

Action Plan for Water use Efficiency for Sustainable Intensification of Agriculture in South Asia

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Major Objectives

1. Increasing water use efficiency and water productivity in the irrigated system
2. Rain water harvesting
3. Ground water management
4. Wise use of wetlands
5. Water institutions and water policies

Activity Options

A. Technology Intervention

- Rehabilitation
- Adopt new additional technology

B. Management Intervention

- Capability development
- Enabling environment favorable Policy Regulation

1. Increasing water use efficiency and water productivity in the irrigated system

S.N	Activity	Time Frame		Estimated cost (USD)/ha	Proposed area ha	Estimated cost US \$
		From	To			
1.1	Land improvement (precision Leveling, sub soiling and land consolidation)	2017	2022	150	20000	3,000,000
1.2	Adopt pressurized irrigation a. Sprinkler irrigation	2018	2025	1500	5000	7,500,000
1.3	Adopt pressurized irrigation b. Drip irrigation	2018	2025	3000	5000	15,000,000
1.4	Develop ground water to complement surface water from canal (Conjunctive use)	2017	2025	1200	5000	6,000,000
1.5	Develop On farm conveyance (pipe network or field channel)	2017	2025	2000	15000	30,000,000
1.6	Upgrade/ rehabilitate irrigation system	2017	2025	1500	20000	30,000,000
1.7	Capability development of agency & WUA farmers :Training , exposure visit, Joint ME system development	2017	2024	250	20000	5,000,000

- Geographic domain: Plain Irrigated land
- Responsible Agency : GO, WUA, farmers, Private firms, CBOs

Abbreviation

GO: Government Organization

WUA : Water Users association

CBO : Community based Organization

MOM: Management operation and maintenance

2. Rain water harvesting

S.N.	Activity	Time Frame		Estimated costs (USD)/ha	Proposed area ha	Estimated cost US \$
		From	To			
2.1	Develop Water storage reservoir	2017	2024	400	10000	4,000,000
2.2	Develop small Rain Water storage Pond in farms	2017	2024	500	15000	7,500,000
2.3	Install small Ferro cement/small plastic Water tank	2017	2023	1500	10000	15,000,000
2.4	Adopt sprinkler irrigation through Pond/tank	2017	2023	250	10000	2,500,000
2.5	Adopt drip irrigation through pond/tank	2017	2024	500	5000	2,500,000
2.6	Training and Awareness building of water management using rainwater	2017	2024	150	10000	1,500,000

- Geographic domain: Hills & Mountain, Dry land
- Responsible Agency : GO, WUA, farmers, Private firms, CBOs

3. Ground water management

S.N.	Activity	Time Frame		Estimated costs (USD)/ha	Proposed area ha	Estimated cost US \$
		From	To			
3.1	Adopt sprinkler irrigation	2018	2024	250	5000	1,250,000
3.2	Adopt drip irrigation	2018	2024	500	5000	2,500,000
3.3	Energize installing solar pumps	2018	2025	450	10000	4,500,000
3.4	Promote Recharging of Groundwater (sub-soiling field to break clay pan & promote growing water standing crops e.g.. Paddy sugarcane)	2018	2025	50	10000	500,000
3.5	Construct earthen tanks to store rain water in wet season for recharging & use for fishery	2018	2025	500	10000	5,000,000
3.6	Training and Awareness building of water management	2018	2025	75	10000	750,000

- Geographic domain: Semi arid, uplands
- Responsible Agency : GO, WUA, farmers, Private firms, CBOs

4. Wise use of wetlands

S.N.	Activity	Time Frame		Estimated costs (USD)/ha	Proposed area ha	Estimated cost US \$
		From	To			
4.1	Management of wetland (prepare Management plan & implementation)	2017	2025	100	10000	1,000,000
4.2	Protective works for maintenance of wetland (E.g., prevent siltation , embankment etc.)	2017	2025	250	5000	1,250,000
4.3	Restoration of wetland by removing deposited sediments (silt/ weed removal dredging etc.)	2017	2025	250	5000	1,250,000
4.4	Promote appropriate Aquaculture & controlled fishing	2017	2025	100	5000	500,000
4.5	Training and Awareness of wetland management	2017	2025	100	5000	500,000

- Geographic domain: Plain land
- Responsible Agency : GO, WUA, Farmers

5. Water institutions and water policies

S.N.	Activity	Time Frame		Estimated costs (USD)/ha	Proposed area ha	Estimated cost US \$
		From	To			
5.1	Develop interface of Agency & Water users association (WUA) and Joint M&E to undertake management responsibility.	2017	2022		10000	300,000
5.2	Exposure Visit & Training for staff and field technician on improved MOM	2017	2024			300,000
5.3	policy improvement for promoting small farmers.	2018	2024			1,000,000
5.4	Support formulating Water management law/regulation empowering WUA	2017	2024			400,000

- Geographic domain: All area
- Responsible Agency : GO, WUA, Farmers

Detail of other support & Total Cost

	Estimated cost US \$
Total Development cost	150,500,000
other support costs	
Agriculture Initiative support	6,020,000
Consultancy & management support	5,000,000
MOM support during project period	1,000,000
Subtotal	162,520,000
Contingency 10%	8,126,000
Total investment	US\$ 170,646,000



Thank You