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Pakistan Water Security: Progress and Success Stories

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Pakistan Water Situation

- Pakistan - one of the world's most arid countries.
- Over 75% of it receives rainfall less than 250 mm annually and another 20% - even less than 125 mm.
- Population and economy are heavily dependent on an annual influx into Indus River System of about 190 BCM (154.88 MAF) of water mostly derived from snow and glacier melt.
- About 90% is used by the Agriculture Sector.
- No additional water to be injected into the system.
- Non-agricultural water uses are going to increase manifold in future.



Economic Water Security

- Total water availability is sufficient to the economic development and growth of Pakistan what Pakistan needs is better management and enhanced storages.
- Against total surface water availability of 190 BCM (154.88 MAF), storage capacity is only 14 BCM (11.31 MAF) which provides only 30 days carryover capacity.
- Pakistan's dependence on single river system is highly vulnerable and has little flexibility as compared to most of the countries enjoyed by virtue of multiple river basins and diversity of water resources.
- Pakistan's economic water security demands construction of reservoirs to store at least 40% of its water resources i.e. 76 BCM (62 MAF) (nine reservoirs of the size of Tarbela).



Household Water Security



- National Drinking Water Policy in place.
- About 65% households are connected with permanent piped water supply.
- Piped water supply is not safe for drinking.
- Household water security is at risk due to worn out pipe lines, mixing of sewerage lines with the water supply lines, no check on water quality pumped into pipes.
- Communal system of water filtration plants has provided safe water supply from where consumers can get water for their drinking and domestic use.
- Unfortunately this facility does not give wider connectivity coverage.
- Heavy investments needed to spread it country wide.

Urban Water Security

- About 85% of urban population living in more than 500 cities and towns have access to piped drinking water supply (GOP).
- Most of the urban water is supplied from groundwater except for the cities of Karachi, Hyderabad and part of the supply to Islamabad, which mainly uses surface water.
- Public sector investments in the drinking water supply sector are inadequate.
- Multinational companies are promoting bottled water culture which is not financially viable for poor communities.



Environmental Water Security



- **Environmental Water Security issues faced by the country include:**
 - Solid/sewerage waste dumping in water bodies
 - Crop wastes/pesticides contaminating rivers
 - Water scarcity/pollution significantly decreasing importance of environmental health
 - Weak Laws and Institutions fail to control environmental degradation
 - Lack of space for civil society and communities
- **Environmental water security is directly dependant on water availability and storage capacity.**
- **National Environmental Protection Policy is in place and strict compliance to set rules and procedures will ensure environmental water security of the country.**

Resilience to Water Related Disasters

- Pakistan is subjected to frequent floods, droughts, storms and other water related disasters.
- The interventions of Government and support of international organizations and NGO/Civil society, the affected communities have become resilient to water disasters to some extent.
- Comprehensive resilience programs have been initiated by different organizations and donor agencies.
- PWP is struggling to create climate change resilience in the affected communities with the active involvement of its Area Water Partnerships and Partners.



Success Stories

Achieving water security is a long and huge task. PWP has achieved some success while working closely with the communities:

- Rainwater harvesting in Kotli Satian implemented by Potohar AWP.**
- Groundwater conservation and switching to cultivation of high value fruits and vegetables instead of low value high water consuming crops in Mastung by Sarawan AWP.**
- Use of innovative technologies of watering crops instead of flood-irrigation in Sanghar by Nara Canal AWP.**
- Equitable distribution of canal water among head and tail end water users in Mirpurkhas and Nawabshah.**
- IWRM principles incorporated in the draft National Water Policy.**
- Water Vision 2025 prepared for Government of Pakistan which was successfully implemented.**
- Concept of kitchen-gardening promoted among AWP partners in Sindh and Balochistan.**

What is next?

Initiate dialogues and awareness campaigns for :

- Food, energy and water security.
- Climate change adaptation and community resilience.
- Water conservation and preservation.
- Disaster management (floods and droughts).
- Energy conservation to control pollution.
- Transboundary water dialogue (track-2 diplomacy program).
- Redefining agro-climatic zoning of the country.



Thank you!