Agriculture in Afghanistan
Growing the Economy, Jobs, and Food Security
1. Fundamental Questions
2. Agriculture in the Afghan Economy
3. Towards an Agricultural Growth Strategy
4. Developing the Prioritized Value Chains for Pillar I
5. Cross-Cutting Constraints on Prioritized Value Chains for Pillar I
6. Addressing Needs of the Rural Poor for Pillar II
7. A list of Working Papers Commissioned
The Afghanistan Agricultural Sector Review is attempting to answer two key questions:

1. Will agriculture and natural resources be adequate to drive growth and job creation in Afghanistan?
2. What are the most important sector-specific policy and investment priorities to support agricultural growth and job creation?
To Answer these Questions we Commissioned the Following Background Papers …

2. Horticulture Sector Review (March 2014)
3. Livestock Sub-Sector Evaluation (January 2014)
4. Agricultural Extension Services (May 2014)
5. An Analysis of the National Risk and Vulnerability Assessment Household Surveys (May 2014)
6. Women in Agriculture (December 2013)
7. Land and Water Resources Assessment (May 2014)
8. Review of Ongoing and Past Bank Programs (October 2013)
10. An Institutional Review of the Ministry of Agriculture, Irrigation and Livestock (MAIL) (April 2014)
11. The Political Economy of Poppy/Opium Production (May 2014)
12. The Agricultural Sector Jobs Creation Potential
13. Maps - Irrigation potential for sub-basins, plus development areas
1. Agriculture in the Afghan Economy
Key features of the Afghan agricultural sector (1) …

• On average accounts for a third of GDP (in 2012, agriculture contributed 25% of national GDP ($4.5 billion out of $18 billion).

• Agro-processing accounts for over 90% of total manufacturing.

• The sector employs some 4.5 million workers, or 60% of the total Afghan workforce.

• Very high inequality in holdings - majority (60%) of holdings are small (< 1ha) owning only 13% of the land and cultivating 22% of the crop land.

• Most farmers producing for own consumption – subsistence orientation.

• High geographical dispersion with population concentrated in selected fertile areas with water.
Key features of the Afghan agricultural sector (2) …

- Relatively well functioning markets - exports as well as domestic value chains.
- No policy baggage – relatively undistorted (27 policy/strategies still in draft form).
- Large institutional and capacity deficit - opportunity to reform ensuring private sector oriented service delivery.
- And of course: poppy – ongoing work:
  - Most provinces are relatively free from poppy.
  - Most poppy free areas are where the poor are concentrated – north and northeast.
  - In the southern provinces, where poppies are most prevalent, it is more a large farmer crop than a small farmer one.
But, agriculture GDP growth is drastically reduced in drought years. Thus, irrigation is critical to sustaining high agricultural production.
Agricultural value added has grown by 2.9% per year since 2002...

\[ y = 2 \times 10^9 e^{0.0293x} \]
But, Total Factor Productivity (TFP) over same period has actually declined …
2. Towards an Agricultural Growth Strategy
“First Movers” Development Strategy Needs Two Pillars

**Pillar I**
- Irrigated wheat
- Intensive livestock
- Horticulture

**Main focus**
- Commercial development of promising value chains
- Targeting commercially oriented farms – typically medium to large
- Opportunities for linking small farms to value chains
- Labor intensive with high employment potential
- Backward links to inputs suppliers and forward to agro-processing and exports

**Pillar II**
- Rain-fed wheat
- Extensive/Nomadic livestock

**Main focus**
- Cater for food security and livelihood needs
- Targeting the poor, nomads and landless
- Improve productivity of rain-fed crops and extensive livestock
- Coordinate with other forms of assistance – social protection, settlement, non-farm sources of income generating activities
Pillar I is the main driver of agricultural GDP growth, jobs and food security …

**Wheat**
- Main staple (60% of Afghans daily dietary intake)
- Important for household food security
- Import substitution (imports are 20 – 30% annually)

**Livestock**
- Critical to livelihoods of nomads (Kuchi)
- Women dominated sub-sector
- Income generation for marginalized groups (women/poor)
- Household nutrition (meat, eggs and milk)
- Peri-urban dairy production and processing potential

**Horticulture**
- Long history of dried nuts/fruits trade
- High value crops with strong export and domestic demand
- High job creation potential
- Highest return to irrigated land
- High agro-industry development potential

65% of Ag. GDP; 3.2-3.4 million FTE; and could increase Ag. GDP by 25% in 5 yrs.
3. Developing the Prioritized Value Chains for Pillar I
Invest in most promising “First Movers” - irrigated wheat, intensive livestock and horticulture ....

- Have the best ‘catch up’ potential for raising productivity.
- Can be produced on a competitive basis with imports (and exports in some cases).
- Face strong and growing demand at home or abroad including good scope for displacing imports.
- Spatially concentrated in relatively small areas of irrigated and peri-urban areas that are relatively secure.
- Have good access to markets, can leverage planned infrastructure investments in growth corridors.
- Can leverage significant value addition and employment along value chains.
- Can contribute to securing national food supplies.
- Some horticultural crops and intensive livestock, are as profitable as opium poppy production.
4. Cross-Cutting Constraints on Prioritized Value Chains for Pillar I
What are the Challenges facing Pillar I?

**Water**
- Insufficient irrigation infrastructure
- Inefficient irrigation water conveyance systems
- Poor on-farm water management

**Technology**
- Farmers have limited access to new knowledge and improved production technologies
- MAIL lacks strategic vision and clear objectives for generation and dissemination of technologies
- MAIL has inadequate capacity to deliver extension services

**Markets and Agro-industry**
- Inadequate agricultural policy and regulatory framework in MAIL impact quality of services and final products
- Inadequate national policies on access to finance, land tenure security, import/export, energy and transport discourage local private investors, as well as FDIs
What are the cross-cutting issues for Pillar I that need to be resolved urgently? …

1. **Water for agriculture** – rehabilitation of existing irrigation schemes and expansion of areas is key to agricultural development.

2. **Technology Development** – Adaptive R&D investment, rehabilitation of at least 7 research centres in different agro-ecological zones for testing new promising varieties.

3. **Extension Services** – Opening up the Extension Services Delivery System to include private service providers (NGOs, input and output traders), and Farmer Field Schools (FFSs) are key to technology transfer.

4. **Regulation of Agricultural Inputs** - A key area for crop improvement is to develop a more effective system for certifying the pedigree and quality of seeds and planting materials.

5. **Land Policy** - Securing the rights of private owners, especially in irrigated and peri-urban areas, improving land leasing and land acquisition arrangements, including for agroindustry, and facilitating the development of efficient land markets.

6. **Agricultural Finance** - Supporting the expansion of agricultural finance, such as ADF is critical. Institutions such as MISFA can support the development of financial products adapted to the agriculture sector.

7. **Women in Agriculture** - The training and use of female extension workers across interventions is critical for effective services supporting female farmers in Afghanistan.
Afghanistan has main River Basin - one inland and four international ....
Unfortunately, their Irrigation Potential is Not Being Fully Utilized ....
The Proposed and Ranked Agricultural Development Centers for Pillar I are ....

<table>
<thead>
<tr>
<th>#</th>
<th>River Sub-Basin</th>
<th>Development Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lower Panjshir</td>
<td>Shomali Plain/Kabul</td>
</tr>
<tr>
<td>2</td>
<td>Lower Harirud</td>
<td>Herat</td>
</tr>
<tr>
<td>3</td>
<td>Arghandab/M.Helmand</td>
<td>Kandahar/Lashkargah</td>
</tr>
<tr>
<td>4</td>
<td>Shortepa</td>
<td>Shortepa/Mazar-i Sharif</td>
</tr>
<tr>
<td>5</td>
<td>Lower Kabul</td>
<td>Jalalabad</td>
</tr>
<tr>
<td>6</td>
<td>Farah</td>
<td>Farah and Khash</td>
</tr>
<tr>
<td>7</td>
<td>Kunar</td>
<td>Asadabad</td>
</tr>
<tr>
<td>8</td>
<td>Kokcha</td>
<td>Emam Sahib/Kokcha</td>
</tr>
<tr>
<td>9</td>
<td>Shomal-Khuram</td>
<td>Matun</td>
</tr>
<tr>
<td>10</td>
<td>Murghab</td>
<td>Ghormach</td>
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</tbody>
</table>
### Recommended Priority Actions for Pillar I of the Development Strategy are ....

<table>
<thead>
<tr>
<th>Wheat</th>
<th>Livestock</th>
<th>Horticulture</th>
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</thead>
</table>
| **Water**              | • First 5 years focus on rehabilitation of the existing irrigation schemes in all five river basins, which is much less expensive – costs about US$300 – 400 per hectare. | • Prioritize knowledge generation, and access to information and technologies by smallholder and commercial farmers through:  
  ➢ extension training models/tools and material design  
  ➢ extension staff training  
  ➢ involving private/NGOs services providers  
  ➢ M&E of extension service quality |
|                        | • In next 5 - 10 years, aim at 20% increase in irrigated land areas in the Panj-Amu (450,000 hectares) and Kabul (250,000 hectares) river basins – cost about US$3 – 4,000 per hectare. |                                                                                     |
|                        | • Improve on-farm water management through water user/irrigators associations (WUAs/IAs) |                                                                                     |
| **Technology**         |                                                                                     |                                                                                     |
|                        | • Finalize/update the 27 draft policy, strategy and laws in MAIL and get Parliament approval. |                                                                                     |
|                        | • Align land related laws to the National Land Policy of 2007 and develop regulations. |                                                                                     |
|                        | • Enhance the capacity of ARAZI to better deliver land administration services.       |                                                                                     |
|                        | • Increase access to finance to overcome high investment and working capital requirements. |                                                                                     |
|                        | • Invest in rural road, transport, energy and cold storage facilities.               |                                                                                     |
|                        | • Renegotiate SAFTA to enhance horticulture and other commodity exports.             |                                                                                     |
| **Markets and Agro-industry** |                                                                                     |                                                                                     |
Investing in irrigation is key to agricultural growth, job creation and food security ....

A. Short-to Medium-term development

1. Invest in strong institutions and policies to improve irrigation water management:
   • Define the legal and regulatory framework and strengthen inter-agency coordination
   • Strengthen the Irrigation Department in MAIL to manage the irrigation network
   • Strengthen Irrigation Associations (IAs)

2. Help farmers better manage their water and get more crop per drop – irrigation extension

B. Long-term development

• Strengthen the basic WRM function at the MEW
• Update the river basin investment plan
• Develop Water Storage Facilities
• Initiate a disaster risk management (DRM) strategy
## Suggested Action Plan for Implementing Pillar I of Development Strategy

<table>
<thead>
<tr>
<th>Wheat</th>
<th>Short-term</th>
<th>Medium term</th>
<th>Long-term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Increase the yield of existing irrigated wheat through better seeds, agronomy, and water management.</td>
<td>• Rehabilitate more irrigation systems to expand the irrigated wheat area.</td>
<td>• Invest in new irrigation capacities to expand the irrigated wheat area.</td>
</tr>
<tr>
<td>Livestock</td>
<td>• Improve veterinary services and disease control and management and feeding practices.</td>
<td>• Expand intensive production of milk, meat, eggs and poultry, especially in peri-urban areas.</td>
<td>• Meat and skins from nomadic systems.</td>
</tr>
<tr>
<td>Horticulture</td>
<td>• Better extension to improve management practices and pest control.</td>
<td>• Increase capacity for agro-processing, such as canning, drying and freezing</td>
<td>• Improve seed varieties and upgrade orchards</td>
</tr>
<tr>
<td></td>
<td>• Increase access to finance to overcome high investment and working capital requirements.</td>
<td>• Increase irrigated land area available for horticulture</td>
<td>• Expand into high-end export markets but this requires much better regulation of quality and safety standards</td>
</tr>
<tr>
<td></td>
<td>• Refrigerated trucks and cold storage.</td>
<td>• Expand into high-end export markets but this requires much better regulation of quality and safety standards</td>
<td>• Airfreight/cargo space for perishable products</td>
</tr>
</tbody>
</table>
Resulting Increments to Annual GDP and Employment Within 10 years are ....

<table>
<thead>
<tr>
<th></th>
<th>Agric. GDP (millions dollars in 2012 prices)</th>
<th>On-Farm employment (FTEs)</th>
<th>Off-farm employment (FTEs)</th>
<th>Total Employment (FTEs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated wheat</td>
<td>1,575</td>
<td>173,828</td>
<td>54,748</td>
<td>228,576</td>
</tr>
<tr>
<td>Intensive dairy</td>
<td>274</td>
<td>604,440</td>
<td>110,880</td>
<td>715,320</td>
</tr>
<tr>
<td>Horticulture</td>
<td>1,830</td>
<td>267,268</td>
<td>94,560</td>
<td>361,828</td>
</tr>
<tr>
<td>Total</td>
<td>3,679</td>
<td>1,045,536</td>
<td>260,188</td>
<td>1,305,724</td>
</tr>
<tr>
<td>% increase over base</td>
<td>123</td>
<td>108</td>
<td>114</td>
<td>109</td>
</tr>
</tbody>
</table>
5. Addressing Needs of the Rural Poor - Pillar II
This comprise mainly policy reforms and direct social support to rain-fed wheat (1) ....

Rain-fed Agriculture

• Disseminating drought tolerant crop varieties or controlling animal diseases may offer widespread gains at relatively low cost, as might reforms to property rights and the management of open pastures.

• Other complementary and nonfarm interventions will also be required, especially for those with access to little land or livestock ownership.

• Support include relief programs in drought years, settlement programs for nomadic people, and social protection programs.

• Improved agronomic practices are badly needed - alternative varieties (with different maturity dates; drought tolerance), planting dates, planting patterns (row width, use of beds, etc.), planting depth, zero-tillage and permanent soil cover to improve water infiltration.
This comprise mainly policy reforms and direct social support to nomadic livestock (2) ....

Nomadic Livestock

- Better disease control, using travelling veterinary or para-veterinary clinics.
- Rehabilitation and improved management of grazing areas - possible approaches including proven improvements in biodiversity, ground cover and feed production.
- Developing and improving wells in traditional grazing lands so as to decrease grazing pressure around the few wells that now exist.
- Improving winter feeding by introducing a winter feeding program for sheep and goats, including an evaluation of the potential for growing barley and establishing salt-tolerant fodder shrubs.
- Better extension services for livestock, delegating to NGOs and the private sector.
- Exploiting the added-value potential of sheep and goats, based on the market demand for fattened animals relative to feed availability.
- Exploiting the potential for collecting and processing more wool, and to improve the productive performance for karakul and cashmere.
- Assistance in rebuilding livestock numbers after droughts, perhaps exploring the use of livestock banks, or drought insurance.
- More modern and accessible slaughterhouse facilities to facilitate more efficient collection of better quality hides, skins and casings.
Thank you!