

1.4. Action plan for application of water saving technologies at irrigated lands

Efficient use of irrigation water will be very important due to expected water scarcity forecasted in light of climate change. Drip irrigation can help use water efficiently. Sprinkler systems will eliminate water conveyance channels, thereby reducing water loss. Secondary benefits from improved crop productivity include income generation, employment opportunities and food security.

Application of this technology successfully lines with the country's economic, social and environmental development priorities. Moreover, it contributes to food security priority, by increasing productivity and land fertility, as well as leading to increase of income of rural population and reducing out-migration.

The application of drip/sprinkler irrigation is practiced in Azerbaijan, but is not widely applied by local farmers. The main reason for this being high investment costs and lack of knowledge and skills on advantages of the technology. The technology could be successfully applied at agricultural lands with irrigation water scarcity, as well as areas with potential risks to droughts and high temperatures.

There are no specific programmes or strategies in Azerbaijan related to application of water saving technologies at cultivated lands. Some local-level and small-scale actions for technology application have been initiated by large-scale private sector entities.

Main barriers of technology diffusion could be listed as follows:

Barriers	Application of water saving technologies at irrigated lands
Economic/financial	- Low prices for irrigation water - Improper pricing mechanism for use of irrigation water
Policy/regulatory	- Weak access to acceptable financial means - High investment costs
Technology	- Lack of technological knowledge and skills
Information/capacity	- Weak agricultural extension services - Low level of awareness of economic and ecological advantages
Social	- Unfamiliarity with new technology - Small-scale lands

During the preparation of TAP, measures have been assessed taking into account their priorities, time scale, related stakeholders, key indicators for measuring implementation and funding resources.

TAP for the technology is provided in table 3.

Table 3: TAP for application of water saving technologies at irrigated lands

#	Measures	Priority	Why it is important	Time scale	Related stakeholders, implementers	Key indicators	Risks	Funding sources	Costs
Policy/regulatory									
1	Regulate tariff system for irrigation water	High	- Tariff system needs to be improved for use of irrigation water	0-5 years	National Parliament, MED, Tariff Council, Amelioration and Water Farms OSC	- Tariff system regulated	- State procedures may be slow to endorse proposed recommendations	State	\$ 250,000
2	Develop mechanism for distribution and pricing of irrigation water	High	- New working mechanism needed for distribution and pricing of irrigation water	0-5 years	MED, Amelioration and Water Farms OSC	- Working mechanism for distribution and pricing of irrigation water created	- State procedures may be slow to endorse proposed recommendations	State	\$ 100,000
3	Develop specific subsidy mechanism to promote application of the technology	Medium	- New initiatives need financial support	5-10 years	MoA, MoF, MED	- New set of package to support local farmers during application of new species	- Lack of funds	State, International	\$ 200,000
4	Develop specific tax and customs regulations to promote technology import and production	Medium	- Private sector initiatives promoted	5-10 years	MED, MoT	- Enabling framework for technology import and local production created	- State procedures may be slow to endorse proposed recommendations	State	\$ 150,000
Economic/financial									
5	Develop mechanism for provision of long-term and low-interest	High	- Create access to	0-5 years	MED, MoA	- Easy access to funds	- Low interest of financial	State, International	\$ 200,000

#	Measures	Priority	Why it is important	Time scale	Related stakeholders, implementers	Key indicators	Risks	Funding sources	Costs
	loans, as well as grants through state, private and international funds		financial sources			created for farmers	institutions - Insufficient State funds	onal	
Technology									
6	Technical support to R & D institutions	High	- Improve technical capacity of R & D institutions	5-10 years	MED, MoA	- Improved capacity of R & D institutions	- No major risk	State, International	\$ 500,000
7	Strengthen international research network programmes	Medium	- Share best practices and experiences	5-10 years	MoA, National Academy of Sciences	- National R & D institutions actively participate in international research network	- No major risk	State, International	\$ 40,000
Information/capacity									
8	Organize specific capacity building programmes (trainings, seminars, workshops) for local farmers	High	- Increase capacities	0-10 years	MoA, NGOs	- Increased capacity	- No major risk	State, International	\$ 600,000
9	Develop and conduct information campaigns on the advantages of applied technology	High	- Raise awareness level	0-5 years	MoA, NGOs	- Awareness level on advantages of new technology increase by 50%	- No major risk	State, International	\$ 500,000
10	Develop mechanism for support to agricultural extension services	High	- Increase quality of agricultural extension services	0-10 years	MoA, MED, MoF, NGOs	- Capacity and quality of current extension service providers improved	- Weak collaboration with existing extension service providers	State, International	\$ 800,000
Other measures									
11	Donor coordination in order to enhance support to R & D project	Medium	- Coordinate various	0-10 years	MED, MoA	- Donor coordination	- Weak collaboration	State, International	\$ 800,000

#	Measures	Priority	Why it is important	Time scale	Related stakeholders, implementers	Key indicators	Risks	Funding sources	Costs
	initiatives related to the technology		donor initiatives - Demonstrate practical application of the technology			meetings organized at least once a year	of related organizations	nal	
12	Develop mechanism for implementation of demonstrative pilot projects	High	- Demonstrate practical advantages	0-5 years	MED, MoA	- Practical knowledge and skills of farmers increased	- Lack of funds	State, International	\$ 500,000