

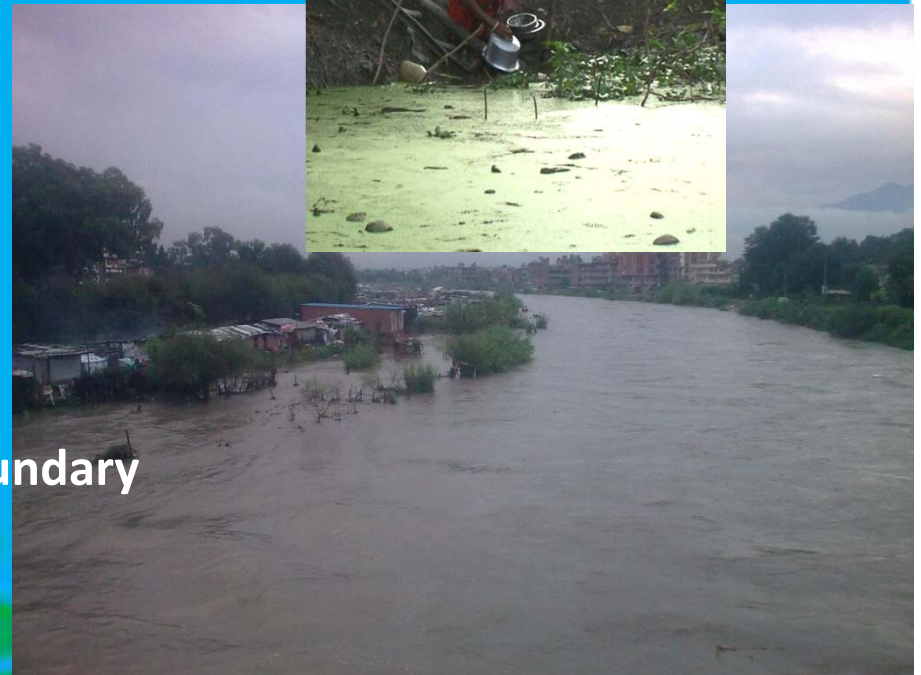
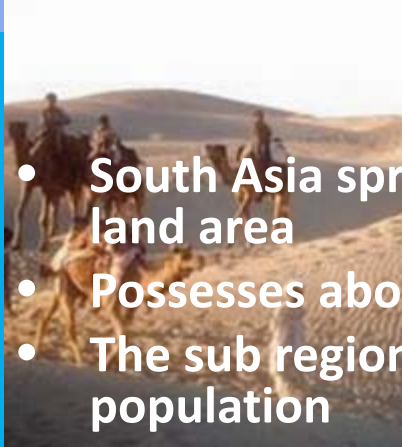
Role of Water Security and Water Co-operation in Climate Change Adaption & Role of GWP SAS in South Asia as APAN Thematic Node -Water

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The Challenge in South Asia

- South Asia spreads over about **4%** of the World's land area
- Possesses about **4.5%** of the water resources
- The sub region is the home for about **23%** of global population
- world's highest concentration of poor people with over 1 **billion** living on **less than USD 2 per day**
- high levels of malnourishment
- high economic growth
- high urban growth
- low access to energy.
- The resources are considerably stressed (even without climate change)
- Shrinking glaciers, soil erosion, pollution, groundwater degradation—and trans-boundary



The Water Challenge in South Asia

1. Climate Change Adaptation and Disaster Coping
2. Flood and Drought Management
3. Trans-boundary Water Issues
4. Overexploitation of Groundwater and Groundwater Depletion
5. Eliminating the social, economic and technological constraints to achieve the potential in Rainwater Harvesting, and Inadequate storage and maintaining the quality of the harvested water
6. Water Management and Agricultural Productivity Issues
7. Matters related to the core issue of water governance, implementation of IWRM related policies and laws
8. Rapid Urbanization - water supply, sanitation and wastewater issues
9. River Basin and lower level organisations - Inadequate capacity at the field/grass-root level to address the water challenges
10. Inadequate use of Information Technology/Media in the Water Sector

Current planning and management have proven insufficient to address the challenges of meeting society's diverse needs for water

Agriculture in South Asia

Country	Agriculture contribution to GDP / percent	Rural population / percent	labor force employed in agriculture / percent	Agricultural Area / percent	Irrigated area / percent
Afghanistan	31.6	77	70.0	58	3.4
Bangladesh	18.6	72	48.0	65	35.1
Bhutan	17.4	65	59.4	15	1.0
India	19.0	70	56.0	55	18.9
Maldives	5.6	60	12.0	30	--
Nepal	32.8	81	66.0	30	8.0
Pakistan	21.2	64	45.0	33	25.0
Sri Lanka	12.8	85	33.0	40	8.9

Sources: FAOSTAT, 2011; ADB, 2011; CIA, 2012 and World Bank, 2011

The Challenge in South Asia - Agriculture

- Produces substantial food grain
- **Least Food-secure Sub-region**
- Floods and Droughts - Devastate Agriculture
Irregular Rainfall – Cultivation & Harvesting
Combined effects of temperature and relative humidity
- A **major part** of South Asian agriculture is **managed by smallholder farmers –Vulnerable**
- Most threatened- Rain-fed farmers
farmers depend on small reservoirs and small diversion schemes.

Water Security for CCA in South Asia

- Safeguard sustainable access to adequate quantities of and acceptable quality water
- Sustaining livelihoods, human well-being, and socio-economic development
- Ensuring protection against water-borne pollution and water-related disasters
- Preserving ecosystems in a climate of peace and political stability

Water Co-operation in CCA Adaptation in South Asia



Water Co-operation in CCA Adaptation in South Asia

- South Asia's river systems – highly dependent on cyclical rainfall from monsoons and glacial melt from the high Himalayas – that are especially vulnerable to climate change
- Water co-operation: Across sectors and borders for the efficient and sustainable use of water – **International Year Water Co-operation 2013**
- Requires mediation and dispute resolution for water sharing between countries and communities – **Many Treaties**
- Water Cooperation for Early Warning – **Starting Point?**

REGIONAL INTERVENTION

Role of Global Water Partnership(GWP)

- Global Water Partnership's VISION
water-secure world

Dimensions of water security are addressed together through
IWRM

- GOAL -increase water security by balancing societal requirements with the availability of natural water resources

REQUIRES long-term engagement of governments with private and civil society partners

- 13 RWPs 160 countries

<http://www.gwp.org/gwp-south-asia/GWP-C-IN-ACTION/International-Year-of-Water-Cooperation/>

Role of GWP SAS

APAN Thematic Node – WATER (2011-13)

- 6 CWPs - Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka
- Water Vision 2025 GWP South Asia
- APAN & GWP SAS Technical papers, Research papers, Policy briefs & E flyers
- Improving adaptation capacity of communities to face the climate-induced challenges in water management
- Climate change adaptation in water management for food security

THANK YOU