

Concept Note and Agenda for the Capacity Development and Stakeholder Workshop

Water, energy, and land nexus scenarios for the Indus Basin: Consultation and joint learning

International Institute for Applied System Analysis (IIASA)
in cooperation with

International Centre for Integrated Mountain Development (ICIMOD)

21-22 August 2019, Katmandu, Nepal

Background

This workshop is organized in context of the Integrated Solutions for Water, Energy, and Land (ISWEL) project, led by the partnership between the International Institute for Applied Systems Analysis (IIASA, the Global Environment Facility (GEF), and the United Nations Industrial Development Organization (UNIDO). The overall goal of the ISWEL project is to develop tools and capacities to support the management of the water, energy and land nexus. The project takes a global approach but it also focuses on two transboundary basins facing important development and environmental challenges: the Indus and the Zambezi.

In the Indus, the project team started working in January 2017 in the development of an integrated assessment modeling tool that can be used to identify long term cost-effective solutions to meet water, energy and land development goals in an integrated manner. In order to shape the tool to be suitable for addressing the most pressing nexus challenges in the Indus, the project has dedicated significant effort to engage with basin stakeholders from the four riparian countries. Beyond the identification of basin development priorities for water, energy and land, the stakeholder strategy aimed to go a step beyond and develop a participatory tool/process to co-develop future basin scenarios. In addition to the development and application of the basin tools and processes, the project has a strong component on capacity development. For this, the basin meetings have been accompanied by a number of trainings, with the purpose of facilitating the uptake of the tools, and their use by the basin stakeholders and researchers beyond the lifetime of the project.

From a stakeholder engagement perspective, the ISWEL team has worked in close collaboration with a number of riparian partners from the Indus, and regional initiatives such as the Indus Basin Knowledge Forum, led by the International Center for Integrated Mountain Development (ICIMOD) and the International Water Management Institute (IWMI). In this respect, IIASA participated in the second IBKF in Colombo, and hosted the third IBKF in Vienna. These collaborations with regional and national stakeholders from the four riparian countries have been fundamental to:

- Identifying country and basin challenges, priorities, and trade-offs in relation to water-energy-land nexus to adequately represent them in the tools,
- Develop a range of stakeholder informed scenarios of water-energy-land futures to gain understanding of the consequences of different decisions and what opportunities exist to maximize sectorial and transboundary co-benefits,
- Identify a number of capacity needs for improved WEL nexus research and management.

Purpose

This is the third and final basin meeting planned within phase I of the ISWEL project (2017-2019).¹ The purpose of this meeting is to update stakeholders on the work developed over the past year. Specifically, how the narratives describing the visions and pathways drafted in the Vienna meeting in 2018 have been used to drive the tools, as well as sharing the results (basin scenarios) for further discussion and feedback.

Through this exercise we aim to provide meaningful answers and facilitate the discussion surrounding complex but very relevant questions for the future of the Indus: what investments and policies are required to achieve WEL sustainable development goals in the basin? What are the benefits and costs of choosing different development pathways? Would these pathways be accepted by all riparian countries? With sound science and using of multiple scenarios, the workshop will aim to provide meaningful answers to this and related questions. The workshop will also discuss possibilities for the practical use of the tools and developed scenarios.

Expected outcomes

The participation in this meeting is expected to:

- Increase the knowledge base on nexus modeling tools (including datasets and model assumptions) and their usefulness for basin planning in the Indus.
- Develop a shared understanding on the quantitative implications of different investments in the basin and their consequences cascading through the WEL sectors and across the borders.
- Provide feedback to the ISWEL modeling team on the tools and scenarios produced and to be reflected in an Indus nexus policy brief
- Identify stakeholders interested in co-authoring a high impact peer review paper synthesizing the findings on the ISWEL Indus project.
- Discuss practical uses of the developed tools and scenarios in the context of other ongoing initiatives and potential future collaborations

Timeframe and Venue

21-22 August 2019, Kathmandu, ICIMOD Headquarters, Nepal

¹ The first meetings were national consultation meetings held in Delhi and Lahore in March 2018. These consultations were followed by a Scenario Workshop organized back to back with the III Indus Basin Knowledge Forum in Vienna in June 2018. The different meetings brought together more than 50 different stakeholders, representing 31 different organizations from the 4 riparian countries.

Proposed methodology

Day 1: Discussing and understanding modeling results and policy implications

After the welcoming and introduction to the workshop agenda, the first part of the day will be dedicated to provide an introduction to the ISWEL project and the tools developed. The project team will also present the results of the Indus scenario of future development to 2050 and underpinning assumptions. In the afternoon there will be a 'hands-on' session, where stakeholders will be invited to participate in a simulation exercise on WEL management. Using a real case study of the Indus basin, stakeholders will explore the implications of how single policies impact across sectors and borders as well as the benefits and trade-offs of promoting more co-operative and integrated policies.

Day 2: Exploring and understanding the data, scenario results, follow-up activities & Wrap up

The second and last (half) day of the workshop will be dedicated to a participatory exercise, where participants will be exploring the databases stemming from the model runs to get familiar with the data and most important gain a deeper understanding on the meaning and implications of different scenarios and policies. The last part of the session will be dedicated to brainstorm about opportunities to further advance research to support the management of the WEL nexus in the Indus research collaborations.

Workshop Agenda

21 August	
Discussing and understanding modeling results and policy implications Piotr Magnuszewski, Barbara Willaarts, Simon Parkinson, Adriano Vinca, Simon Langan, Keywan Riahi, Robert Novak	
8:30-9:00	Registration + welcome tea
9:00-9:15	Welcome (IIASA, ICIMOD, UNIDO)
9.15-9:45	Getting to know each other
9:45-10:00	Brief introduction to the ISWEL
10:00-11:00	Nexus Modeling in the Indus: what are the tools and underlying assumptions?
11:00-11:30	Coffee break
11:30-13:00	Presenting the modeling results: Indus Basin Future Scenarios
13:00-14:00	Lunch
14:00-16:00	Strategic Nexus Simulation Exercise
16:00-16:30	Coffee break
16:30-17:30	Discussion on the policy implications: What can we learn from the modeling and simulation exercise?
17.30-17.45	Summary of the Day

22 August

Exploring and understanding the data and scenario results & Wrap up
Piotr Magnuszewski, Barbara Willaarts, Simon Parkinson, Adriano Vinca, Keywan Riahi, Simon Langan, Robert Novak

8:45-9:00	Welcome and introduction to the program of the day
9:00-10:30	Exploring the data sets: Understanding modeling results and identifying policy insights
10:30-11:00	Coffee break
11:00-11:30	Possible application of tools in a potential REEECH energy, water, food security and climate resilience project
11:30-12:30	Discussion Exploring further opportunities
12:30-13:00	<i>Closing remarks</i>
12:30-13:30	Lunch