



## Assessment Report on Pakistan's National Action Plan related to SDG and Capacity in Science, Engineering, Technology and Innovative to Support SDG



**Ashfaq Ahmed Sheikh, PhD**  
**Pakistan Council of Research in Water Resources**  
**Dili, Timor Leste**

### Presentation Layout

- **Country's National Action Plan**
- **Validity Year of Plan**
- **Target and Indicators**
- **Program and activities**
- **Plan to address SDGs**
- **Any program in Plan linking with particular SGD**
- **Link between Plan with SDGs target and indicators**

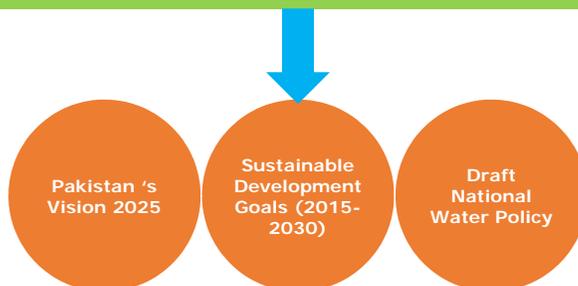
## Ministry of Science and Technology

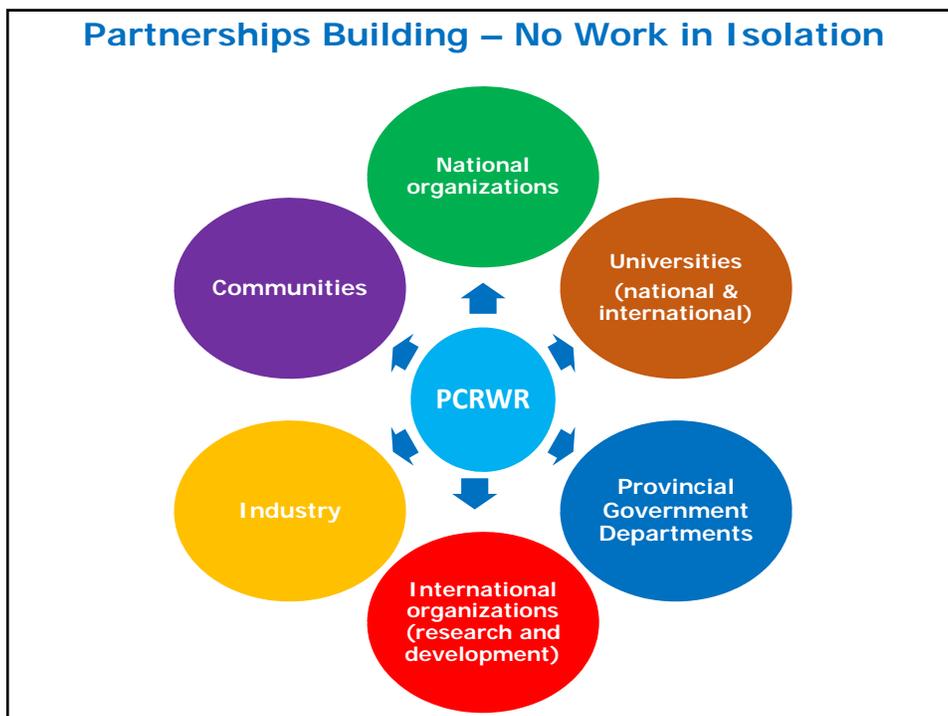
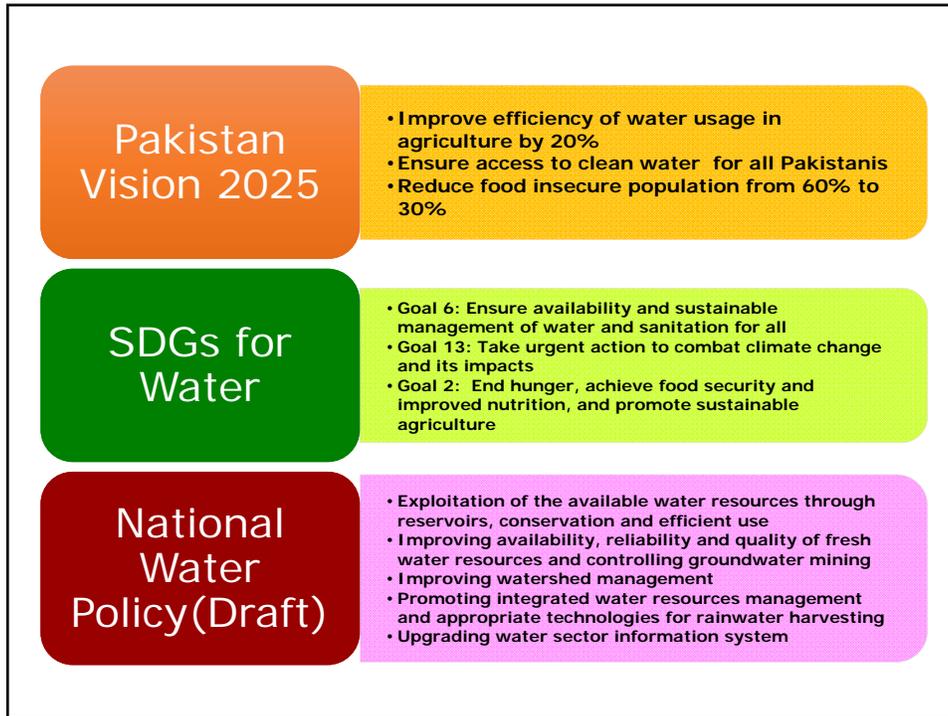
- The role is to integrate the programmes and initiatives being undertaken by other Ministries and Departments at Federal and Provincial levels:
  - i. Coordination and implementation of National Science and Technology Policy
  - ii. Promotion and coordination of research and utilization of the research results
  - iii. Development, production and utilization of nuclear energy, and
  - iv. Coordination for utilization of scientific and technological manpower

12 R&D Organizations in almost all sectors & 02 Universities

## Pakistan Council of Research in Water Resources

To conduct, organize, coordinate and promote research on all aspects of water resources including irrigation (surface and groundwater), drainage, soil reclamation, drinking water, wastewater management etc.





## Research Infrastructure

	Regional Water Resources Research Centers (8)	
Headquarters Islamabad	Research & Demonstration Farms (7)	DRIP, Tandojam
	GIS and Geo-Hydrological Laboratory	
Regional Office, Lahore	Lysimeter Stations (4)	WRRC, Quetta
	Tile Drainage Facilities	
Regional Office, Bahawalpur	Desertification Control & Demonstration Stations (5)	WRRC, Peshawar
	Water Quality Laboratories (24)	
	Commercialization and Innovation Cell	
	Library, Documentation & Information Center	
	Gilgit, Muzaffarabad, Karachi	

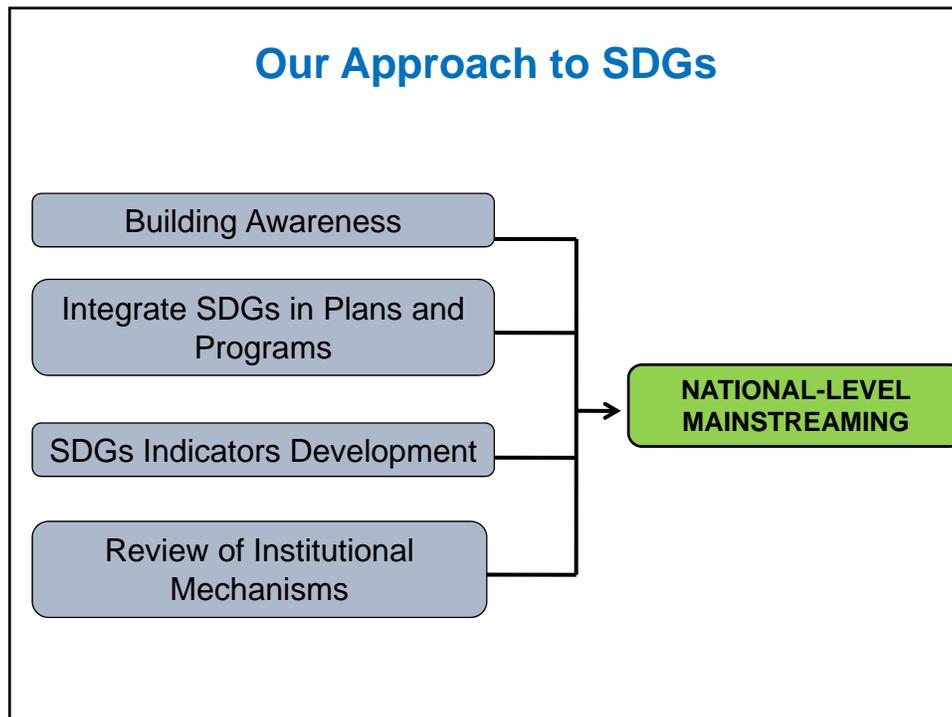
## Building on MDGs to SDGs

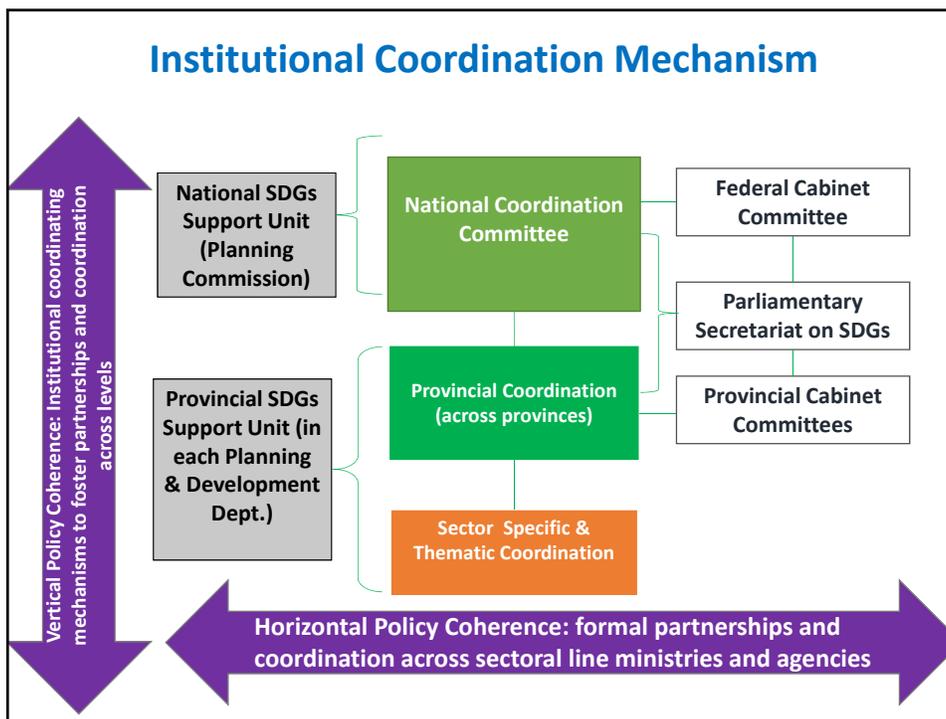
### MDGs lessons learnt and SDGs:

- MDGs were officially acknowledged in 2004 and localization started in 2010
- Development framework remained alien to MDGs
- Timely and pro-active reaction on SDGs by Government of Pakistan
- Economic policies and development framework is aligned to SDGs framework
- SDGs demands disaggregation of data by sex, age and other salient socio-economic characteristics, including income/wealth, location, class, ethnicity, age, disability status

### Decentralized Governance Structure in Pakistan

- Where provinces are empowered to plan and execute - implementation of SDGs, especially those related to social sectors, fall under the preview of provinces.
- This calls for localization and ownership of SDGs at the lowest administrative tier as key to SDGs achievement.





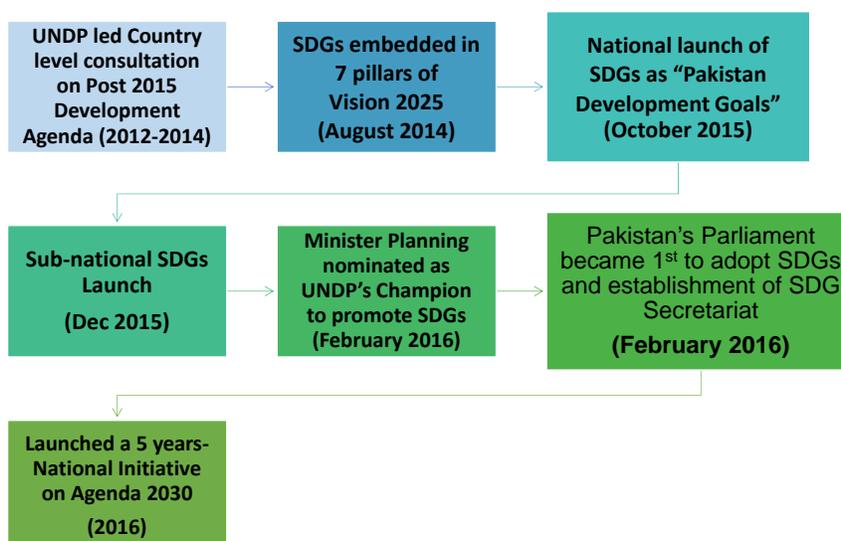
### Targets of NAP for SDGs

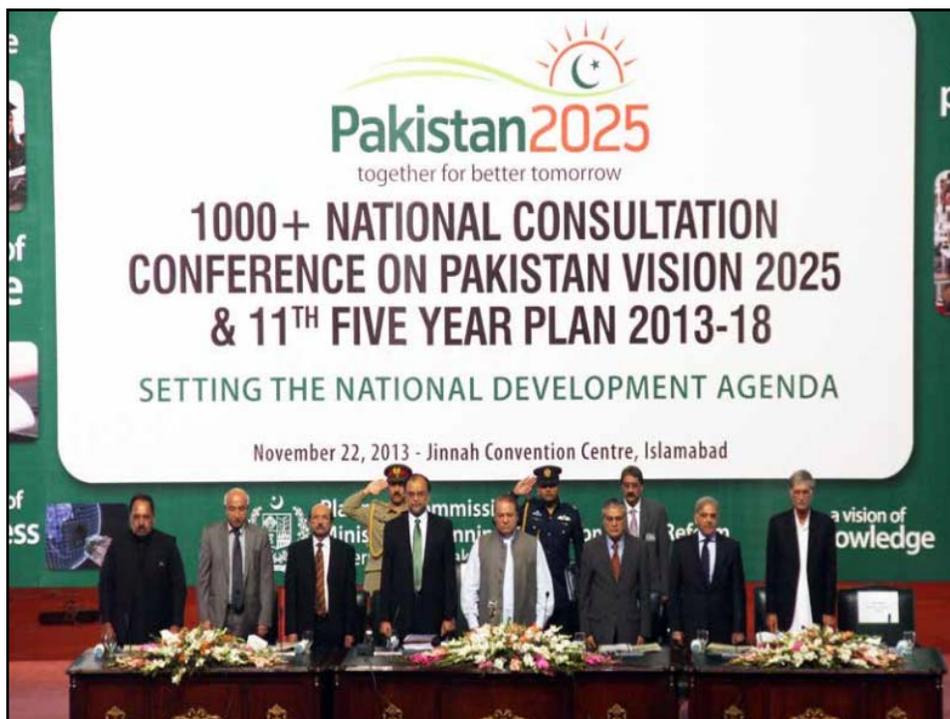
- Sustained job-creation for rapid economic growth
- Closing infrastructure gaps for providing essential services to all
- Universal access to education and health to harness Pakistan's youth bulge
- Universal social protection and financial inclusion
- Addressing food security and hunger with sustainable agricultural productivity improvements
- Promoting gender equality and women's empowerment through entrepreneurship
- Climate Change adaptation strategies

## Data, Monitoring & Evaluation

S.#	Availability of data	Suggested Reporting Level of Indicator				Total Indicators
		Global	National	Provincial	District	
1	Data available on regular basis and standards are available		45	14	33	92
2	Data available but not on regular basis, however standards are available		5	10	9	24
3	Data not regularly produced and standards need to be developed		10	25	77	112
4	Indicator is not reported at this level		0	0	0	0
<b>Total Indicators</b>		<b>13</b>	<b>60</b>	<b>49</b>	<b>119</b>	<b>241</b>

## Key Milestones Achieved so far





## Pillars of Pakistan's Development Agenda (Pakistan's Vision 2025)

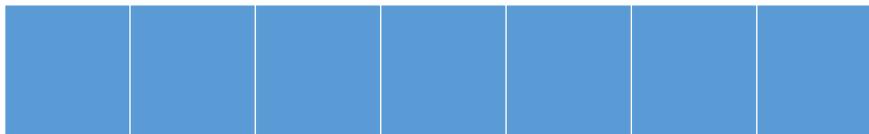
- Pillar 1: Putting People First - Developing Human and Social Capital**
- Pillar 2: Achieving Sustained, Indigenous and Inclusive Growth**
- Pillar 3: Governance, Institutional Reform & Modernization of the Public Sector**
- Pillar 4: Energy, Water & Food Security**
- Pillar 5: Private Sector led Growth**
- Pillar 6: Developing a Competitive Knowledge Economy through Value Addition**
- Pillar 7: Modernizing Transportation Infrastructure & Greater Regional Connectivity**



## Linkage between Vision 2025 and SDGs

### Water

- Increase water storage capacity, applicable to the requirements of each province, in line with defined strategic needs and international benchmarks: from currently 30 days to 45 days by 2018, and 90 days by 2025.
- Invest in proven methods and technologies to minimize wastage (e.g. in the agricultural sector), promote conservation and gain efficiencies through rationalization of pricing.
- Enable more effective allocation with direct reference to national & provincial priorities and related social and economic considerations.
- Establish institutional mechanisms (e.g. a National Water Commission) to effectively manage all sources of water (surface, subsurface, rain) and their sectoral and regional allocations (agriculture, industry, urban).
- Provision of access to a minimum baseline of suitable water to every person in Pakistan.



## Linkage between Vision 2025 and SDGs

### Food Security

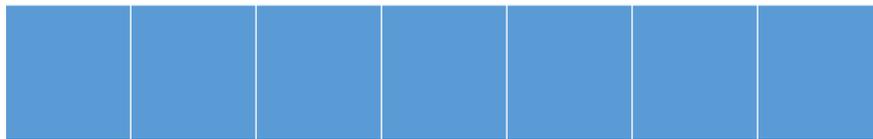
- Protect the most food-insecure segments of the population through effective relief measures, including long-term arrangements and adaptation mechanisms.
- Create a modern, efficient and diversified agricultural sector – aligned with associated water and energy infrastructure –that can ensure a stable and adequate provision of basic food supplies for the country’s population, and provide high quality products to its industries and for export.
- Optimize production and supply mix in line with current and projected needs by leveraging our unique strengths.
- Ensure that the entire supply-chain related to food security is geared towards provision of stable and affordable access to adequate, nutritious and safe food for a healthy life.
- Use the resource base in an efficient and sustainable manner—with outcome-based benchmarks agreed in line with regional and global standards.



## Linkage between Vision 2025 and SDGs

### Climate Change

- Design water, food and energy security policies and plans of the country with specific reference to the profound challenges posed by climate change.
- Explicit recognition of the relevant risks (and associated economic and social costs and implementation of well-defined mitigation and adaptation strategies / measures.
- To promote long term sustainability, conservation and protection of natural resources.



## Implementation on tasks related to WASH - Goal 6 (6.1, 6.2, 6.3)

- Focal Ministry: Ministry of Climate Change
- Key Partners: PCRWR, UNICEF, Provincial Departments
- Consultation: Initiated recently in July 2016
- Baseline indicators setting
- Data acquisition formats
- Monitoring mechanisms

## Challenges

- Pakistan needs at least 10-15% of GDP including social investments to achieve SDGs agenda
- PPP in key areas, pooling resources with private sector and CSR could be complementing additional resource mobilization efforts
- For data, monitoring and accountability to accurately track SDG progress, statistical system needs substantial capacity building efforts
- Extensive coordination efforts at inter-ministerial and federal, provincial level are required

## Conclusion

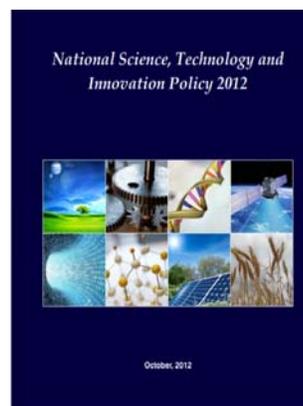
- Pakistan has proactively started localizing SDGs
- SDGs were embedded in 7 pillars of long-term roadmap Vision 2025
- SDGs Unit in Planning Commission is connected to SDG Units in provinces (Punjab has already established and Sindh at advance stage)
- Pakistan's Parliament became 1<sup>st</sup> to adopt SDGs and establishment of SDG Unit
- Development framework is well aligned with SDGs framework
- Pakistan will built upon failures of MDGs

## Presentation Layout

- **Country's STI Policy**
- **STI program and activities**
- **STI to support NAP targets and indicators**
- **STI support to achieve SDGs targets and indicators**
- **Country's challenge and opportunity on STI**
- **STI gaps and needs to accelerate its achievement**

## National Science, Technology and Innovation Policy 2012

- In 1960, the National Scientific Commission of Pakistan was constituted; how best scientific research can be promoted and ensured that its results are utilized for overall development of the country.
- The recommendations of the Commission paved way for basic and applied research in universities and R&D institutes and laid the foundation for the S&T policy.
- The first "National S&T Policy" was approved in 1984
- Followed by National Technology Policy and Technology Development Plan- 1993.
- Updated as National Science, Technology and Innovation Policy - 2012



## Vision - STI

To achieve the security, prosperity and social cohesion of Pakistan through equitable and sustainable socioeconomic progress using science, technology and innovation as central pillars of development in all sectors of economic activity.

## Major Aims and Objectives of STI

- To improve the quality of life of common people in line with the parameters of Millennium Development Goals and International Human Development reports
- To create an industrial and economic environment
- To make Pakistan self-reliant with respect to its strategically important needs
- To encourage natural inquisitiveness of young students in elementary schools
- To assist the educational system at secondary and tertiary level
- To strengthen R&D activities in Higher Educational Institutions
- To take measures for creating a competent corps of technicians and engineers principle

## STI Planning & Management Structure

- The National Commission for Science and Technology (NCST) – Chair: Prime Minister of Pakistan
- The Executive Committee of NCST (EC-NCST) – Chair: Federal Minister, S&T
- Ministry of Science and Technology (MoST)
- Pakistan Council for Science and Technology (PCST)
- Provincial Departments of Science & Technology, Planning & Development

## Policy Actions

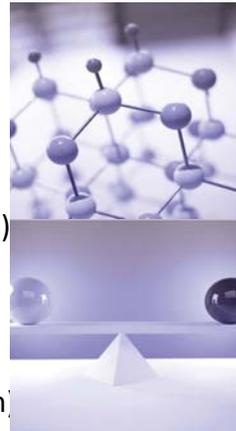
- Declaration of the political will that S&T capacity building would be a central pillar of national development strategy and the R&D expenditure would be enhanced to 1.0% of GDP by 2015 and 2.0% by 2020.
- Commitment to create a long-term non-partisan ST&I policy with the consensus of all stakeholders and putting in place a legal framework for ensuring continuity of the policy and allocation of required funds.
- Issuing the guidelines for shifting the focus of R&D towards demand side with full participation of private sector and employing mechanisms to foster innovation.

## Policy Focus

- Socio-economic Development
- Human Resource Development
- R&D Infrastructure
- S&T Management System

## Policy Programs and Activities

- Human Resource Development  
(Trainings, incentives, motivation, popularization)
- Indigenous Technology Development  
(high tech, incentives, socio-economic focus, codification and intellectual rights, innovation fund)
- Technology Transfer and Creation of Absorptive Capacity
- International Cooperation (multi & bilateral)
- Thrust Areas (standards, quality, genetic, bio-tech)



## STI support towards SDGs

STI	NAP	SDG
Socio-economic Development	Programs on water, agriculture, climate and technology innovation	Goals 1 to 17
Human Resource Development	Capacity building, users trainings and Higher Education Institutions	Goal-4, 8 and 17
R&D Infrastructure	Strengthening of R&D Institutions and support to Provincial Departments	Implementation and problem solving towards SDG achievements
S&T Management System	Database developments in water, industry, scientists and professionals	Helping to provide baselines in all SDGs Goals and indicators

## Pakistan Water Development Report (PWDR)

- Focus upon meeting Water SDG's in Pakistan: Challenges and Opportunities
- The concept of PWDR report;
  - Assessment of current state of water sector and water resources
  - Comprehensive analysis of key issues and challenges
  - Baseline situation analysis with respect to each target defined
  - Pathways for achieving different targets
  - Prioritization of future policy and research agenda to advance the implementation of targets
- The team of Technical experts encompasses;
  - Pakistan based experts: PCRWR, Pak-US CAW-MUET, SDPI, IUCN, Government of Sindh, Planning Commission of Pakistan, COMSATS
  - US-based partners; Experts from University of Utah and University of Nevada

## Chapter-wise outline of PWDR report

<b>Chapter-1;</b> Pakistan's Water Economy	<b>Chapter-6;</b> Water Quality (Target 6.3)
<b>Chapter-2;</b> Water Governance in Pakistan	<b>Chapter-7;</b> Overcoming Water Scarcity (Target 6.4)
<b>Chapter-3;</b> Transitioning from MDG's to SDG's	<b>Chapter-8;</b> Implementation of IWRM Plan (Target 6.5)
<b>Chapter-4;</b> Drinking Water Supply (Target 6.1)	<b>Chapter-9;</b> Protection and restoration of Water-related Ecosystems (Target 6.6)
<b>Chapter-5;</b> Sanitation and Hygiene for all (Target 6.2)	<b>Chapter-10;</b> The Way forward, An implementation plan

## National Workshop, Pakistan Achievement of Water-related SDGs, 14-15 March, 2017



PCRWR in collaboration with United Nations University, Canada and Ministry of Planning, Development and Reforms

Project in 5-countries (Ghana, the Republic of Korea, Pakistan, Tunisia and Costa Rica) to support collaboration for evidence-based policy and decision making for SDGs



## Regional Dialogue on SDG 6.0 February 15, 2017

In collaboration with Tajikistan Embassy and ECO-Science Foundation



## Challenges and Opportunities relating STI

- STI policy in line with national development agenda
- Nearly 50% youth less than 20 years of age
- A large resource base of scientists and professionals available in S&T fields
- Climate change impacts – frequent floods & droughts (since 2010)
- More collaboration and joint efforts needed to accomplish SDGs targets especially in emerging areas.

## STI Gaps and Needs

- Need pro-active implementation of STI
- Human resource development (high-tech tools)
- International/ regional partnerships for knowledge sharing and technical support in emerging areas (satellite technology, bio-technology, climate change, food processing, genetic engineering, health....)

*Thanks for Listening*

Terima kasih untuk mendengarkan

[www.pcrwr.gov.pk](http://www.pcrwr.gov.pk)

ashfaq\_sheikh@hotmail.com  
drashfaq@pcrwr.gov.pk