

## INSTITUTIONAL SETUP OF IRRIGATION AND DRAINAGE IN AFGHANISTAN



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3<sup>rd</sup> World Irrigation Forum  
1-7 September 2019, Bali, Indonesia

1

## On-Farm Water Management Project (OFWMP)

- Implementing under four main components:
  - a. Irrigation Rehabilitation and Management
  - b. Institutional Strengthening and Capacity Building
  - c. Project Management and M&E
  - d. Support for Enhancement Agriculture Productivity
- Focus on Farm level Irrigation Rehabilitation + IA Establishment and Account Opening
- Contribute to High Irrigation Efficiency System (HIES)
- Provide Capacity Building Trainings to MAIL and Other Project under Irrigation department
- Contribute in development of Irrigation Procedures, Policies, Manuals and Guidelines



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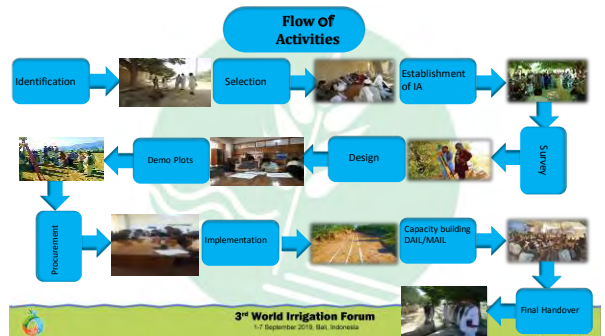
4

## INTRODUCTION

- Economy of Afghanistan heavily rely on Agriculture
- While 80% of agriculture depend on Irrigation, the **aridity** of climate causes water resources scarce like other Central-Asian and Middle-East Countries
- Contribution of Agriculture is strong in Afghanistan: Contribution to **National GDP is up to 31%** (MAIL, 2015) and creation of **employment is 60-70% of population**.
- 9.61 Million ha of arable Land (FAO, 2014)

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2



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5

## Types of Irrigation in Afghanistan

According to Anderson, 2006; FAO and AIMS, 2004

- Modern Surface System (10% of Irrigated Area)
- Traditional Surface System with Intakes (More than 80% of Irrigated Area)
- Springs (5% of Irrigated Area)
- Karezes and Wells (5% of Irrigated Area)



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3

## Traditional Irrigation Institutions

- Traditional Irrigation Systems in Afghanistan are well managed, maintained and organized by local communities
- O&M carried by Local Water Users, headed by Water Master, Locally Known "**Mirab**"
- Mirab: Combination of Arabic Mir (amir-emir) designated as Leader and "ab" in Dari is used for Water (Leader of Water)
- The **Mirab** system has been observed to have a long history and possess its own characteristics that have been well integrated into the country's natural and social background (Roe, 2008).

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6

### Characteristics of Traditional Irrigation Institutions

- Mirab system is characterized as:
  - Responsibility
  - Apprenticeship Process
  - Flexibility of Organizational Structure
  - Basis and Process of Water Allocation and Distribution
  - Resource Mobilization for Operation and Maintenance and process for Conflict Resolution
- Individual appointed from among the landowners by the landowners for a given period of time (one to several years) entrusted with responsibility of Irrigation Water Allocation and Distribution belonging to Same Community

7

### Roles and Responsibility of Irrigation institutions

#### Irrigation Associations (IAs) Bank Account Establishment

- Accounts are Established for each IA as they collect money (Usually 250 AFN or USD 3-5 per Hectare) for O&M under IA responsibility
- MAIL has around 950 IAs in the Country and all have Bank Account
- Deposited the Money not only for O&M but also for New Irrigation Schemes Rehabilitation Work
- More than 12.6 Million AFN/ USD, 157510 Collected

10

### Roles and Responsibility of Irrigation institutions

#### Operation and Maintenance (O&M)

- Based on the IAs' By-Law/procedure and Afghan Water Law, IAs are responsible for managing the O&M of irrigation canals under the preservation of the traditional *Mirab* system (Afghan Water law/26 April 2009).
- The Statute/guideline of IA's is more focusing on overall management of IAs but specifically on the IA's (ToR) of each members (Mirab/ Chakbashi, Secretary, Treasurer and General body members). It is clearly mentioned in ToR to take very serious care of O&M and repaired canals in Defect Liability Period (DLP) and even after the final handover to the community.

8

### Roles and Responsibility of Irrigation institutions

#### Special efforts by OFWMP

- Established Guidelines and Procedures for O&M following below steps:
  - Social Mobilization
  - IAs establishment
  - IAs registration with MAIL
  - Opening of Bank account
  - Collection of land & water right fee (250 AFN/ha)
  - Implementation of irrigation sub-project
  - Handover of irrigation sub-project to the community
  - Capacity building of IAs
  - Operation & Maintenance
- Capacity Building Trainings Provided for Betterment of Procedure

11

### Roles and Responsibility of Irrigation institutions

NO	Region	O&M of completed irrigation schemes
1	Kabul	18
2	Herat	38
3	Nangarhar	16
4	Balkh	6
5	Baghlan	9
	<b>Total</b>	<b>87</b>

#### Operation and Maintenance (O&M)



9

### Roles and Responsibility of Irrigation institutions

#### Resolving Water Management Problems/Issues

- Various types of conflicts, issues and problems exist in irrigation system in community or with contractors
- OFWMP developed Grievance Redress Mechanism (GRM) for timely resolving the issues, problems, grievance and conflicts raised by community members
- OFWMP follow several steps for resolution of problem and solve the problems
- Various types of Grievances Related to (Irrigation Association Formation and Management, Inter-community disputes and Process delays)

12

## Conclusion and Recommendations

### Conclusion

- Strengthening and Establishment of IA strongly affect the Performance of Mirab System in context of strengthening, O&M of canals, resolving water management related issues and capacity building of water users in modern agriculture and irrigation practices in Afghanistan
- IAs have been registered with MAIL as their legal entity
- The role of IA is crucial in term of institutional development and awareness campaign for the dissemination of modern irrigation and agricultural practices.



13

## Conclusion and Recommendations

### Recommendations for Further Improvement

- Necessary care must be exercised not to disturb the organizational set up of Mirab/ Chakbashi of centuries old irrigation water management; while establishing IAs, the Mirab should be its key person
- IAs should not be restricted only to Irrigation activities but it can be used for other agricultural and extension related activities to make it more active and multi-functional
- Comprehensive trainings on Irrigation Water Management have to be provided to IA as most of the Mirabs are not educated



14



15