farmers, and create a more uniform approach to terms and conditionalities attached to inputs. MAIL will also work in shifting the responsibility of input distribution to local institutions such as Agricultural Cooperatives, and private sector actors under public sector oversight.
52. In an effort to increase quality assurance and marketing of horticulture and vegetable products including vegetable seeds, currently an untapped opportunity, MAIL will work with other stakeholders to support and oversee the establishment of a Fruit Marketing Corporation and Vegetable Marketing Corporation. These entities will be privately owned, however will be regulated and supervised by a Board of high-level appointees from MAIL, Ministry of Commerce and Industries, Ministry of Finance, and the Afghanistan Chamber of Commerce.

6.3.2 Industrial Crops and Medicinal Plants

53. Development of industrial and high value horticulture crops, medicinal plants and vegetables are still reliant on research and extension initiatives, including corresponding domestic processing and storage facilities, small and medium enterprises and the essential standards developments. To date, these have been dealt with in a fragmented and uncoordinated manner, with certain crops receiving significant investment at the opportunity cost of another. Domestically grown oil crops contribute to less than 10% of the cooking oil consumed in the country, amounting to 498,338 tons annually at a cost of US\$ 491 million dollars to Afghan consumers. Medicinal crops (both cultivated and wild) have been considered important export items for centuries, currently valued at US\$ 80-100 million on annual basis and this amount can easily be doubled with appropriate interventions. Afghan farmers cannot take advantage of this huge potential market because they lack access to suitable oilseed crop varieties, processing and storage facilities and the right marketing strategy.
54. With an income of USD 700 million from horticulture production in 2015, the target is to increase horticulture exports to at least 5 percent a year. As such, it provides an immense opportunity for further income and employment generation within the agriculture sector. Thus, it is imperative that MAIL follows upon the recommendations of a detailed study on reviving the cotton value chain, and the outcomes of recent national conferences on oil-seed crops, saffron and medicinal plants.
55. With the objective of revitalizing and further developing industrial crops and medicinal plants, this intervention will pursue clearly defined strategies and institutional arrangements (e.g. establishment of National Saffron Research and Development Institute). It will further support development of value chains for oil

seed crops, in particular, cotton as a strategic crop of national importance in order to reduce Afghanistan's dependency on imported textiles, edible oil and livestock feed. With a combination of additional funding and maximizing finite resources, the next five years will see MAIL select a set of industrial crops (current priorities being Cotton, Soybean, Saffron and Rose Oil), 10-15 high value horticulture products (including fresh and dried fruits and vegetables) based upon an agro-climatic analysis and support opportunities for to take full advantage of value-chain development.

56. The program has adopted a phased approach with all key areas possessing short-term deliverables achieved by 2017 and longer-term outcomes materializing towards 2021. The four key areas of focus are as follows.

- **Promoting an Enabling Environment for Promotion of Investment in Small and Medium Enterprises and Agro-Processing** will include the joint formulation of critical strategies in agro-processing, SME development with the Ministry of Commerce and Industry. These will be underpinned with a detailed sub-sector study to determine the potential for value addition of crops with the lowest risk crops by the government and its partner agencies or through PPP arrangements. Along with exploring viable and sustainable renewable energy options to address the key constraint of access to cheap energy in rural areas.

In the longer term, specific rules and regulations, standards, quality control and other measures will be established and updated for production, processing as well as marketing, import and exports with the aim of developing export-orientated, high quality production

- **Institutional Arrangements, Expansion of Area, and Yield** will incorporate inter-ministerial coordination mechanisms established to assess the multi-dimensional aspects of this sub-sector to ensure each ministry is able to contribute in line with its purview and comparative advantage. At MAIL level, the research-extension-education continuum will be strengthened at PAIL level to ensure best practices are promoted and improved with feedback from the IASCs at district level. In addition, agricultural faculties of universities will include industrial crops and medicinal plants in the curriculum, which will be connected with the FRCs at provincial level where MAIL will establish a technical hub. These initiatives will, in turn, result in farmer's producer groups marketing their products more efficiently.

57. In the longer term, MAIL will regulate and ensure production and productivity, through a combination of ministry and private sector owned mechanisms will provide timely input delivery and technical assistance and other forms of support to farmers and other stakeholders.

- **Market Development:** The government in partnership with the private sector will establish the necessary regulatory framework and enabling environment for the export markets to flourish. In addition, significant emphasis will be placed upon branding Afghan products through an innovative PPP approach attracting already active export companies to support domestic products.
- **Promoting Public and Private Partnership (PPP):** As this approach gains traction, the government will review the possibility of renovating/upgrading aging existing facilities in collaboration with MoCI, Ministry of Economy (MoE) and AISA.
- **Production of Sufficient Quantities of Proteins and Others Essential Nutrients to Contribute to Food Security** remains a contribution to the broader

agenda of nutrition-based food security, alternatives and additions to existing dietary intake. The existing diet may be enhanced through the promotion of high-protein content oil-seed crops such as soybeans, as substitutes for meat, eggs and milk for subsistence-level households.

6.4 Strategic Priority 4: Livestock Development

58. The livestock sector contributes significantly towards Afghan economic growth and employment as well as import substitution for livestock products. From 2012–2013, the contribution of livestock to National GDP was 3.1% decreasing from 3.8% in 2011–2012 based on current prices.¹¹ The sector provides 15% (US\$ 680 million) of the agricultural GDP annually and creates about 1.1 million full-time equivalent jobs, 15% of which are off-farm¹². It also provides an exclusive livelihood for Afghanistan's nomads, who follow traditional grazing routes across the country. Livestock, as a commodity also has the potential to yield rapid income and employment generation under the right circumstances. However, for the domestic livestock industry to flourish to a point at which it can offset imports, MAIL will lead an update in regulations covering the import and export standards for livestock products, a more coherent and domestically-driven health component and greater outreach of extension support.
59. Considerable potential exists for the expansion and semi-commercialization of the livestock industry. While the scope for subsistence farming to contribute to growth is limited, a substantial number of farmers could, through limited inputs (technology, credit, contract farming, etc.), enter market-based agriculture by moving towards semi-intensive/semi-specialized farming practices. There is already an indication that progressive farmers are beginning to diversify in order to capture new opportunities for generating income from livestock production, especially in peri-urban areas where there is better access to a rapidly growing demand for animal products. This is especially true in the case of semi-commercial dairy and poultry production, but also increasingly, seasonal fattening of sheep and goats as and when market prices of feeds and meat allow a profit to be made.
60. The demand for food including livestock products in Afghanistan is expected to increase as the population increases. Current demographic projections for 2025 state a possible total population of 47,602,000, rising to 70,553,000 by 2045.¹³ In order to meet the growing demand for food, the livestock sector will have to increase the number of animals and/or increase the level of productivity per animal. The former will entail consideration of the appropriate carrying capacity in view of key challenges for instance related to livestock feed availability.
61. The broad-based objective of the National Livestock Development Program (NLDP) is to increase production of fodder, dairy, meat and poultry and link these to improved market access. MAIL is committed to improving animal health, productivity and enhancing the key role played by women in this sector. In addition, Aquaculture will, once again, be explored in a systematic way to understand how uptake of cultivating a high protein source can be undertaken. Practical income diversification activities

¹¹ Afghanistan Statistical Yearbook 2012 – 2013.

¹² World Bank, Agriculture sector Review (2014), pp.xiv

¹³ United Nations Population Division 2010., Revision of the World Population Prospects.

such as this, apiculture and sericulture amongst others, will add to farmer coping strategies and provide localized income generating opportunities.

62. The NLDP will have two key areas of emphasis (i) Animal Health and Veterinary Public Health; and (ii) Animal Production which will cover Management, Breeding, Nutrition and Marketing. As The livestock industry of Afghanistan is based upon two distinct and largely traditional production and management systems¹⁴, both of which are practiced at little more than subsistence level of production. Although this will require two slightly differing approaches, this diversity within of livestock production and management systems is viewed more as strength than a liability due to the immense resilience of both systems.

63. Under Animal Health and Veterinary Public Health, MAIL will have four clear sub-components:

- **Animal health service delivery:** enabling sustainable, and cost effective services to reach the majority of livestock keepers through innovative PPP approaches, in which the private sector plays a critical role. MAIL will oversee the required regulations on importing, domestic manufacturing and distribution of veterinary medicinal products. In addition, MAIL will gradually improve the quality and outreach of veterinary education, training, and best practices by veterinarians and veterinary para-professionals in line with international standards. Wherever appropriate, the private sector will be incentivized to provide input and elements of service delivery through MAIL-fostered backward and forward linkages.
- **Disease prevention and control:** through the establishment of a national animal disease surveillance network, known as the Sanitary Mandate Contracting Scheme, linking the provinces to a Central Veterinary Diagnostic & Research Laboratory in Kabul. This allows improved disease surveillance and the implementation of a flexible and responsive set of disease prevention programs, which have an important economic impact on livestock production. In addition, greater control over import and export of animal as and animal products in the form of regulatory and physical inspection will be undertaken. The latter involving strict Border Inspection, and when necessary quarantine, sampling and testing for certification for safety for animal or human health and the environment.
- **Veterinary Public Health** will provide strengthened regulations on food safety for imported and domestically produced products of animal origin. This will involve the establishment of an inspectorate for ante and post-mortem meat inspection of animals being slaughtered for human consumption, and establishment of laboratory facilities for testing for biological, chemical or physical hazards present in food products derived from animals, both domestically produced and imported. In support of the above reference to border inspection procedures, a second inspectorate will be created at Border Inspection Posts. In the medium to long term, it will be necessary to establish Veterinary Inspectorate at all major international border crossing points.
- **Animal health extension** continues to raise awareness and encourages farmers to invest in disease prevention interventions to prevent the spread of animal

¹⁴ Nomadic/transhumance, involving the Kuchi and 40-50% of the national sheep and goat flock. Sedentary farmers with variable numbers of small ruminants, cattle and poultry (ducks and chickens).

diseases, especially those transmissible to humans. This activity has immense potential to develop through a public, private partnership (PPP) enhancing outreach of existing public services and private animal health service providers through mass media and innovative communication vehicles. In this respect, MAIL continues to strengthen sustainable animal health services to farmers through private public partnership models already being tested in the field. These models are exploring innovative ways in which to deliver quality, range and geographical distribution of animal health services and inputs available to farmers according to their needs and ability to pay. MAIL views this as a significant opportunity to develop a PPP model for the delivery of these services, with the aim of applying it elsewhere in the sector. In addition, greater animal disease prevention and control through stronger quarantine and monitoring practices will be enforced to prevent the spread of trans-boundary diseases. This will all be built upon the evolving capacity building of veterinarians and affiliates.

64. Under Animal Production, based upon a long overdue national livestock census, MAIL will be in a better position to prioritize the sequence of activities leading to the promotion of appropriate, innovative and modern animal husbandry practices, such as the use of indigenous breeds for improved animal production. Detailed strategic development plans for dairy production, sheep and goat production; poultry production, commercial beekeeping and fodder production have been completed. As such, the NLDP will cover:

- **Strengthen animal breeding policy and research** into production performance of indigenous breeds, especially small ruminants, cattle and poultry which are perfectly adapted to the current management systems, coupled with the gradual introduction of exotic genes into production systems which are able to take advantage of improved genetic potential. Currently average milk production of crossbred cows is 10 Liters per day with average animal management, increasing to 15 liters with improved animal husbandry.
- **Increased availability and quality of animal feed** will continue, with greater coordination between research into developing commercial feed products that also exploit by-products of agricultural crops to meet the demands of emerging and commercial livestock farmers. In addition, efforts will be invested in developing integrated systems for increasing fodder production for diet supplementation of dairy cattle, sheep and goats during the winter months when production levels fall to very low levels.

65. Significant collaboration within MAIL will be required to ensure both nomadic and sedentary livestock herders can benefit from the current 29.2 million ha of pasture. It is estimated there are 16.5 million animals in 654,917 farming families grazing their animals on 12.6 million hectares (summer pastures), 2.4 million hectares (winter pasture) and 5.9 million hectares (spring pastures) which are managed by Kuchis¹⁵. This is in addition to a total rangeland available of just over 30 million ha (47% of country's territory).¹⁶

- **A shift towards semi/commercialization** can only be achieved through a comprehensive PPP approach where MAIL and private sector agents share responsibilities in providing awareness and the required training on demonstration farms. Progressive farmers will be guided, trained and with access to an appropriate credit package, to become specialized in an advanced livestock

¹⁵ Kuchi directorate MAIL, 2015

¹⁶ Afghanistan Land Cover Atlas 2016

production enterprise. Such enterprises will include including semi-commercial poultry production, small-to-medium scale dairy, and sheep and goat fattening businesses. Each enterprise will be geared towards viable financial independence, operating on the basis of producing sufficient quantities of animal products and other crops to produce a marketable surplus.

- **Animal production extension** continues to improve animal management practices, animal nutrition and to facilitate access to markets for certain products. This activity has immense potential to develop through a public, private partnership (PPP) enhancing outreach of existing public services and private contracting service providers to provide extension. In addition, timely market information through mass media and innovative communication vehicles will provide increased opportunities for additional income generation at the farm gate.

66. In addition, over the next five years, MAIL will continue to build upon achievements in increased Public sector reforms underway, in order to rationalize existing grazing areas and their custodianship in a manner that reduces opportunities for conflict. However, significant resources will need to be invested in further research to identify and make available additional fodder resources to maintain traditional grazing areas for the longer term.

67. Focusing on the demand-side, MAIL will develop incentives to increase the engagement of the private sector involving access to credit and some technical support. In addition, MAIL will support the development of National Associations in dairy and poultry and build the capacity of dairy unions and other institutions to gather smallholders and address issues around achieving a high quality and consistent supply of products for the market based upon a semi-commercial/commercial set-up.

6.5 Strategic Priority 5: Climate-sensitive Natural Resource Management

68. Despite frequent natural disasters and the impact of climate change, Afghanistan remains a country, rich in natural resources such as 1.7 million hectares of forest (2.63% of the total surface of the country), 30.1 million hectares of rangelands (46.84% of the total surface of the country)¹⁷. These resources have a significant economic, social and cultural value. Although Afghanistan has made acknowledged advances in cataloguing its natural assets, passing laws and developing policies, further progress has been constrained by contested land ownership, land grabbing, etc., and the case-by-case approach undertaken by the National Land Authority is complex and time consuming.¹⁸

69. In addition, with climate change becoming a global priority, MAIL is currently comparing its approaches to neighboring countries in tandem with the recent COP21 framework. MAIL will review its abilities to adapt sustainable ways to address adverse effects of climate change through awareness-raising of the climate change phenomenon and its effects on agriculture and livelihoods. MAIL will coordinate closely with National Environmental Protection Agency (NEPA), MEW and MRRD on the above important issue of climate change. While this will be done in conjunction with the Emergency Preparedness and Disaster Risk Reduction activities covered in

¹⁷ MAIL. 2012. Land Cover Atlas Of The Islamic Republic Of Afghanistan . Page 16

¹⁸ The issue of Land Rights is adjudicated by a separate department of government and MAIL coordinates closely on land issues with them.

the next section, MAIL recognizes the crucial need to protect and build upon its existing NRM base to ensure a curative and causative approach. Through structured programs on agricultural adaptation, farmers, herders, and particularly women will be better positioned to plan and implement low-cost interventions. MAIL is further pursuing efforts to ensure that effective plans to combat climate change is addressed thus meeting the requirements of SDG 13, target 2.

70. The overall objective of the NRM strategy is to ensure the program supports sustainable economic development of communities which depend on natural resources (forests, rangelands, natural vegetation and ecological areas), create green environment, conserve soil, water, and protect biodiversity.
71. The entire strategy is divided into four pillars, as stated below. In addition, links have already been developed between rural and peri-urban communities to build social awareness of the value of urban eco-systems and the provision of greenery for major cities to reduce air pollution levels. This strategy will be underpinned by concerted capacity development that places MAIL in a facilitative position over the next five years as it shifts custodianship of common assets into community hands, identifies key areas of medium to long-term income generation for communities wholly reliant on forest and non-forest products. Investment in these sectors will allow for rapid growth of products that will contribute directly to economic growth of the country in a substantive manner.
72. Forestry: community-based Forest sustainable management (e.g. conservation, restoration, afforestation, development, sustainable harvesting and value adding to the products) in order to attain developed economy and sustainable rural livelihood. Based on the aggregation of the statistics and data collected and analyzed for effective planning, a cluster of activities will be delivered, such as strengthening or creating community-based institutions in forest management and Forest Management Associations to take charge of fruit and nut tree production as a broader component of a potentially lucrative value chain, which will be supported through IASCs at district level. At provincial level, through the FRCs, will facilitate the establishment of Forestry Research Centres linked to, or as an annex to, existing research stations wherever possible. Research will be focused on propagation of drought resistance (adoptable) species. Finally, improving urban greenery for urban ecosystem management and improving peri-urban based supply farms to meet the requirements of plants, shrubs, saplings, etc. All this will be supported by development of institutional and HR capacity at national and sub-national levels in line with institutional reform.
73. Rangeland and Medicinal Plant Management: community-based sustainable management conservation, restoration, improvement, development, will be used as mechanisms to manage sustainable utility of rangelands and wild medicinal plants, begin to systematically address sand-dune fixation in order to support and develop sustainable livelihoods of local communities and nomads. This will require local communities to actively conserve and maintain 210,000ha of rangeland by introducing rotational grazing practices covering an approx. area of 205,000 ha over 5 years. Innovative approaches to engaging communities in watershed management, and the establishment of local producer groups and associations will be undertaken through mobilization and capacity building. In addition, 11 Forages Seed Production and Propagation Centers will also be set up.
74. Protected Area management: will become another mainstay of the program reliant on inculcating ownership and sustainable conservation and management Protected Areas and Wildlife. This will be supported by the enforcement of relevant law and

commitment to the relevant International Conventions to develop biodiversity and strengthen eco-tourism. Based on similar models applied elsewhere in S. Asia, Protected Areas will gradually be expanded at national level from 0.34% to 2%¹⁹. Furthermore, the combination of cataloguing and prioritizing indigenous fauna and flora through scientific surveys in all 9 targeted protected areas will be carried out with expansion of tourist facilities and the promotion of community- managed models resulting in additional income and employment generation. This pillar also meets the requirements under SDG Goal 11, target 7 and SDG Goal 12, target 2.

75. Institutional and Human Capacity development: in order to regularly attain the expected outcomes. This will include finalizing regulatory frameworks, policies and sub-sectoral strategic and implementation plans. NR surveys will be designed partly in Kabul and shaped by primary data – the information gathered will inform planning and institutional and financial resource allocation. The development of capacity to deliver technical support through FRCs and hands-on knowledge through IASCs. This will include a critical realignment of staff and function at provincial level (PAIL) based on the establishment of a professional hub for NR planning and technical support to NRM planning. Furthermore, the PAILS will support the promotion of community-based NRM governance, which will involve mobilizing, establishment and registration of active community-based groups/associations.
76. Hence, over the next five years a variegated approach of short and long term measures will be undertaken in the above areas of sustainable forest management. Maintaining and improving rangelands, improving production and strengthening value chains for medicinal plant cultivation; enforcing protected areas and indigenous wildlife. In addition, links will also be developed between rural and peri-urban communities to build social awareness of the value of urban eco-systems and the provision of greenery for major cities to reduce air pollution levels. This strategy will be underpinned by a concerted capacity development that places MAIL in a facilitative position over the next five years as it shifts custodianship of common assets into community hands, identifies key areas of medium to long-term income generation for communities wholly reliant on forest and non-forest products. Investment in these sectors will allow for rapid growth of products that will contribute directly to economic growth of the country in a substantive manner.

6.6 Strategic Priority 6: Food and Nutrition Security, and Resilience Building

94. Afghanistan is a country with high-levels of food insecurity and severe malnutrition with 33% of the country facing high levels of food insecurity. While other components of this document jointly address the availability and access to food, MAIL acknowledges greater efforts will need to be focused in improving the utilization of nutritious food through dietary diversity (e.g. kitchen or commercial gardening) and food safety.
95. Building upon evidence-based strategies from previous similar endeavors, MAIL will collaborate closely with other Afghanistan Food Security and Nutrition Agenda (AFSANA) members to coordinate efforts through its Extension Workers and Home Economists to improve feeding and food preparation practices in a systematic and sustainable manner. This will move beyond a project-based approach and inculcated into, the general philosophy of DAIL and PAIL staff interacting with communities. hopes

¹⁹ NEPA. WCS. 2010. National Protected Area System Plan.

to bridge the existing gender gaps in addressing the needs of women engaged in the agricultural sector, centered around: providing technical support to meet women's needs in nutrition-sensitive agriculture, launching urban and peri-urban agriculture, small-scale agro-based enterprises, enhancing women's skills development training programs at community level in view of women's restricted mobility.

96. In addition to the emerging challenges of Climate Change, Afghanistan remains extremely vulnerable to multiple, predictable and recurrent natural hazards. Conflict and natural disasters, particularly flood, drought, landslides and earthquakes seriously affect the availability of food staples, cash crops and animal production. Without a modicum of support, traditional coping mechanisms may not be sufficient to ward off food insecurity.
97. However, addressing disaster mitigation and long-term attrition of vital natural resources as a result of natural disasters is beyond the scope and mandate of any one ministry. In line with national guidelines and in concert with other ministries, particularly MRRD and ANDMA, MAIL will bring to bear farmers' ingenuity and resourcefulness combined with a more systematic and technically sound nationwide initiatives to reduce the amount of natural resources and common goods that threaten rural livelihoods.
98. Maintaining a crosscutting institutional philosophy, MAIL will establish a unit to contribute to the planning off, and implement the national EPRR (emergency preparedness, response and resilience) strategy in line with pre-agreed responsibilities. In addition, the Ministry will strengthen Weather Early Warning Systems at its Research stations. It will also explore more innovative options around crop insurance and focus on development of disaster management techniques that address women's specific needs and also enhance their resilience through appropriate coping strategies. MAIL is exploring new ways to incorporate within its mitigation strategy the role of urban farming and encouraging women groups to engage in home kitchen gardening. The provision of specific extension services to urban women farmers is an important component in sustainability of urban food production beyond just the provision of inputs.
99. At the central level will focus on building institutional capacity on early warning and preparedness and adopting an agriculture-specific policy. At sub-national level, using its comparative advantage of its significant national outreach at district level and agricultural practices, it will work towards establishing a multi-ministerial regional level designated coordination mechanism to improve the quality of response in a timely manner, and activities that are anticipatory as well as mitigation-orientated. Thereby enhancing institutional capacity for the preparedness and response to affected population to protect agriculture-based livelihoods. Initially commencing with capacity building of key PAIL and DAIL staff, information and training will then be delivered to farmers and livestock producer groups focused on preventative measures such as at watershed and sub-watershed level, Irrigation Associations will support strengthening of water systems in tandem with CDCs.

6.7 Strategic Priority 7: Institutional Reform

100. MAIL, like many other Ministries, has undergone important changes in the last fifteen years, and particularly in the last two years. Attempts at redressing chronic challenges in the area of personnel, capacity and process management have begun and are fundamentally reshaping the nature of how the institution operates however, much

remains to be done. For MAIL to deliver on the promise of increased production and national agricultural self-reliance, a number of institutional reform issues must be addressed.

101. The current structure of the organization is incompatible with its stated vision of being a dynamic and a farmer centric organization. Much of the existing structures within the ministry reflect a vision from a former past that has experienced 40 years of war and diminished agricultural systems. The institution and its various departments, forty years ago, dealt with an agricultural population that was considerably smaller, productivity was remarkable given the mix of technology and traditional practices that were in use at the time and the role of women in Agriculture was markedly different. Most of the planning process was centralized and government had a critical role in supporting farmers and identifying markets for their products. However, in the intervening years neglect and conflict, has meant having to restore agriculture back to its former state. With promotion of a free market philosophy, agriculture, once again is a profitable proposition.
102. The last fifteen years has seen considerable strides in agriculture. However, MAIL continues to retain many of its vestigial structures from the past. In responding to the demands of farmers in the current setting, it needs to shed some of these structures. For example it needs to move away from budget execution approach to a more results based approach. Particularly as the country embarks on pursuing priorities, which will contribute greatly to income, expand employment and add to national revenues. A lot can be achieved with a motivated and dynamic work force – albeit critical changes, that promotes accountability and a culture of personal responsibility.
103. While MAIL has embarked on reform through the Capacity Building for Results (CBR) program, which is helping to reshape some of the workflows involved with personnel. Nonetheless it remains confined to improving personnel process management with limited impact. Reform assumes that the Minister and his senior managers have had an opportunity to bring about requisite changes at the MAIL, after which the normative requirements of transparency and adherence to rules and regulations would be overseen by the Independent Administrative Reform and Civil Service Commission (IARCSC). However, the processes in place require the IARCSC to approve all changes, big or small; thus making any meaningful attempt at reform impossible. The bureaucratic process has hindered and seriously set back the ability of the institution to meet its intended mission objectives in terms of reform. For senior management at MAIL to engage in a meaningful reform process they need an unequivocal commitment and urgent support, at the highest level unimpeded by structural constraints.
104. Reform at the Ministry will require an evolving critical focus on mid-level and senior leadership positions, in addition to a functional review and re-profiling of the various positions in MAIL, leading to a smaller, agile and responsive institution. Reformed management practices must reflect renewed emphasis on leadership and professional qualities that motivate and support junior staff. It must accept responsibility for initiatives and look to solutions within the confines of its departmental mandates without having to consult and acquire signatures on every issue. Furthermore, MAIL will undertake to provide requisite training to new staff at the center and its provincial and district staff to bridge the distance between farmer and service providers.
105. Building on the current memorandum of understanding between MAIL and Ministry of Higher Education, the options of tailor-made trainings, joint and awarded research

and curricula development with the agriculture faculties around the country will be explored. Similarly, cooperation with Ministry of Education will be made to address the quality of agriculture schools curricula with a specific focus to recruit graduates within MAIL system or on the farm.

106. In line with the seven priorities, the Ministry envisages a fundamental change in its structures. MAIL over the next two years will restructure its Kabul headquarters by reducing and re-profiling some of its departments. The Kabul centric approach is no longer responsive or compatible with its mission of placing farmers at the core of its mission. The mechanism of the Citizens Charter, including MAIL's investment in Extension Services are providing a new reality on the ground and it challenges the institution to adapt to new practices and ways of doing business. In fact the process of change has already begun with the identification of 34 new provincial Directors, who have been interviewed and are waiting assignment. The process of reform is continuous and will include changes at all levels of the institution.
107. A farmer-focused Ministry will reconsider its current provincial structure. The current structure at provincial level is referred to as Department of Agriculture Irrigation Livestock (DAILs). Existing DAILs will be renamed as Provincial Agriculture Irrigation Livestock (PAIL). PAILs will undergo significant change in terms of its management and technical profiles. Apart from housing a small management team the PAILs will host Farmer Resource Centers (FRCs). It shall provide technical and knowledge sharing functions to its clients at the provincial level. The FRCs will train the re-profiled male and female extension officers from the districts, commercial and lead *farmers*, who in turn will assist farmers at the district level through demonstration plots including modern agricultural and other knowledge sharing techniques. The PAILs, unlike the past, will not attempt to emulate MAIL functions at the provincial level with exception of coordinating data and information that will be disseminated upwards from the districts so that PAILs can attenuate their technical requirements. Based upon a comprehensive assessment, it is envisaged MAIL will minimally centrally retain its 'corporate functions' in form of its relevant departments such as Planning & Policy, Personnel, Deputy Ministerial Posts, Ministerial Support Systems, Procurement, Regulatory Functions, Finance, Legal Department and relevant Corporate Services.
108. Within this restructuring, the establishment of the District Agriculture Irrigation and Livestock (DAILs) will become the most critical platform in moving MAIL's development agenda. At the district level a greater level of integration among sectors (e.g. irrigation, livestock, horticulture, etc.) must take place so that information and knowledge that is shared from the PAILs will have a discernable impact on agricultural activities. To reach that target the Ministry will re-profile the extension units at district level as Integrated Agricultural Service Centers (IASC). The proximity and presence of extension services in an integrated manner will allow farmers and herders to interact on a constant basis with a group of extension experts representing various sectors. It will further ensure that the current sporadic and disorganized approaches will be minimized. Thus fundamentally changing the relationship between farmers and the chain that includes MAIL, PAILs and DAILs.
109. MAIL endeavors to rationalize and reduce bureaucratic workflows between the PAILs and DAILs. Planning inception will be bottom-up starting with the farmer at the DAILs; information compiled will be shared with the PAILs where needs will be matched with requirements of technical needs at the Provincial level. Once technical requirements to support DAILs are finalized at the PAILs, plans are forwarded to the Planning Directorate for investment consideration and finalization. Reporting and

monitoring will be undertaken by DAILs; while PAILs will ensure that they are consistent with agreed plans and compiled to be forwarded to Kabul MAIL offices. The above process will be done in a timely manner through establishing a proper e-governance system so that planning information and communication between MAIL, PAILs and DAILs are done in 'real time'.

110. To undertake this change in the Ministry, the reform process requires the support of both senior government officials and donors. Achieving the ambitious targets given to MAIL for the next cycle of (2017-2021) can only be realized if due attention is given to the fundamental issues that continue to hinder the organization's effective performance. Reform must achieve results for farmers and by extension to many who support agriculture in Afghanistan.

7 Drivers and Enablers

7.1 Planning as key enabler

111. MAIL while having a formal planning process it is ad-hoc, pro-forma and devoid of meaningful impact on the broader strategy of the institution to ensure priority in its plan for investment in agriculture. Much of planning in MAIL is based on unverifiable data from provincial offices supplemented by anecdotal information gathered by on or off budget projects. The combining of such data gathering efforts often produces contradictory and unreliable information to base planning assumptions on. More than often decisions on budgetary and investment in agriculture are based on previous year performance, which is a weak and incomplete indicator of agricultural performance.
112. Information gathering and management is key to sound planning. PPD will merge the statistical department with its GIS unit to increase cross integration of information and data to ensure that planners have the most up to date data to base their assumptions on. Addressing SDGs specially where disaggregated gender data and other information are required is key in recognizing the need for timely intervention.
113. As part of its reform efforts MAIL will introduce a new planning system that involves gathering data from farmers through extension services at the DAIL level. Information compiled at the PAIL level, by sectoral analysts, will be systematically verified, organized, consolidated and reported upwards to the Planning, Policy and Program Directorate (PPPD). PAIL consolidation of information will cover a range of activities but not limited just to production; it will include data to on type of production, spoilage, value exported, market access, opportunities, constraints, access to irrigation, pest management, veterinary services, animal production, state of NRM, pasture management and a range of issues that men and women farmers are concerned with.
114. PPD will use a number of distinct approaches in gathering information and data through its Geographic Information Systems (GIS) capability and other means: To accurately estimate the total crop area of the country using GIS and Remote Sensing technology. The GIS team will conduct accurate crop identification using ground survey and satellite imagery (true color and multi spectral), with emphasis on wheat area identification, including crop yield, particularly wheat (irrigated and dry land), per unit of land across the entire country. This capability is available and is being

conducted and will be supplemented by on the ground manual collection of farmer data including household size animal holding etc. The remote sensing data will guide the MAIL teams to areas where there are concentration of agricultural activity in the first instance and allow to MAIL to identify isolated pockets of farming activities that are often neglected. The GIS capability will be further increased in the coming years with the addition of newly trained staff, equipment and ability to analyze remote sensing for better planning.

115. Data and information compiled at the PAILs will be provided to the PPPD who then will start a series of consultation with relevant directorates, at MAIL, to make critical assessment based on the merits of data provided, on investment strategies for respective provinces and sectors. Data aggregation at MAIL will link corporate requirements to support, achieve targets and contribute to results framework of the organization. Each department at MAIL will be linked to the support and performance of farm level activities. A Consolidated Corporate Plan will be submitted to the Minister for his final approval prior to being submitted to the Ministry of Finance. Departments found to be incapable of demonstrating their contribution to the advancement of the various development programs for farmers will face either reduction and or complete re-profiling, to ensure their relevance to the new 'farmer centric' philosophy of the Ministry. A CCP allows for a professional approach to husbanding limited resources and producing greater efficiency in supporting outcomes.
116. Systematic data gathering will better inform not only the planning process across the Ministry but will also have considerable impact on Sector Wide Coordination (SWC) with donors. Projects whether on budget or off budget must evolve within a new planning framework given that current arrangements reflect a number of concerns: Project ideas, while initially discussed with MAIL, often are designed with minimal participation by MAIL experts. Donors rely on contractors to design, procure, implement and monitor projects where MAIL or its representatives are virtually absent. Periodic joint reviews tend to be *pro-forma* and are not a serious substitute for 'hands on' participation. Thus absence of ownership creates an "otherness" that excludes institutional responsibility for projects funded and implemented by donors. Project concept development, design and implementation can no longer remain the exclusive domain of contractors alone. Shortage of expertise and capacity, if of critical concern, can be addressed by donor participation in creating the necessary capacity to help design and address these shortfalls and provide an important asset toward institutional sustainability. MAIL intends to bring all projects irrespective of their budgetary assignment under a common planning umbrella.
117. The PPPD will develop a transitional plan to ensure that all existing and future on or off budget projects are incorporated in the planning framework of the Ministry. Recognizing that many off budget projects have a fiduciary and programmatic responsibility to their respective donors, a transition plan that incorporates their work plans within the broader context of the corporate plan of the Ministry will be developed. The intention here is to align investment with the broader needs of the country and to ensure that uncoordinated activities are discouraged. Similarly, consolidating, the work-planning, design, implementation of both existing and future on budget projects under the umbrella of the PPPD will allow for streamlining and considerable savings in transaction cost. It will also ensure programmatic coherence. For example, virtually all on budget projects have their own Project Management Units (PMU); functions such as admin, finance, procurement are conducted separately and are duplicative given that all transactions must be routed through the Ministry's finance, procurement and administration system. This duplication gives the

impression that projects are operating at a greater level of efficiency without regard to the cost benefit analysis of such arrangements. Furthermore, consolidating these activities centrally presents the potential possibility of creating enhanced capacity while providing saving to donors and the government.

7.2 Research and Extension

118. Research is a critical link to the maintenance and development of agricultural practices and knowledge development. The presence of Research Centers across the country provides an opportunity to promote a cross section of research and development efforts that will provide farmers with the added advantage of maintaining the primacy and quality of their products in an ever increasing competitive world market. Bearing in mind the sustainability of such centers is key to its continuous support to extension and farmers. To that end MAIL is exploring ways to ensure financial sustainability through self supporting mechanisms without undermining of these centers.
119. Both research and extension are inextricably linked. The inter-relationship that holds great promise must be capitalized upon, to ensure for both functions to consolidate their activities to support resource-rich areas as well as communities that have limited outreach. Research and extension services products and know-how must play a critical role in providing opportunities to marginalized farmers whose graduation from poverty must be a priority. By supporting research centers and through their products farmers MAIL is well on track to meet the requirements of SDG 9, target 5.
120. Building on the current farmer-centric approach to service delivery, research and extension will greatly benefit from a phased strategic shift in emphasis and investment from Kabul to the provincial DAILs (PAILs) and District (DAILs). The resulting increased autonomy will allow PAILs to take on more of a management and technical lead through the aggregation of research staff and requirements in tandem with recruiting a cadre of technical staff to cater to DAIL knowledge requirements. Thereby taking the lead in downward planning, implementation, and monitoring and impact assessment of demand-driven technical support packages and interventions.
121. Proportionally, the largest investment will be in the DAILs, which are closest to the farmer. At this level, there will be increased focus on recruiting female staff to ensure as inclusive an outreach strategy as possible. At district level, provision of these demand-driven and timely services will be carried out through a national network of (FRCs) located within PAILs. These FRCs will be invested in to acquire the capacity to provide technical assistance directly through the DAILs to farmers, whilst also being viewed as a 'one-stop shop' linking farmers to input suppliers and promoting backward and forward market linkages, IPM, and storage.
122. FRCs will broker business relationship amongst stakeholders, bringing together the decentralized services of all relevant ministries working in the area. Similarly, DAILs will become the premier delivery mechanism of know-how, support and advice to farmers at the community and village level. Much of the ideas and knowledge developed at the PAIL will migrate downward to DAILs to address farmer's needs irrespective of their sectoral requirements.

7.3 Input Delivery System

123. Farmers continue to face numerous challenges in acquiring high quality inputs in a timely manner. Markets are currently dominated by imported agricultural inputs of dubious content and quality. In order to provide these inputs in a demand driven

manner, endemic issues around quality will require mitigation through enforceable regulatory and legislative actions under multi-ministerial ownership.

124. In the case of seed production, the current system is far from market-oriented, requiring MAIL to act as a middleman to purchase seed to pass on at subsidized rates. In addition, the seed has quality constraints and is well below the required levels of production, with an actual target of 30,000 MT still being unmet. The unmet needs of farmers are over 20,000 MT. MAIL will seek to change the above system by introducing a repayment mechanism by the farmers in kind and or in cash. In doing so, MAIL will use the cash/in kind input to store wheat in its "grain or seed bank". Thus over time removing the need for subsidizing wheat and other seed inputs. It will also allow MAIL to broaden its distribution of quality seeds to other framers while reducing its overall investment in subsidized seed distribution. Similar constraints are faced in Horticulture, which has limited access to certified saplings and seeds, which will be addressed in extending the capacity of Perennial Horticulture Centers (PHDCs) and that of ANNGO, Afghanistan National Nursery Growers Association.
125. MAIL will develop an exit strategy that will reduce Ministry's involvement in seed distribution and increase oversight and quality control, where private seed producers will engage with farmers through IASCs including inputs such as fertilizers, improved seeds, and seedlings. MAIL will also explore the possibility of shifting the responsibility of input distribution to local institutions such as Agricultural Cooperatives, and private sector actors under public sector oversight. Currently laws covering inputs such as seeds, pesticide, fertilizer are undergoing due diligence - these will need to be further enforced through regular monitoring, inspection laboratory testing; institutional capacities yet to be developed.

7.4 Agriculture Credit

126. Access to credit by farmers and herders remains an immense challenge that has been addressed in a fragmented and piecemeal manner to date, based upon a few programs or projects engaging with the rural finance market. There is a view that commercial banks can play a major role in agriculture. However, the risk-averse nature of these institutions has resulted in finance packages for those with assets and collateral. It is to be hoped they will soon be able to manage necessary lending to agribusiness, which they are not serving adequately at present. Majority of Afghan farmers are not in a position to provide guarantees to qualify for small loans, clearly alternative ways need to be explored to address the poverty of capital that many farmers face.
127. Whilst MAIL has increased credit availability through partnerships with credit institutions, a more coherent approach, which builds upon existing credible agricultural and other institutions, will need to be taken. At the higher level, this will include developing better defined financial policies to stimulate more credit institutions to serve the supply and value chains for more efficient development of the agriculture sector and the related activities and industries. At ministerial level, there will be greater collaboration with the growing number of competent Afghan MFIs and private sector entrepreneurs to ensure financial and business-related inputs are demand driven by farmers' producer groups and herders.
128. With the longer-term view of paving the way for an Agricultural Development Bank over the next five years, MAIL will push for all actors in this sector to develop other "financial intermediaries," typically cooperatives and farmer associations. Within each established intermediary, credit management units of local finance and administration personnel will be put to task. Yet another approach to increasing the uptake of

agricultural credit is by capitalizing upon past group credit guarantees, which greatly reduce default risks in the system. Agricultural cooperatives and enterprises could become farmer owned and managed although, they might start out with an injection of donor grants, government capital and government management, particularly to ensure high standards in transparency and accounting.

129. Over the next five years, credit will be instrumental in mitigating risk sufficiently to enable value chain participants to try new markets and adopt new technologies to meet market requirements. A menu of agriculture financing packages will be tailored to capture the smallholder farmers and, ultimately will turn them into commercially viable enterprises and to meet the requirements of SDG 9, target 3.

7.5 Farmer Organizations

130. MAIL recognizes that without an organizing principle around, which farmers can coalesce, organize and utilize provision of credit and other services such as value chain and market development progress is likely to remain limited. Development support of farmers' including organizations such as Cooperatives, Associations, Unions, Village-B/Common interest Groups, etc.' is a first step in organizing both male and female farmers. It will lead to better horizontal and vertical integration of value chains and will act as training and technology knowledge exchange centers to promote organized farmer groups in dealing with the business sector.

131. Farmer's view of the market place is mostly confined to their regional interaction with villages sometimes with towns and less often with cities. Organizing movement of their products to larger towns and cities is often constrained by cost and access to means of transportation. Often farmers are at the mercy of traders who will visit their farms and offer to buy their products. The fact that farmers are unaware of market prices; are cash poor and require to sell their products as soon as they can; leaves them vulnerable to predatory practices by traditional buyers and traders. The creation of cooperatives and associations will go a long way to address this structural problem among many farmers.

132. MAIL proposes specific objectives to help farmers overcome some of the constraint discussed:

- Ensure farmers ability to join Farmers Organizations (FOs) on a voluntary and democratic basis;
- Improve the livelihoods of men and women who join FOs;
- Ensuring food security in communities;
- Creating self-financing reliance through credit institutions;
- Promoting self-help approach through FOs;
- Institutionalize mechanism to effectively involve FOs in agricultural policy making and implementation;
- Greater synergy with emerging structures under Community Development Councils and Citizens Charter.

133. A critical element in the development of FOs will be the enabling role that MAIL will play in helping organize farmers. Farmers are keen to understand their advantage in belonging to an organization that will promote their income and create greater economic stability in their lives. Farmer as an economic agent of change must be convinced of the relevance and utility of any association and or cooperative. The

facilitative role of government must not seek to overshadow the natural 'space' within which trade and economic exchange takes place. Farmers need to understand what tools are available to them to place them in a competitive position vis-à-vis traders; similarly traders need to become aware that by farmers organizing themselves they are likely to face greater competition.

7.6 Private Sector Support and Public-Private Partnerships

134. As envisaged in the Realizing Self-Reliance document tabled at the London Conference in December 2014, this document and its revised strategic framework, places Public Private Partnership (PPP) at the very center of its efforts in ensuring an enabling environment for various sectors in agriculture, to realize its full potential. Critical understanding of the role of the private sector, in achieving sectoral targets, and the creation of capabilities along value chains is one of the most important reform tasks.
135. The growing emphasis on involving the private sector across as many agricultural activities as possible requires both inter and intra-ministerial collaboration and coordination. Due consideration will need to be given to (i) regulatory issues dealing in transferring of state assets and contractual obligations around large-scale contract farming; (ii) seasonal trade tariffs allowing Afghan producers and processors' exclusive access to domestic markets; and (iii) tax incentives. In all of this, MAIL has the mandate to provide policy formulation, legal and regulatory frameworks, supervision and monitoring and facilitating the provision of technical assistance and supporting the farmers, farmer's organizations and the private sector.
136. Over the next five years, MAIL will continue to pursue an economic development strategy based on private sector investment in value-chain processing to stimulate market-driven demand and agricultural productivity. This will be achieved through the establishment of a variety of strategic initiatives to attract international large-scale domestic private sector investment as well as strengthening farmer groups, cooperatives, small and medium size enterprises all of which form the nucleus of private sector and market development. The ultimate aim being the provision of employment and security for local people, which in turn stimulate economic development.
137. Attracting larger investments will be undertaken through incentivizing the private sector to invest in Agricultural Industrial Parks (AIPs). These AIPs will offer opportunities to share costs in value addition activities, thereby providing a replicable model for increased efficiencies and lower production costs. Where possible, Public Private Partnerships (PPPs) will be used to bring together demand driven input supplies and services currently delivered by MAIL with private sector agents investing in other value adding elements of the value chain including improved market linkages. MAIL will establish a separate PPP unit to bring the required expertise to be able to handle simple PPP partnerships that will gradually scale up to more complex and bigger PPP projects.
138. Smaller commercial farmers will also be encouraged to link with private sector entrepreneurs through district level Integrated Agricultural Service Centers (IASCs) where smallholders and commercial farmers can receive help from the public and private extension services as well as inputs from various stakeholders. At this level in particular, female participation in enterprise will be focused upon to bolster and support the marginal number of female entrepreneurs. The majority of their businesses are in the handicraft and services sectors, many subsidized by donors, thereby calling

into question their sustainability. The challenges facing female entrepreneurship is further exacerbated by the limitation of social-cultural customs, with support for women to work outside home seemingly declining.

8 Cross-cutting Components

8.1 Agribusiness

The expansion in production and productivity of the Afghan farmer is moving at a faster pace than anticipated. Accesses to improved inputs and technology have resulted in surplus in a number of areas in agriculture. This increase in production requires greater emphasis on the development of markets and transitioning from current subsistence farming practices to rationalized market oriented production systems. The potential for expansion of the agribusiness sector is enormous and requires a number of enabling instruments to transition into a new era of production and marketing. Such a transition requires that constraints and challenges are closely examined and the establishment of essential platforms to realize this important potential. Given the increasing number of agriculture value added products (18 products), it is essential that initiatives relating to agribusinesses are directly linked with emerging value chains.

139. Access to Capital: A key constraint to transition from subsistence and traditional farming methods to modern practices is the absence of capital and ability of farmers to access it. Existing financing arrangements are simply not suited to the requirements of farmers being able to transition from subsistence farming to that of 'extensive' production and market oriented farming. Current access to financing is extremely limited and tends to favor farmers who can provide guarantees to finance agricultural loans. Many of the lending institutions are risk averse and consequently a great opportunity to graduate marginal farmers, through; well thought out programs is missed.
140. Access to Land: A major constraint is access to land by entrepreneurs and investors. Often the process of acquisition of land by would be long regulatory and bureaucratic processes stymie investors' interest resulting in investors shifting their focus from agribusiness to other areas. The negative impact of such delays in approving access to land also has a direct impact on potential on-farm employment and associated support businesses.
141. Regulatory framework: Small informal associations and cooperative often are the leading edge in the transition from subsistence farming commercial farming. The regulatory framework for downstream producers such as associations and cooperatives are often unclear and contradictory. By definition, associations and cooperatives should be encouraged to organize and rationalize their internal management and not be subjected to regressive tax regimes and outdated regulations. The potential for these groups is enormous; they embody the most basic entrepreneurial practices and are the potential vehicle for many subsistence farmers to graduate into a modernized agricultural production and market oriented system.
142. Access to Technical Assistance: The move towards a robust agri-business sector requires a knowledge-based approach from the early phases of production through the supply chain and access to markets. Many of the traders in Afghanistan, are considered as

'traditional' traders. Their perspective is formed by tradition of managing and interacting with supply and value chains that are proximate and confined to long established practices of exporting to known established markets. The notion of value added practices such better packaging; phyto-sanitary control, cold storage and exploring new markets, generally, are **not** areas of concern for traditional traders. Provision of know-how and marketing techniques that go beyond working with traders is key. For example, working with farmers through targeted extension services on marketing can provide the necessary awareness on part of farmers to demand and negotiate better prices and access to markets. It can also create a greater awareness about market potential and the necessary conditions for farmers to coordinate their production quality and supplies with the demands of the market.

8.2 Counter Narcotics

143. In spite of the Counter Narcotic (CN) efforts of the Government and the international community, poppy cultivation has been rising over the last 15 years, culminating at 224,000 hectares in 2015. Poppy production distorts economic incentives against competing licit crops, undermining state legitimacy and the rule of law, and fueling corruption and the insurgency.
144. Although the yield of raw opium has varied sharply in recent years because of environmental factors, disease, oversupply and law enforcement activities, the overall trend is one of rising cultivation, and this trend will continue unless sustainable alternative on-farm and off-farm livelihood strategies are provided, particularly to subsistence farmers.
145. The licit agriculture sector currently lacks the necessary dynamism in production, productivity and markets to sufficiently address issues of farming and rural poverty and unemployment, providing viable alternatives to the cultivation of illicit crops. It requires a coordinated approach to ensure that new and expanded on-farm and non-farm opportunities add up to a viable alternative to poppy growing, in terms of the income and job opportunities they offer to farmers and rural communities. Investing in irrigated wheat by facilitating irrigation poses the risk of resuscitating opium poppy cultivation. Thus, it is important to institute mandatory counter-narcotics impact assessments for irrigation projects.
146. As wheat is typically a lower value crop than poppy, it is quite possible that parts of the rehabilitated irrigation areas intended for wheat could end up under poppy production. To address such risks in opium poppy growing areas, the strategy should prioritize interventions to raise irrigated wheat productivity (raising yields per unit area), rather than expanding area under irrigated wheat. In other words, expanding wheat cultivation could be assigned lower priority than investments in perennial horticulture and intensive livestock production, which could compete better with opium poppy.
147. The risk that promoting horticultural crops will promote opium poppy growing is smaller than that from promoting wheat, because the output values per hectare of horticultural crops are more competitive with that of poppy. Thus, prioritizing the development of perennial crops such as vines and tree fruits rather than annual horticultural crops might help in this regard, because once in place these crops commit land over the entire year and for an extended period (typically 25 - 30 years), and

represent “sunk” investments that would be costly to shift back to opium poppy cultivation. Similarly saffron, which has an initial high investment cost and occupies land for 7-8 years, would be more effective than annual crops in competing with poppy.

148. The Sub-components of the program, as designed, jointly facilitate the strengthening, provision and diversification of licit rural livelihoods, with a particular focus on subsistence and marginal farmers and laborers, thereby supporting reduction in poppy production in CN-priority provinces. It focuses notably on research and extension services, improved agricultural production methods and agriculture infrastructure development. However, as per the “International Guidelines on Alternative Development”, a coordinated effort is needed on the part of the Afghan Government and countries affected by the flow of narcotics, to create an enabling environment for agriculture to flourish along with other sectors of the economy. All as a “shared responsibility” must recognize alternative development, to address CN.

8.3 Women in Agriculture

149. Afghan women’s role in the agricultural sector is a paradox. While women play a critical role in agriculture and food security, accounting for nearly 43% of the sector’s labor force, they still remain on the periphery with limited access to productive resources. Despite their important contribution towards the fight against food insecurity and poverty and their significant role in natural resource management, women are subjected to different types of social and economic exclusions. These restrict their access to productive resources and economic opportunities to develop their full potential. Their participation is primarily family-based, without remuneration (not accorded a monetary value) and they are rarely compensated for their labor in terms of time allocated.

150. The feminization of the agricultural workforce in Afghanistan results in part from the coping strategies adopted by women to diversify their livelihoods, which are gendered. Men usually cultivate the lucrative crops, or migrate as seasonal or permanent workers; while women cultivate the family plot for household consumption, care for small livestock, process and/or sell part of their production in local markets. Compared to Afghan men, Afghan women have little access to decision-making over agricultural inputs, outputs, and product markets. Nevertheless, Afghan women continue to contribute significant amount of time to agriculture and livestock production as well as to a broad range of products in both areas.

151. With an established gender strategy and a dedicated Gender Focal Point at MAIL, mainstreaming and institutionalizing gender issues within MAIL remains a challenge with two Directors working in Kabul and none at provincial level. While there is an overarching Gender Policy for MAIL, some Directorates and programs/projects have developed their own respective gender strategies or guidelines to inform their activities. There remains an absence of coordination among the individual initiatives of each directorate, programs and projects. A well-planned approach to coordinate the integration of gender in every intervention of MAIL is conspicuous by its absence. Consequently, the issue of mainstreaming women’s equality and promoting women’s empowerment have not been clearly understood in a uniform way by all concerned; and secondly, the absence of coordination has prevented collaborative efforts from taking shape to deepen the impact on target groups.

152. The increased presence of MAIL’s Home Economic Department (HED) at the provincial and district levels, has allowed the MAIL to promote awareness of women’s

work in the sector. Using successful women farmers as role models and mentors for a cadre of younger women farmers will further strengthen women's confidence, dignity and participation. In addition, this intervention and approaches create a space for improved woman-to-woman coordination and information sharing to provide support and assistance to women in times of disaster, and ensuring an effective implementation of the strategy in the context of MAIL's Gender Policy. Current HED programs include work with women in the communities in order to economically empower them and increase women's contribution to increase family income. HED is in the process of designing programs to specifically address sensitization of men farmers on the role and contribution of female farmers the CDCs.

153. Despite these challenges MAIL is committed to bring about critical focus on gender equality women's role in agriculture. The participation of women in all aspects of work related both institutionally and otherwise is a priority that MAIL is incorporating in its planning and implementation efforts. In achieving this important SDG Goal 5 (target 5,7,8 and 9), MAIL is restructuring its reform efforts to ensure that women's rights and economic empowerment is addressed both legislatively and economically. Developments in utilization of new information technologies at the farm will enable women who are excluded from public access on economic information to access such information through telephone cellular technology. Access to information and economic important will serve as important driver for change among rural women producers.

8.4 Anti-Corruption

154. MAIL not unlike many other governmental institutions is susceptible and impacted by corruption. Senior managers in discharging their responsibilities are often the target of pressures and undue influence by a variety of external institutional means. Some are in the form of political pressures while others may involve monetary incentives. Irrespective of the source and nature of pressure, senior managers at MAIL are committed to modeling the best practices to ensure that middle managers and junior staff are aware of the scourge of corruption and are equipped to do battle against.
155. Senior management at MAIL is engaged in ensuring that processes in use at the Ministry, are consistent with national policies on anti-corruption and that reform efforts provide a framework to identify potential areas for corruption in workflows as well as policies. For example procurement processes are aligned with the newly established National Procurement Commission's guidelines, as set out by the Office of the President and Ministry of Finance.
156. Recruitment processes are particularly susceptible to corruption and political influences and pressures. Strengthened and an independent Human Resources department may help reduce the spread of corruption by introducing strict merit based procedures that attract qualified people. Simplification of business processes and application of integrated electronic system may help in reducing corruption. Complicated procedures and redundant workflows often result in delays and are prone to misuse and exploitation.
157. Public private partnership strengthens MAIL's efforts against corruption by empowering interest groups such as farmer groups, community members, civil society in building consensus and identifying areas of corruption. Recognition of interest groups as stakeholder in policy dialogues can serve as a catalyst for a corrective measure to combat corruption.

9 Implementation Strategy and Mechanism

158. Sequencing the reform process will involve a number of key actions.

- Irrigation being the first priority, MAIL will use the irrigation department as a reform model, the following actions will be undertaken. Managerial capacity assessed and addressed;
- New management team in consultation with senior ministry leadership provides advice on investment options based on priority areas including information provided through baseline and GIS survey data;
- Develop a priority plan that includes using GIS and baseline data to determine geographical areas for project work identification;
- Based on scope of work determine the support structures at central, provincial and district levels including resources required to implement reformed structures;
- Evaluate and introduce streamlined work flows and process management concepts utilizing e-governance;
- Identify, recruit, train and deploy new and existing technical staff to different locales;
- Integrate new functions within provincial and district structures including increased outreach to farmers;

159. MAIL will use the above approach to sequence its reform work further integrating other directorates in a manner that is not disruptive of the work assigned to them. As part of its integration and reform efforts, MAIL is developing a consolidation plan to ensure that the various projects working in irrigation will be brought under the programmatic aegis of the Irrigation Department, reducing duplicative services in administration, logistics, finance and management.

160. A number of Task Teams will be formed to oversee the implementation of this strategy. The task teams will comprise key technical staff in MAIL from Kabul and Provinces, chosen to represent the best possible blend of technical and reform-oriented practices. These task teams will support MAIL leadership in rolling out reforms and provide practical implementation guidelines to achieve the intended results. MAIL will seek to initially pilot comprehensive reform in the five provinces covering a total of 50 Districts.

161. The provincial and district reform process will be initially piloted in the first six months and will be expanded to another five provinces within a year's time. An experienced Task Manager will lead the Task Team. The Team will comprise of a specified number of experienced analysts and managers to proactively engage across a wide spectrum of sectoral disciplines, ensuring the process of managing and meeting established targets are met. The Team and the manager will be responsible for liaising at different levels across MAIL, provinces and districts to identify problems, opportunities and creative solutions in what is likely to be a difficult and challenging transition. The Team will be periodically assisted by national, and when required, international consultants. The Task Teams, as they identify capacities, assets and consult with provincial and district

staff including Provincial Governors and District Governors, will build the necessary momentum to refocus efforts to intensively support farmers.

162. In line with the seven priorities, the Ministry envisages a fundamental change in its structure. In adopting a more farmer-centric approach, resources (human and financial) will need to be reorganized and reallocated to the province and district levels. This will ensure a more demand-driven and innovative utilization of MAIL resources at farm level, supported by a coherent and interlinked technical and research-based hub at the provincial level.

9.1 Institutional Reform at the Centre

163. Reform at the Ministry will require a critical focus on the rationale of mid-level and senior leadership positions in line with a functional review of the various positions in MAIL and lead to a smaller, agile and responsive institution. Reformed management practices will reflect renewed emphasis on leadership and professional qualities that motivate and support junior staff. It must accept responsibility for initiatives and look to solutions within the confines of its departmental mandates without having to consult and acquire signatures on every issue.
164. A series of managerial and functional adjustments will be carried out to shift from the relatively uncoordinated project-based structure currently reliant on post-facto involvement in key areas of design and implementation, duplication of functions and unsynchronized resource utilization. The first strategic shift will be to link existing projects as a whole, or by key activity to the relevant MAIL Directorate. Positioning MAIL Directorates at the center of oversight and coordinating implementation will provide a program-based approach to MAIL activities, increase coordination and information sharing between Directorates, and build the capacity of MAIL to take a more hands-on and longer term planning approach to the application of its portfolio. The resultant reduction in transaction cost and increase in accountability will speak for itself.
165. Simultaneously, the international community will adhere to new MAIL guidelines on a process of inclusive planning of all pipeline projects from conceptualization to implementation and evaluation. This will ensure key priorities and gaps are jointly identified, effective resource mobilization can be planned in tandem with appropriate designs and implementation modalities efficiently delivered.
166. The end state of the will be that of a significantly reduced physical presence built around the support and delivery of corporate obligations to the overall direction and management of the Ministry. Restricting itself to macro-level issues, the Ministry will predominantly focus on donor relations; national agricultural policy. MAIL will minimally retain at its Kabul facilities relevant departments such as Planning & Policy, Personnel, Deputy Ministerial Posts, Ministerial Support Systems, Procurement, Regulatory Functions, Finance, Legal Department and relevant Corporate Services.
167. In practical terms, this will effect a change from a somewhat prescriptive and unresponsive supply-driven approach to a system of demand-driven services and input provision requires organizational changes and the integration and coordination of several different elements such as:
 - Multi-ministerial platforms to foster the required regulatory and legislative frameworks to enable an enabling environment for national and international initiatives targeting self-reliance;

- Updating regulatory frameworks and quality control to create and maintain enabling environment and foster PPP models.
- Development of an integrated and synchronized agricultural services provision strategy;
- The strengthening/creation of appropriate institutions to maintain and expand activities by providing legitimate basis, policies and de-centralized financial decision-making;
- Identification of a common platform/point of entry for developing demand driven services and inputs provision;

9.2 Technical and Coordination Hub at Province Level

168. Existing DAILs at province level will be renamed as Provincial Agriculture Irrigation Livestock (PAILs). The existing structures mirror that of MAIL in Kabul, with a number of Directorate staff reporting to the Agricultural Affairs Officer at the Province level as well as to relevant Directorate in Kabul. Most reporting and information flows upwards, often of questionable veracity and with very little response or feedback from Kabul. The quality of information that is sought from Directorates are often proscribed and not of any analytical value. Content and value are sacrificed to meet reporting targets that do not provide sufficient substance to derive policy recommendations or the development of investment strategies. Authority to make decisions is very limited and financial decisions are controlled entirely by Kabul.
169. In order to make service delivery more responsive to Farmer's needs, PAILs will undergo significant changes in terms of management and technical profiles. Apart from housing a small management team, the PAILs will host Farmer Resource Centers (FRCs). FRCs will provide technical and knowledge sharing functions to their clients at the provincial level. The FRCs will train the re-profiled extension officers from the districts, commercial and lead farmers who in turn will assist farmers at the district level through demonstration plots including modern agricultural and other knowledge sharing techniques. The PAILs, unlike the past, will not attempt to emulate MAIL functions at the provincial level with exception of coordinating data and information that will be disseminated upwards from the districts so that PAILs can attenuate their technical requirements. Staff for these FRCs will be a combination of existing reallocated staff and the recruitment of specifically skilled individuals recruited from the open market.
170. The FRCs will draw upon a number of additional resources such as PHDCs, relevant University faculties, Regional Research Stations, with the addition of smaller specific laboratory facilities to provide province-specific services to support quality control along various segments of the value chain
171. Again, in practical terms, PAILs will provide the required technical backstopping for district level staff to be able to provide the required information, support and mentoring of farmers with the long-term aim of inculcating the concept of need-based, demand-driven services based on payment²⁰. Hence, providing comprehensive

²⁰ Thus "demand" is here defined as what people request for, need and value so much that they are willing to invest their resources, such as time and money. In order to deliver services that can be defined as demand driven, the following main principles need to be applied: (i) Services shall be driven by user demand; (ii) Service providers shall be accountable to the users; and (iii) Clients shall have a free choice of service providers

integrated need-based services and inputs require a responsive cadre and skillsets to meet farmers' needs and ensure they are clearly understood by the providers. It is important to keep in mind that poor farmers are usually disadvantaged with limited access to rights, assets and services and it is important that these farmers become visible to the service providers enabling them to actively identify and demand the services they require.

172. In turn, FRCs will provide the technical resource pool to increase the perceived value of district level service delivery. FRCs will provide a responsive technical package tailored to the requirements of an evolving set of agricultural needs. This approach is designed to create the change from a supply driven to a system of demand-driven services and input provision requires organizational changes and the integration and coordination of several different elements such as:

- Develop information and guidance on regulatory requirements including setting of standards for agricultural inputs, products, etc.
- Create a repository of knowledge based upon technical resources and indigenous knowledge
- Prepare a collection of package training resources

9.3 Service Delivery to Farmers at District Level

173. Within this restructuring, the establishment of the District Agriculture Irrigation and Livestock (DAILs) will become the most crucial platform in moving MAIL's development agenda. At the district level a greater level of integration among sectors must take place so that information and knowledge that is shared from the PAILs will have a discernable impact on agricultural activities. To reach that target the Ministry will re-profile the extension units at district level as Integrated Agricultural Service Centers (IASC). The proximity and presence of extension services in an integrated manner will allow farmers to interact on a constant basis with a group of extension experts representing various sectors. It will further ensure that the current sporadic and disorganized approaches will be minimized. Thus fundamentally changing the relationship between farmers and the chain that includes MAIL, PAILs and DAILs.

174. The IASCCs are platforms for information exchange, experience sharing and establishing backward and forward linkages between farmers and the private sector. The IASCs will consult with CCDs and CDCs as part of its assistance towards the articulation of the farmers' demand for extension services and will provide a mechanism for linking the "demand" with "service suppliers". By constructing a public- private partnership framework, the role of all stakeholders will be clearly defined, including those of MAIL to meet its public sector responsibilities. In the medium to long term, these will ostensibly be applying and monitoring legal and regulatory frameworks to ensure the accountability of each stakeholder.

175. As such, the IASCs will also:

- To communicate aggregated farmer demands to providers and monitor service provision.
- To ensure that the quality and quantity of the demanded service is adequately provided for within an agreed time frame.

- To improve community driven decisions on agriculture extension interventions
 - To strengthen development of the local institutions and build supportive linkage between intuitions
 - To encourage CDCs to support agricultural initiatives and assist in the process of identification and prioritization of problems and formation of farmers groups
 - To maintain collaboration between stakeholders on communities' requirements
176. It is assumed that CDCs will be in a position to ensure information on a variety of projects linked to development is openly available to CDC members. This will entail maintaining linkages with farmers' groups, cooperatives and farmers association in order to develop an integrated development plan based on the agricultural potential of a target village with the assistance of DAIL staff. In addition, CCDs and CDCs will support the formation of agricultural interest groups, support MAIL extension workers as mobilisers for group formation and share their experiences to encourage establishment of Farmer Groups.

10. Monitoring and Evaluation

177. Restructuring of the M&E Directorate and periodic evaluations and impact assessments are critical to creating a culture of learning and responsibility; in order to provide inputs for policy review and program design in order to contribute to (i) tracing delivery progress against the broader strategic framework; and (ii) developing a central resource for a consolidated and verified data. Integration of key functions such as information gathering and its analysis (GIS and Statistical department) conveying of information and data (MIS) have to be reorganized and made available to the farmer through the IASC and the FRCs. Such a task will require that GIS and the Statistics departments to be merged at MAIL and some staff assigned to both PAILS and DAILS. MIS will have a key role in creating new platforms for communication of information within the proposed 5 provinces and districts including their ability to communicate with MAIL offices. Over time MIS will use new innovative pictorial technologies that can communicate an array of important information to farmers including multi-media.
178. Evaluation will become a separate independent department directly reporting to the Minister. During the pilot provinces reform, a total of two mid-term evaluations are planned and a final evaluation will take place. Emphasis will be on lessons learnt and adaptive recommendations both at policy and structural levels. Information used from the mid-term evaluations will be used to make necessary adjustments to the concept with a view of eventually adapting the feasibility of such an approach across the remaining 29 provinces.
179. During the pilot, phase a new methodology will be developed and tested to ensure that planning becomes the premier instrument for accountability and rationalization of needs as compiled at the lowest levels (the farm and district) including the IASCs. Monitoring and Evaluation departments will be revamped to reflect two distinct tasks: Monitoring will be informed by plans and frameworks that will be prepared at the beginning of the planning cycle at the IASCs in the districts. Monitoring teams unlike the current practice will be based at both the provincial and district levels. Project and program staff will work closely with monitoring teams to ensure timely implementation of plans are commensurate with quality outputs and expenditures. Discrepancies recorded and adjustments including remedial actions must be timely

to ensure that targets are met and contribute to outcomes. Monitoring at the provincial level will focus exclusively at the role and efficacy of the knowledge centers and the FRCs. The manner and speed in which FRCs communicate technical knowledge to the IASCs will be the principal focus of the monitors.

11. Budget

The budget reflects the cost of each component for the period of five years, from 2017 to 2021 in line with ANDPF timeframe. The committed funds include ongoing and pipeline projects such as OFWM, SWIM, RAIN, PARBP, sNaPP2, CLAP, NHLP, FARM, AAIP, GRAIN, WB SGR. Livestock sector also assumes future private sector investment as part of committed funds. It is also assumed that the current ongoing projects will cover some cost of the institutional reform, figures of which have not been reflected yet. More alignment of the ongoing projects is required in order to create a holistic approach to MAIL's priorities.

USD Millions (2017-2021)

ITEM	BUDGET	COMMITTED	GAP
IRRIGATION	391.50	193.0	198.50
WHEAT (& OTHER CEREALS)	92.00	27.00	65.00
HORTICULTURE	288.90	86.80	202.10
LIVESTOCK	262.95	124.90	138.05
NATURAL RESOURCES MANAGEMENT	318.50	17.00	301.50
FOOD & NUTRITION SECURITY	318.50	17.00	301.50
INSTITUTIONAL REFORM	105.79	12.13	93.66
TOTAL	1886.02	536.69	1349.33

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