

Developing the CAREC Water Pillar

The CAREC Water Pillar- a vehicle for long term cooperation Central Asia case in view of geographical expansion

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ADB TA 9977-REG: CAREC – Developing the Water Pillar

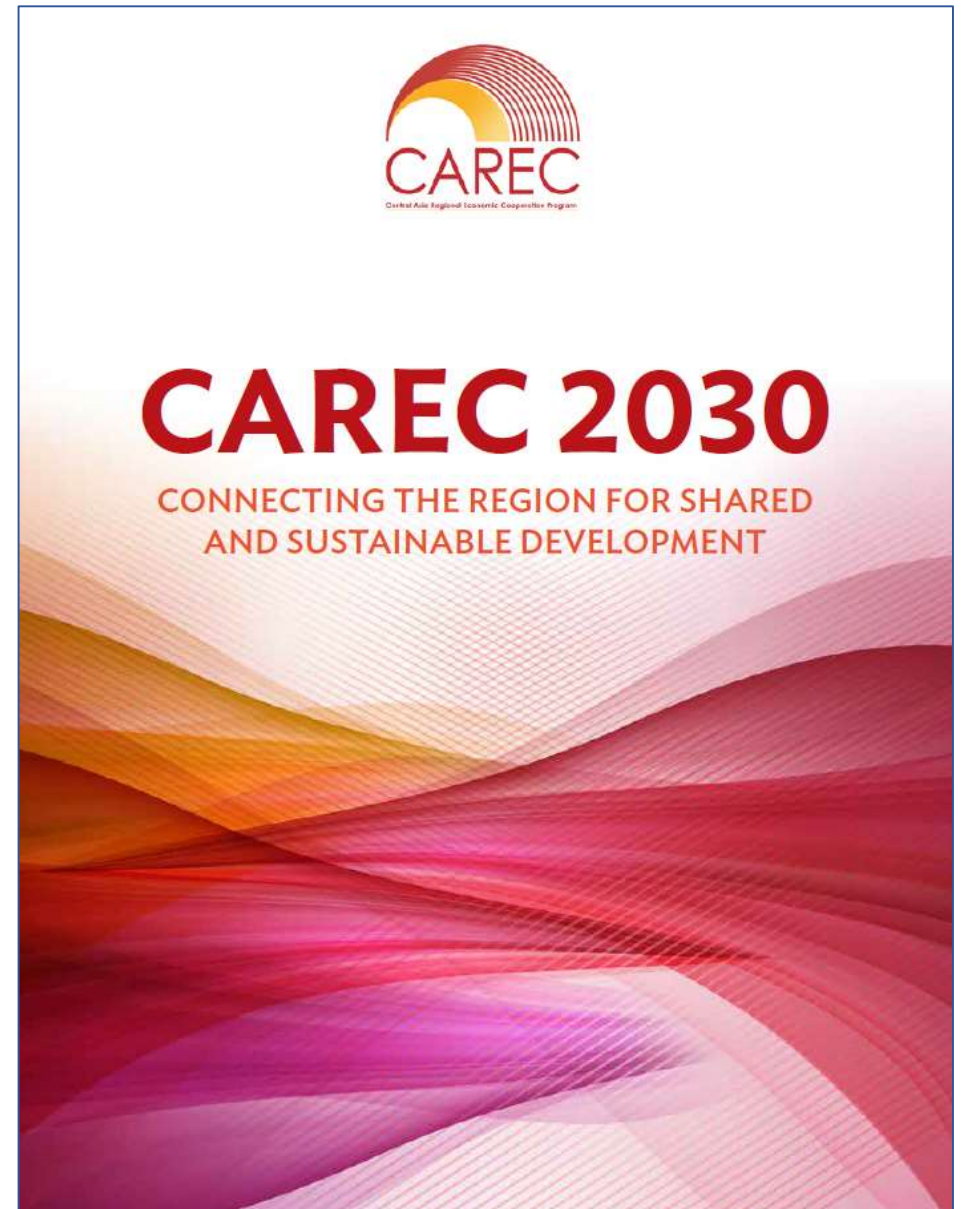


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Central Asia Regional Economic Cooperation (CAREC)

1. 11 member countries
2. Focus on Regional Economic Cooperation
3. Organized around 5 clusters
 - (1) Economic and Financial Stability
 - (2) Trade, Tourism and Economic Corridors
 - (3) Infrastructure and Economic Connectivity
 - (4) Agriculture and **Water**
 - (5) Human Development
4. Overarching vision “Good Neighbors, Good Partners, and Good Prospects.”



Aim and vision of the CAREC Water Pillar

Water Pillar aims to:

- be part of a broader regional economic framework to raise the profile of water security across the region and facilitate cross-sector dialogue and investments for mutually beneficial outcomes
- complement other regional initiatives and programs
- support achievement of national development goals - SDGs, NDCs

Vision: *‘a sustainable, climate resilient, productive and water secure region with shared benefits among States and communities.’*

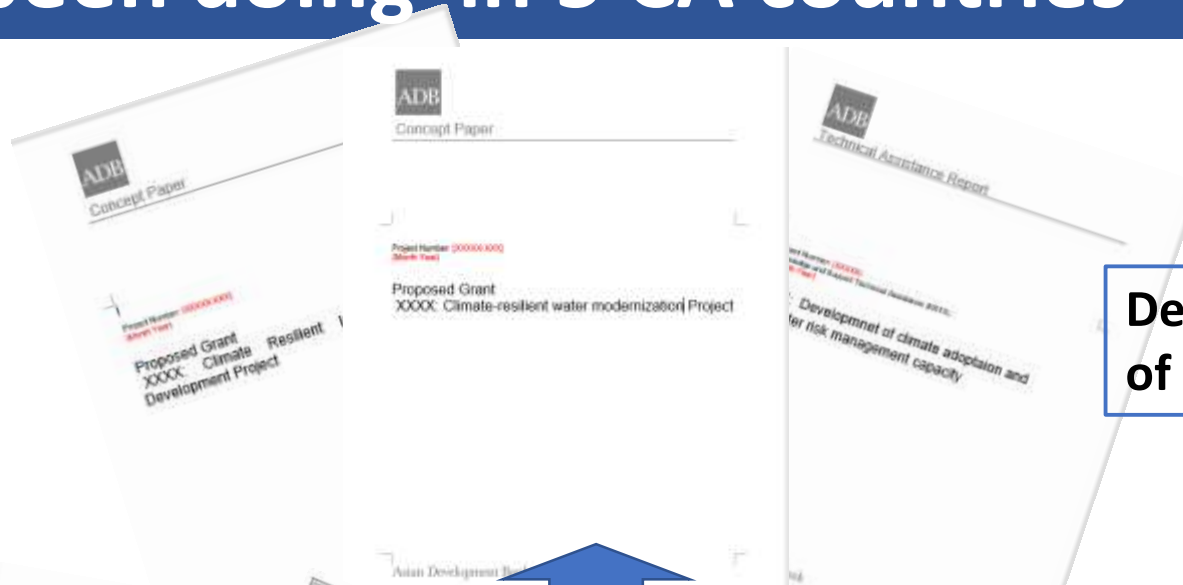
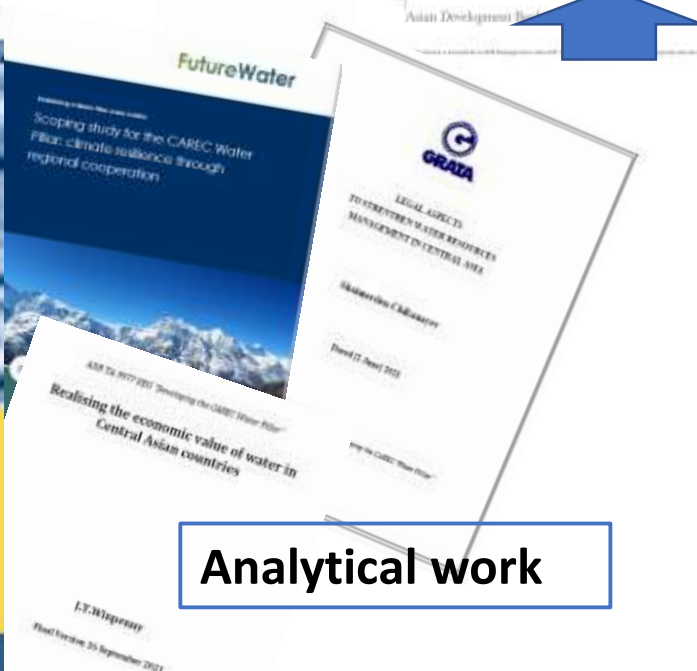
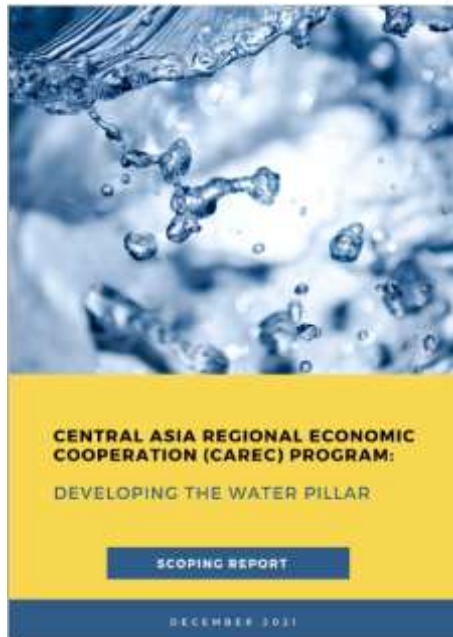
Initial geographic focus is on Aral Sea Basin region – with later expansion to broader CAREC membership

What we have been doing in 5 CA countries

Development of concept notes of regional cooperation

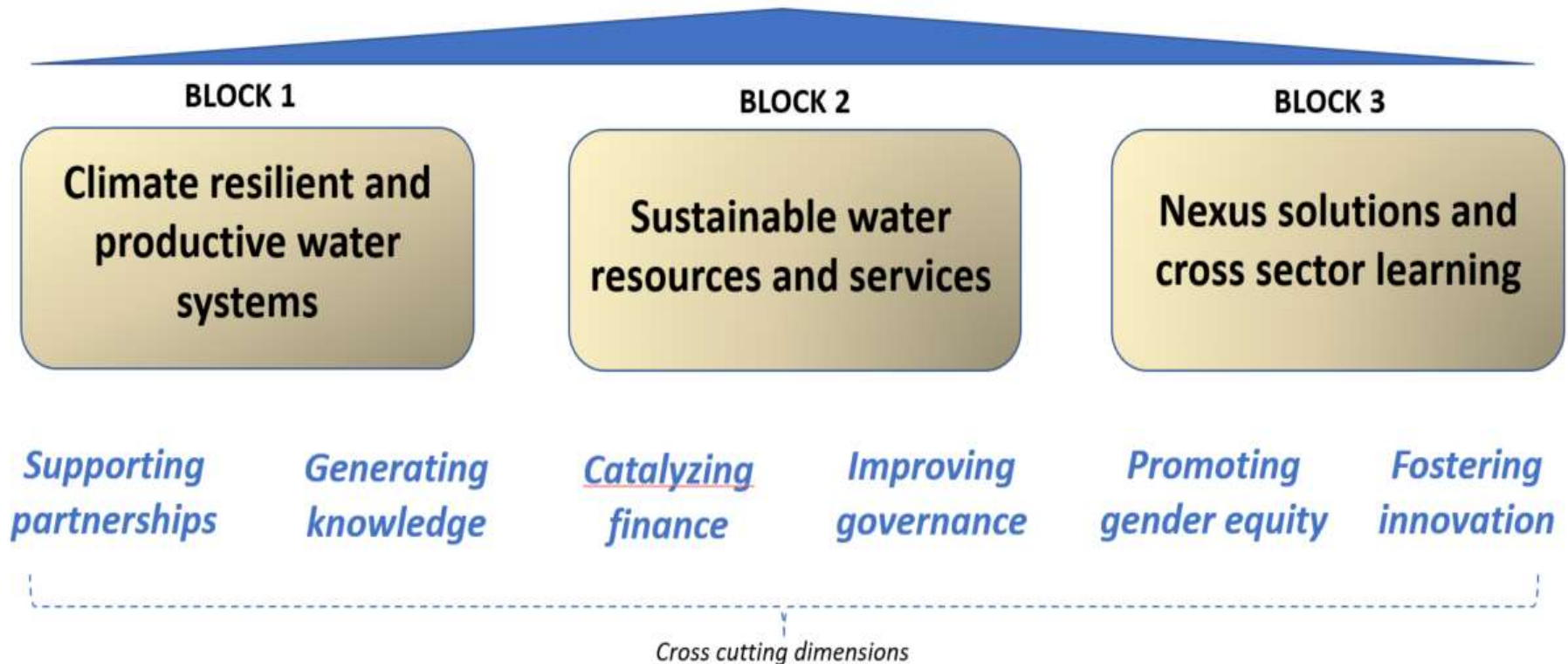
Analytical work

Consultation with countries and partners
(regional and national consultation meetings)



Proposed framework for the Water Pillar

CAREC Water Pillar

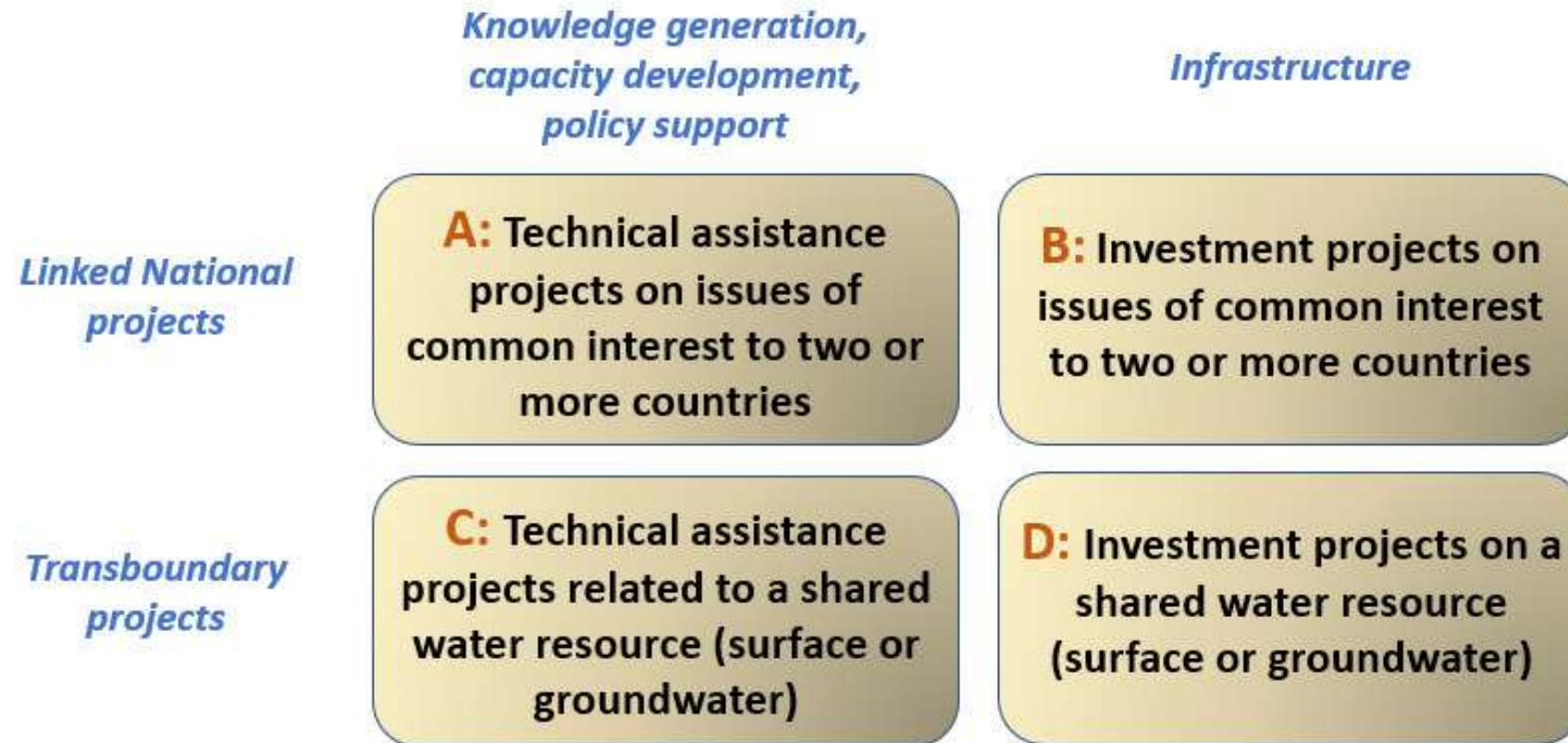


Draft criteria for identifying Water Pillar activities

Water Pillar projects will:

- contribute to the goal of closer regional cooperation
- involve 2 or more countries that are committed to a regional approach
- be consistent with national development priorities
- build synergies with Nationally Determined Contributions for climate change and SDGs
- avoid duplication with ongoing and planned activities
- be economically viable and environmentally and socially sustainable
- have a strong focus on climate resilience
- demonstrate an integrated, cross-sector approach where relevant
- stimulate capacity development of regional, national and local institutions

CAREC can support a range of different project types



A

B

C

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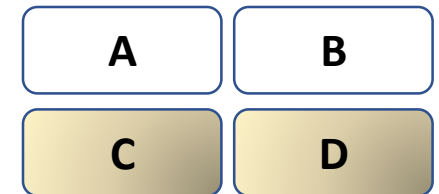
1.1 Climate adaptive management in a shared tributary

Objective

Improved capacity to manage a shared resource in the face of climate change and competing sectoral demands

Activities

- upgrade monitoring systems
- basin-wide climate risk vulnerability assessment
- integrated water-energy scenario modelling
- assessment of the economic productivity of water
- identify opportunities to increase resilience and mitigate vulnerabilities
- pre-feasibility / feasibility studies for selected infrastructure upgrades
- consider institutional plans for regional cooperation on water management



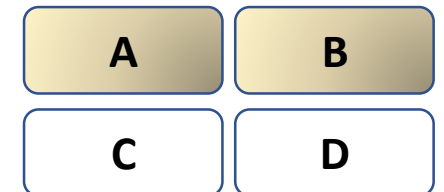
1.2 Regional benefits from climate resilient irrigation

Objective

Improved and shared understanding on effective policy, regulatory and technical aspects for introducing modern, efficient irrigation systems and practices.

Activities

- regional knowledge sharing on climate resilient irrigation modernization including economic incentive mechanisms
- establishment of regional operators' partnership on irrigation modernization to facilitate mentoring and capacity development
- exchange of experiences on involvement of PPPs in irrigation management
- pre-feasibility / feasibility studies for selected infrastructure upgrades



1.3 Risk management for drought and heat stress

Objective

Develop regional capacity and tools to monitor and mitigate risks related to increased occurrence of drought conditions and heat stress

Activities

- develop / adapt prototype early warning system for drought and heat stress
- introduce systems for monitoring drought related variables through remote sensing
- improve ground-based hydrological monitoring networks
- draft and review data exchange protocols for drought information
- implement capacity development programs for system managers and farmer organizations

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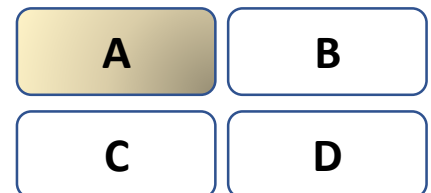
2.1 Efficient and sustainable water services models

Objective

Improved and shared understanding on improved service models for provision of water supply and irrigation

Activities

- review of emerging practice on institutional and regulatory reforms for service provision
- establishment of water operators' partnerships to support exchanges of experience with successful utilities and implementation of reforms
- support to pilot interventions for institutional and management reforms and upgrading of infrastructure
- development of good practice guidance on a service-oriented approach



2.2 Salinity management strategy

Objective

Development of a regional policy and strategy for salinity management and reduction in land degradation

Activities

- regional analysis of existing salinity conditions and land degradation
- regional knowledge event to review current salinity management practices in the region and other arid environments
- establishment of a regional working group on salinity management and support for applied research
- basin-scale modelling of water and solute fluxes to identify key sources and sinks and assess mitigation approaches
- support for implementation of good practice - policy, institutions, technical
- pilot implementation of management and infrastructure approaches



2.3 Promoting safe re-use of treated wastewater

Objective

To develop a common understanding of the benefits and opportunities of wastewater reuse and guidance on creating the necessary enabling environment

Activities

- scoping of the available supply and potential demand for treated wastewater in selected municipalities
- regional knowledge event to discuss alternative business models and policy frameworks
- establishment of a regional working group on reuse of treated wastewater to oversee analysis and preparation of guidance materials
- development of the business case in pilot areas and implementation of pilot projects with municipalities and private sector partners

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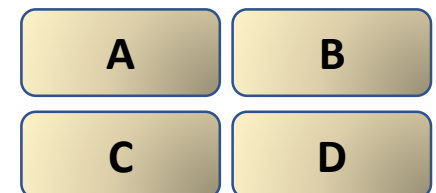
2.4 Promoting benefits from nature-based solutions

Objective

To develop an economic justification and business case for promoting nature-based solutions in water ecosystems

Activities

- mapping and evaluation of aquatic ecosystems in the Aral Sea Basin region
- awareness raising and capacity building on nature-based solutions
- analysis of sustainable financing mechanisms for nature-based solutions
- develop the business case for nature based solutions in selected degraded aquatic ecosystems
- implement pilot interventions including updated management regimes



3.1 Promoting jointly managed infrastructure

Objective

To facilitate the identification and implementation of jointly managed infrastructure bring mutual benefits to project partner countries

Activities

- screening assessment of candidate projects including climate risk vulnerability assessment (CRVAs)
- integrated modelling of water and energy systems to explore benefits from alternative development scenarios
- analysis of shared costs and benefits
- project concept studies
- development of a model agreement for joint management / ownership and operating regime



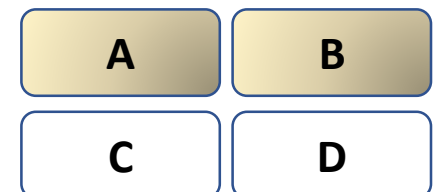
3.2 Renewable energy options in water systems

Objective

To assess the potential and mechanisms for expanding renewable energy technologies in water systems

Activities

- survey the potential for small scale hydropower, land based solar and floating solar technologies in irrigation and water supply systems
- review policy frameworks for private sector investments
- joint energy-water scenario modelling for renewable energy in a selected sub-basin / irrigation system
- financial and economic analysis and social and environmental safeguards
- regional knowledge event to share experiences
- feasibility studies



3.3 Human resource capacity for climate resilience

Objective

To build capacity of current and future water professionals for integrating climate resilience into planning, management and operation of water systems.

Activities

- *capacity development needs assessment*
- *support for development of training courses, knowledge events and knowledge materials for mid-career professionals*
- *incorporation of modules on climate resilience in training institute*
- *support for programs of applied research into climate resilience*



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Regional workshop – 29-30 November 2022, Tashkent

- **Participants:** representatives from water-related government agencies, intergovernmental organizations, regional institutes, development partners
- **Process:** Working breakout sessions with cross-country participation to co-design a shortlist of project activities
- **Expected outcome:** “sufficient consensus” on a set of activities that the TA consultants can further develop into draft project concept notes.

Next steps to develop project concept notes

- regional workshop (Nov 29-30, 2022) to reach consensus on outline of three project concepts
- TA consultant team draft concept papers including scope, budgets and draft implementation arrangements
- review by government agencies and revisions by TA consultant team
- proposal for institutional arrangements for administering the Water Pillar
- consideration by Senior Officials Meeting of CAREC

TEAMWORK AND COLLABORATION CUP



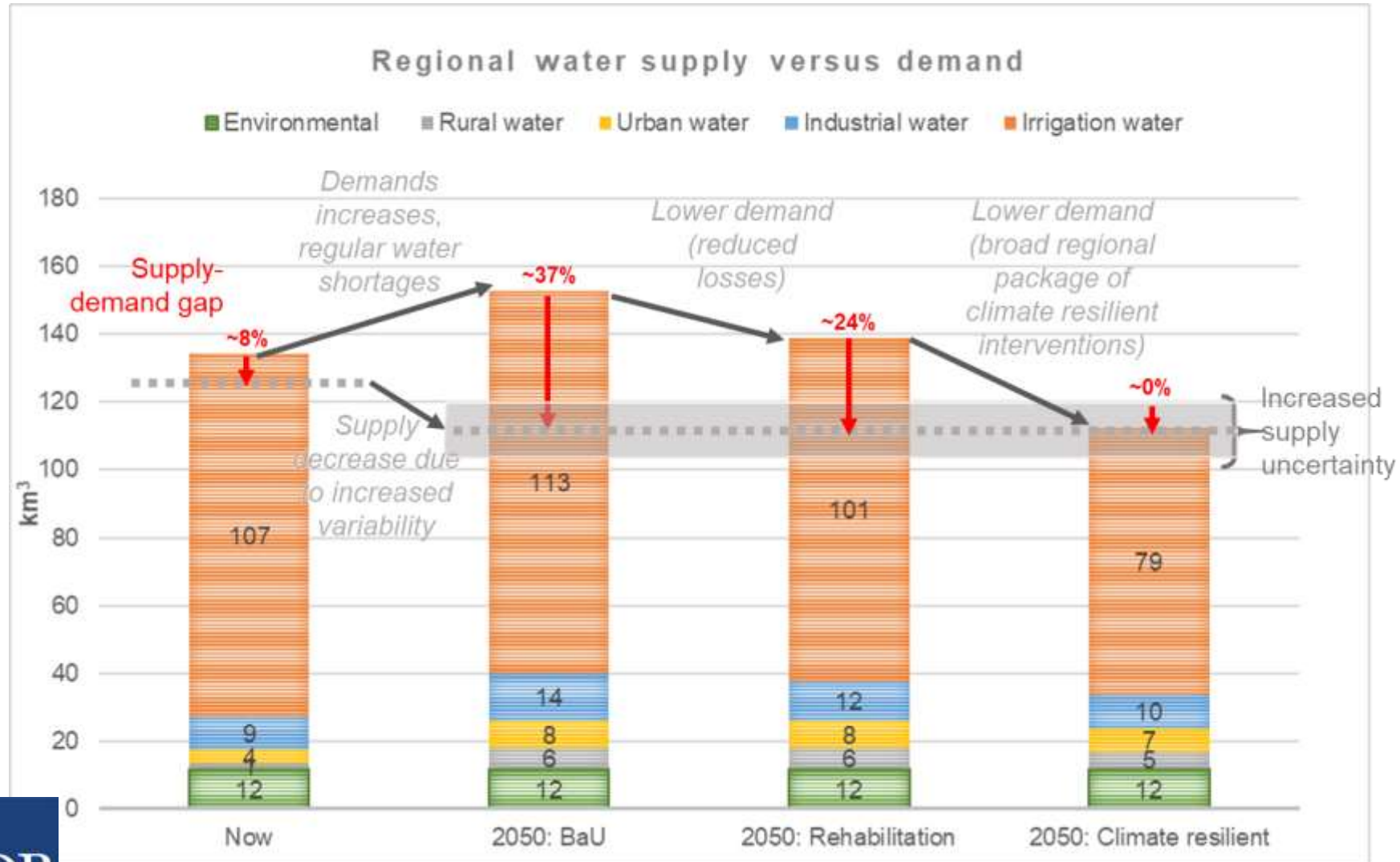
Thank you for your attention, and continuous collaboration!

by eXo
Ha Minh Le

Extra slides to use if necessary



Water supply-demand scenarios



Policy challenges for water in Central Asia

- ❑ Reducing excessive demand for water and reducing waste and losses
- ❑ Discouraging use of water for low-value purposes and promoting more economically productive use of water
- ❑ Encouraging water savings, and enabling release of water for other beneficial use or for environmental needs
- ❑ Increasing cost recovery from water users for sustainable financing of water infrastructure and services
- ❑ Making water more attractive for private sector involvement including PPPs
- ❑ Policy coherence across sectors (e.g. agriculture, irrigation, energy, finance) with coordinated implementation from national to farm levels

SWOT analysis for water cooperation through CAREC

Strengths

- **Long history and high-level commitments to regional cooperation on water**
- **Strong national commitment to economic reforms**
- Rich endowment of land and water resources
- High human resource potential
- **Established CAREC cooperation platform**

Weaknesses

- **Limited skills in modern management approaches**
- **Sparse data collection and information sharing**
- **Degraded water infrastructure and low productivity**
- Degraded natural environment
- Low numbers of women in water management
- Outdated regional agreements

Opportunities

- Improvements in geopolitical relations
- Global emphasis on climate adaptation, including funding for resilience and green economy projects
- **Complementary water-energy benefits from regional inter-connection**
- **Potential markets for high value agriculture**
- **Potential for improved productivity and management by adopting of modern technology**
- Potential for new renewable energy sources

Threats

- Climate impacts are more extreme for some countries than others
- **Increasing demand for water constrains regional cooperation and water for the environment**
- Water quality deteriorates as economies grow
- **Institutional barriers to cross-sectoral coordination**
- Mistrust and lack of confidence in finding mutually beneficial solutions

Role of the CAREC Water Pillar

Focus on regional interventions that go beyond the benefits delivered through national projects alone:

- **Investment support for water infrastructure** that has mutual benefits for two or more countries;
- **Generator of knowledge** through analysis of key issues and guidance on policy reform, including adaptation of international good practice;
- **Platform for dialogue** at technical and policy levels to exchange experience and build consensus on water resources management and provision of water services;
- **Facilitator of capacity development** involving peer-to-peer exchanges, in-career professional development, and upgrading training programs.

Game changers – exploring future scenarios

Climate change impacts:

Increased uncertainty and variable flow regimes **necessitate cooperation in the forecasting and allocation of water resources**

Technological advances:

New technology including remote sensing and modern irrigation brings potential for **more productive use of water and wider access to information**

Agriculture liberalization:

More secure land tenure combined with high value agriculture and more commercial production methods offer **potential to reduce water demand**

Regional electricity interconnection:

Integration with South Asia electricity market leads to **closer alignment of peak demand for hydropower generation with downstream irrigation needs**

Transition to intermittent renewables:

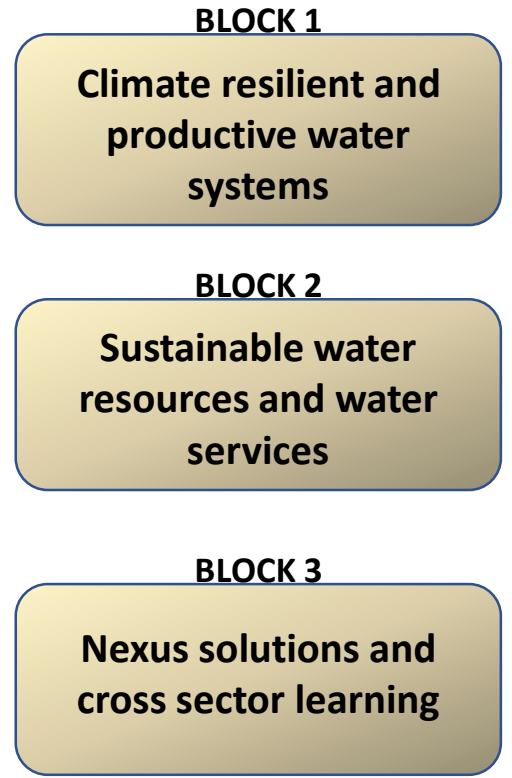
Operation of upstream hydropower for grid stability to balance solar and wind production leads to more variable flow regimes downstream **requiring improved cross-sector dialogue**

Higher standard of living:

Raises expectations for service delivery performance and quality of life, including an improved environment

From 'scoping' to 'implementation' and 'expansion' - the CAREC Water Pillar

Framework of Water Pillar



-June 2022

- Detailed mapping of other regional programs
- Dialogue with CAREC country agencies
- Coordination with EC-IFAS on ASBP4 opportunities
- Complementarity with development partner programs

July-Nov 2022

- Draft long list of priority project
- Regional workshop (Nov)
- Outline design of 2 priority projects
- Develop institutional arrangements and implementation modalities

Dec- Jan 2023

- Develop concept notes for 2 priority projects
- Seek official endorsement for priority projects
- Discuss key regional stakeholders for expansion of CAREC Water Pillar
- Draft scoping report for the additional sub-region
- Explore opportunities for expansion of CAREC Water Pillar

-Dec 2023

- Draft scoping report for the additional sub-region (continued)
- Proposal for expansion of CAREC Water Pillar
- Develop concept notes for 2 priority projects for the additional sub-region
- Knowledge event (tbd)

