



# The 7th World Water Forum

12-17 April 2015, Daegu-Gyeongbuk, KOREA



Thematic Process 4.5: Enhancing Education and Capacity Building

## 4.5.4 “Facing the changes in due time: Specific training for basin organizations”

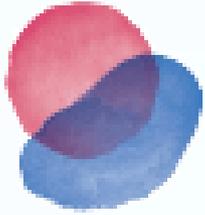
Water Sector Capacity Development System in Central Asia

**Mr Dinara ZIGANSHINA, PhD**

Deputy Director, Scientific Information Centre of

Interstate Commission for Water Coordination in Central Asia

Thursday 16 April, 14h40-16h40 Daegu EXCO, DEC\_307 – 3F – Room 321



**7<sup>th</sup> World Water Forum 2015**

Daegu & Gyeongbuk, Rep. of Korea

# **Water Sector Capacity Development System in Central Asia**

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# Key water challenges in ASB

Diminishing supply

water quality & climate change

Increasing demand

population growth, economic development, Afghanistan

Conflicting interests

agriculture/hydropower/ecosystem ; upstream/downstream

**Ensuring water for all**

Paramount importance of education & capacity development

# Key challenges for capacity development

- **Lack of support from governments** to ensure a systemic and long-term approach to professional development in the water sector
- **Over-dependence on donors' assistance**
- **Poor coordination** between national, regional & international organizations that leads to duplication of efforts in one fields and their shortage in other
- **Lack of clear standards** on CD programs
- **Disconnection** of professional development activities in the water sector from a national system of professional development
- **Lack of incentives** for water professionals in improving their skills and knowledge

# STRUCTURE of Interstate Coordination Water Commission of Central Asian states

## FOUNDERS OF ICWC



State Committee  
on Water  
Resources of  
the Ministry of  
Agriculture of  
the Republic  
of Kazakhstan



Ministry of Agriculture,  
Water Resources  
and Processing  
Industry of the  
Kyrgyz Republic



Ministry of  
Reclamation  
and Water  
Resources  
of the Republic  
of Tajikistan



Ministry of  
Water  
Resources  
of Turkmenistan



Ministry of  
Agriculture and  
Water Resources  
of the Republic  
of Uzbekistan

ICWC

Secretariat

Scientific  
Information  
Center  
(SIC ICWC)

BWO "Syrdarya"

BWO "Amudarya"

Coordination  
Metrological  
Center  
(CMC ICWC)

ICWC  
Training Centre

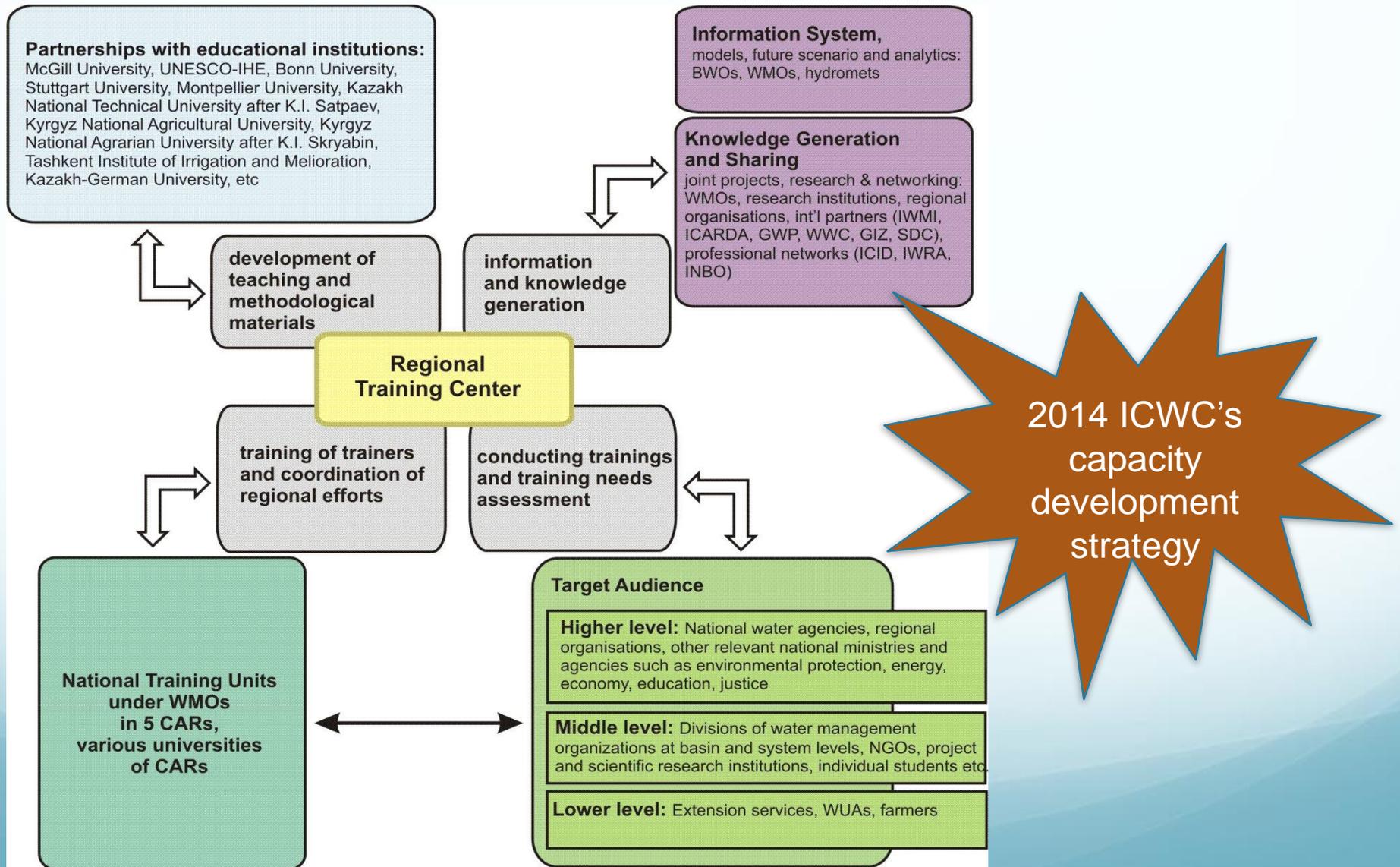
Kazakh Branch

Kyrgyz Branch

Tajik Branch

Key Projects	CD elements
Capacity Building through Project Management Enhancement (CIDA, 2001-2005)	<ul style="list-style-type: none"> <li>–Regional Training Center established</li> <li>–1st step to regenerate water sector PDS – training of trainers</li> </ul>
Integrated Water Resources Management in the Fergana Valley (SDC, 2001-2012)	<ul style="list-style-type: none"> <li>–Field work &amp; practical trainings</li> <li>–Strengthening institutional &amp; legal framework for IWRM</li> <li>–Evidence &amp; research driven training</li> <li>–Social mobilization</li> </ul>
Water and Land Productivity Improvement in Plot Level (SDC, 2008-2012)	<ul style="list-style-type: none"> <li>–Focus on end water users (farmers)</li> <li>–Innovative cycle of knowledge transfer to farmers</li> <li>–Practical trainings</li> </ul>
Central Asia Regional Water Information Base (SDC, 2003-2012)	<ul style="list-style-type: none"> <li>–Database</li> <li>–Knowledge Base</li> <li>–Models</li> </ul>
Water and Education Project for Uzbekistan (OSCE)	<ul style="list-style-type: none"> <li>–Water in school curricula</li> <li>–Training for teachers</li> </ul>
RETA 6163: Improvement of Shared Water Resources Management in Central Asia (ADB, 2005-2008)	<ul style="list-style-type: none"> <li>–High-level officials and cross sectoral approach</li> <li>–Themes: transboundary waters, international water law, conflict resolution</li> </ul>
Capacity Building for Integrated Water Resources Planning and Management in Central Asia (The Netherlands, 2009-2011)	<ul style="list-style-type: none"> <li>–Systematization and testing of teaching materials (curricula on 4 training themes)</li> <li>–Training of trainers (19 national trainers, 212 specialists trained)</li> <li>– Close partnership with educational institutions</li> <li>– ASBmm model</li> </ul>

# Capacity development in ICWC



# What lessons can we learn?

- Lesson 1. **Demand-driven institutions & tailor-made approaches** for all levels of water hierarchy
  - Innovative cycle of knowledge transfer to farmers
  - Special support program for WUA in Uzbekistan
  - Capacity development courses for water professionals (now gains momentum in Uzbekistan)
  - E-learning course for Eurasian Center of Food Security under the Moscow State University
- Lesson 2. **Partnerships** are crucial
  - National agencies: water authorities, educational institutions, technical experts, etc
  - Regional organisations: EC-IFAS, BVOs, ISDC
  - International partners: IWMI, UNESCO-IHE, ICARDA, GWP, WWC, ICID, IWRA, INBO
  - Donors: SDC, CIDA, EU, ADB, WB, USAID, Netherlands

# Lesson 3. Enhance linkages between training, applied research & best practices through joint projects

**Regional Project IWRM in Fergana Valley** (2001-2012 SDC)  
Implemented by national WMOs, SIC ICWC & IWMI in the Fergana Valley (the Kyrgyz Republic, Tajikistan & Uzbekistan) – over 116,000 ha.

## Results:

- With a limited investment (~US\$ 7 mln for six years), water users learned **how to** save water (250 mln m<sup>3</sup>/year) & ultimately **live under water shortage**, producing better yields & improve land productivity
- Professionals from riparian countries **work together to achieve common goals & build trust**

## Challenge: Decreasing number of regional projects



**The Way Forward:** Aral Sea Basin Program for the period of 2011-2015 (ASBP-3) approved by all CARs & fully supported by donors as “an essential framework to guide future assistance to the region”

# Lesson 4: Establish databases, knowledge bases and connect them to training needs



ASBmm – integrated model for assessment of aral sea basin development scenarios. Water sector, ecology, hydropower, agriculture, climate change, socio-economic assessment, new technologies in computer modeling and forecasting.

- If you are a journalist, student or a novice in hydrology, hydraulic engineering or energy who wants to know about characteristics, problems and prospects of development in the Aral Sea basin, please, focus attention on ASBmm.
- If you are a professional in the water sector area and water and energy resources management who is interested to know about alternative water sector development scenarios in riparian countries of the Aral Sea basin, with consideration of socio-economic, environmental, energy and climatic factors, optimization and trade-off solutions, please, focus attention on ASBmm.

This is a unique product in terms of wide coverage of water-related processes and tendencies in the Central Asian countries.



- Authorization**: With the authorization system you can always continue your work from your last action made.
- Navigation system**: Step-by-step navigation simplifies the calculation process and helps you to avoid "getting lost" in your projects.
- Long-term forecasts**: The forecasting system produces results up to 2035.



## Knowledge Base Rubricator



- WATER RESOURCES
- WATER RESOURCES USE
- AGRICULTURE
- LAND RECLAMATION
- LAND DEGRADATION AND DESE
- HYDROECOLOGY
- CLIMATE CHANGE

## L5: Invest in future **water leaders** & promote mutual learning for **transboundary** cooperation



SIC ICWC invests in **the future water leaders** by delegating young water specialists to complete master and PhD programs at the universities of Germany (LUCA, ClinCa projects) and the Netherlands (IHE-UNESCO).

Provide **a platform for communication and interactive dialogue** among representatives of the CARs to foster peaceful cooperation on transboundary waters in the region and reaching consensus on water issues through education.



Building new **skills and knowledge** but also fostering new **mindset and attitudes**

# The Way Forward

Focus on establishing and sustaining a basis for building trust and encouraging collaborative learning between riparians through:

- *Data, information and knowledge sharing,*
- *Joint regional projects (replication and scaling-up across countries of successful pilots),*
- *Training,*
- *Modeling and future development scenario building*

**With a view of managing shared water  
in a climate of peace & security**