

Background

The Project Steering Committee (PSC) of the Integrated Solutions for Water, Energy and Land project (ISWEL) met for the first time in person with the ISWEL research team at IIASA during 8-9 June 2017. This was the first of the three annual face-to-face meetings planned during the project life time, and was attended by 18 IIASA staff, currently involved full- or part-time in ISWEL (see the Agenda and Participant list, Annex I) and by the six members of the PSC: Leena Srivastava (TERI University), Astrid Hillers (GEF), David Grey (Oxford), Youba Sokona (South Centre), Robert Novak (UNIDO) and Nebojsa Nakicenovic (IIASA Directorate).

This meeting has been preceded by two conference calls (12 December 2016 and 21 April 2017), which provided an introductory overview to ISWEL. The specific goals of the meeting were:

- Providing a comprehensive overview to all PSC members on the project scope, goals, timeline, planned outcomes and outputs.
- Present and discuss in detail the ongoing work within the different project components and tasks. In particular, the progress achieved so far with the modeling (global and regional), the stakeholder engagement strategy, the challenges upfront and the planned outcomes for 2017.
- Receive feedback from the PSC members to improve the usefulness and impact of the research developed
- Utilize the knowledge, experience and network provided by the diversity PSC members' background to design appropriate strategies and responses to overcome existing challenges.

The meeting lasted one and half day and was arranged into four sessions (Project Overview, Regional Assessment, Global Hotspots Assessment and Stakeholder Engagement) (See Annex I). Each session was introduced by presentation by the IIASA team and followed by a discussion. Time was also allocated at the end of the meeting for the PSC members to deliberate a number of specific recommendations to enhance the relevance and applicability of ISWEL both for, global and regional decision making.

Summary

This section summarizes the essence of the feedback, questions raised by the PSC and the main discussion points we had in the first three sessions (regional and global modeling and stakeholder process).

Thursday 8 June

Project Overview

1. **Scope**
 - a. There is a need to clearly define what we want to achieve in practice with ISWEL, in particular in the regional case studies. What specific outputs will be delivered? Who will benefit? Who should be involved?
 - b. Project life time is too short to expect that ISWEL is going to achieve a substantial swift in the two case study basins. But it can well represent the beginning of a transformational pathway and set the baseline for develop the necessary tools and local capacities needed to tackle regional challenges
 - c. The challenges of the Global South are enormous. Lifting people out of poverty is one but also achieving this within extremely high complex systems. It is important that ISWEL acknowledges this double challenge and incorporates it to the extent possible.
2. **Nexus conceptualization.** Sectorial interlinkages or nexus as conceptualized in ISWEL are very context dependent. The shape and feedback between WEL in low latitudes is different from higher latitudes, and this needs to be early acknowledged to appropriately frame nexus issues within ISWEL, particularly in the regional case studies.
3. **Approach.** Low resolution and poor data quality make global model projections in the South quite irrelevant. Improving the quality of the model projections and the usefulness of the outputs, strongly requires the incorporation of bottom-up approaches within ISWEL in both, the global and regional modeling. These bottom up approaches imply e.g. double check data sources with local partners, share assumptions behind model projections with local experts to assess their relevance, and work with local partners to identify most pressing problems.

Regional Assessment

4. **Problem definition.** Providing adequate solutions, requires in the first place a good diagnosis of what the problems are. Without knowing what the challenges in the basins are, is unlikely that we will provide useful solutions and equally important, discern the extent to which our tools are capable of responding to the local demands.
5. **When engaging with stakeholders?** Problem identification and consultation with local stakeholders should occur in the early stages of the project, but going to the regions too early with empty hands i.e. with no demonstration capabilities at all, might threat our credibility. It makes sense to engage with stakeholders early in the project but once we have some capabilities developed (tools, preliminary projections & model runs).

6. Potential risks to bear in mind

- a. It is highly possible that regional projections obtained from downscaled global models do not match the reality and trends observed in the basins.
 - b. Global scenarios will most likely not reflect all relevant challenges basins are facing.
 - c. IIASA tools might not be adequate for addressing local challenges.
 - d. Priorities in the two regions might differ significantly and we need to be prepared
 - e. If engagement with regional partners fails, we need a B plan. For Indus, this could be to focus only on the Pakistan part of the basin. In Zambezi, if ZAMCOM or the WB do not support us, we might want to find another partner or directly go to another basin (e.g. Senegal or Congo basins).
7. **Building capacities.** To be successful we would ideally rely on local partners or focal points. These partners can take ownership of tools and outputs, and themselves connect to decision makers. Identifying focal points is fundamental to develop local capacities and create ownership. PSC members can provide significant input to this through their networks and personal contacts

Friday 9 June

Global Assessment

8. **Hotspots.** Better definition of the questions we want to answer through this analysis. Best strategy is to link the analysis to relevant global policy targets e.g. SDGs, Climate Change mitigation/adaptation, etc. If linked to SDGs, the advantage would be that countries individually have developed mechanisms to address SDGs separately, and this global assessment could help envision synergies of integrated approaches across sectors and countries/regions (e.g. water, food and energy goals within transboundary basins). If the assessment aims to establish a linkage with CC policies and what-if under different temperature scenarios (e.g. 1.5, 2 or 3°C), runoff and not only precipitations should be considered as key variables. Physical and economic dimension is well represented so far in the assessment, but social and governance dimensions are miss-represented.
9. **Resolution of model projections.** The resolution of the drivers and impacts of the global assessment is high compared to what is out there. However, there is still the risk that such resolution (0.5 degrees) is not adequate to address key policy questions. Nevertheless, the results of the regional assessment in the two basins can be used to assess the reliability of the global projections and provide caveats on whether global projections are or not within the range.
10. **Solutions oriented assessment.**
- a. The global hotspot analysis involves a two-step process: identification of CC or SDG related challenges and where those located in the globe, and in a second

step explore sets of possible (soft- or hard-path) solutions to achieve targets at the lowest possible costs.

- b. It is important to discern in this analysis who will bear the costs in addition to who will benefit.

Stakeholder Engagement

11. **Best strategy is a blend between top-down and bottom-up approaches.** Models and capacities at IIASA might not be suitable to address all questions, and therefore boundaries of our capabilities need to be established from the beginning. But early engagement of the stakeholders in the definition of the regional problems, drivers, and policy targets will ensure the consistency of the regional assessment and also they buy-in of local partners.
12. **Choice of stakeholders.** Do we want to engage with decision makers, practitioners, investors, academics? It is important to clarify this.
 - a. Developing local capacities (in addition to ongoing efforts like YSSPs) will require placing our efforts largely in engaging with knowledge institutions, which can themselves take ownership of the tools and data to influence regional decision making.
 - b. But if we wish to influence or support decision makers and investors more directly, efforts of engagement should be allocated with these two groups of stakeholders.
13. **Entry points.** Using a well-connected organization or contact person will facilitate the establishment of a partnership with regional stakeholders and develop the regional assessment component of the project. Using as entry point the World Bank is a good option (Markus Wishart in Zambezi and Christina Leb in the Indus).

PSC concluding remarks

This section describes the main points the PSC highlighted at the end of the meeting, which build on the detailed discussions we had in the previous sessions.

1. It is necessary to define better the specific outcomes and outputs that we want to achieve with ISWEL. How are we going to measure the success of ISWEL?
2. For future meetings, materials and documents need to be send well in advance to allow the PSC to go through them in detail.
3. ISWEL should not just be an academic exercise. It is important that this project provides useful science and has a positive social impact in addition to publications.
4. Improving the knowledge of the risk and opportunities of the global south is very important and ISWEL can make a difference here.
5. It is crucial to target the right partners on the ground. This will ensure 50% of the project success at the regional level.

6. It is advisable to plan the next PSC meeting within the next 8-12 months. It might be worthy to revisit the timeline and see when are important milestones planned for and arrange a meeting shortly after.
7. All team leaders are encouraged to take part in the next PSC meeting
8. Teleconferences can be planned with the PSC members to address specific issues but those should remain independent from the face to face meetings.
9. IIASA team has to decide what recommendations and comments can take on board at this stage of the project and report back to PSC.

Actions agreed by the ISWEL Executive team

A series of actions have been agreed by the Executive Team of ISWEL in response to the recommendations and questions raised by the PSC in the different sessions. The list of actions planned don't address all comments, only those that can clearly be incorporated at this stage of the project. This is not to say that we will dismiss any, but will try to incorporate them as we move forward in the project.

1. Working towards a **better definition of project outputs and outcomes**. The project proposal included a detailed plan of outcomes/outputs as well as impact indicators (Annex II), but we acknowledge that we are at the stage where we can already provide more details for some outputs. We will invest time in the next weeks defining more specifically some of the upcoming outputs that we will include in the next progress report (e.g. global hotspot assessment, stakeholder with who we will engage in the two regions and for what).
2. **Better framing of nexus challenges in Low latitudes**. In the regional case studies it is clear that such framing can be obtained from the interactions with local stakeholders and experts, and we are planning include this issue as a key outputs from our first consultation. At the global level, the preliminary global trade –off analysis and solution space that we are drafting might not capture this level of detail and stay more generic. But certainly, we will explore avenues for making this specific conceptualization explicit in the final assessment (D2.2.1).
3. **Engaging early with stakeholder to adequately frame regional problems, demands and challenges**. We have finally received confirmation from ZAMCOM that the next Zambezi Basin Forum will take place during 25-29 September 2017 in Lusaka. We have been invited by the ZAMCOM Secretariat to attend the Forum and we see this is a gold opportunity to engage with a range of local partners to identify the pressing problems and seek for a matchmaking between our capacities and their needs. A delegation of ISWEL staff will attend the Forum and participate in the first regional meeting. Internally we have now to arrange the organization of this meeting and discuss the details. We are now in conversations with ZAMCOM to clarify the details. Indus Forum is taking place now (3-7 July) and Simon Langan will report on his way back about what are the best options to engage with local partners and when.
4. The **global hotspot assessment will incorporate multiple indicators** from the different sectors in an attempt to respond a wide range of questions (CC change related but also others). Nevertheless, **special emphasis** will be given to the identification of areas across the world where attaining **WEL-related SDGs** (e.g. 2, 6, 7, 13 and 15) could be challenging. The team is currently discussing the selection of indicators to be included

in the analysis. The societal vulnerability (measured in terms of people or GDP exposed to single or multiple WEL-related risks) is another dimension that will be included. Governance aspects while being a very important driver and a solution to current a future challenges are not yet being considered for a number of reasons (including the difficulties of finding an appropriate quantitative indicator for good governance).

5. ISWEL should be a **solution-oriented project**, but providing global WEL solutions seems a rather ambitious plan, as this will require a throughout analysis of technological, physical and institutional conditions of every country and region. Therefore the global analysis is meant to be a comprehensive assessment pointing at regions around the world where problems and conflicts might emerge under a number of scenarios and test how a series of *standard* solutions may work, but it is not meant to provide specific recommendations for the different regions. In the regional assessment, exploring the solution space is feasible and here significant efforts will be placed in both, understanding what the challenges and problems area and what solutions make more sense given the local and regional context.
6. **Capacity development** is a core element in ISWEL project but better definition of the extent of this activity is now being discussed. One way to proceed, could be to engage and work directly with knowledge organizations in the basins and built local capacities in nexus thinking and tools. This is the way we are considering for the Indus, as our entry point(s) are most likely to be research organizations. ZAMCOM has also showed interest in us collaborating in the development of local capacities at the ministerial level and perhaps provide input to the development of a DSS, but we are now discussing the details and how this could look like.
7. **Next PSC meeting.** Given that we are planning to hold our first regional workshops in the last trimester of 2017 (September and late fall) in the two basins, we propose to hold our next PSC meeting here at IIASA during the first quarter of 2018. In the meantime, we would like to invite those PSC members interested in joining our first regional meeting in Lusaka the last week of September. Details and final dates will be confirmed in the next weeks.

Annex I Meeting Agenda

Integrated Solutions for Water, Energy and Land Annual Project Steering Committee Meeting 8-9 June 2017 – Venue: Wodak room, IIASA



Background

This meeting is a follow up of the conference call we had on the 21 April 2017 and has been organized shortly after the call with the aim of: 1) facilitating a more interactive and in-depth discussion about the ongoing work and next steps in ISWEL; and 2) utilize the knowledge and network of the PSC members to benefit the project from the early stages.

The meeting venue: **Wodak room**

Participants

Leena Srivastava-TERI
David Grey-OXFORD
Youba Sokona -IIED
Astrid Hiller – GEF
Robert Novak – UNIDO
Nebojsa Nakicenovic - IIASA
Simon Langan -IIASA
Volker Krey – IIASA
Yoshihide Wada – IIASA
Petr Havlik – IIASA
Ed Byers-IIASA
Piotr Magnuszewski– IIASA
Amanda Palazzo-IIASA
Simon Parkinson-IIASA
Michiel van Dijk-IIASA
Beatriz Mayor-IIASA
Taher Kahil-IIASA
Peter Burek-IIASA
David Leclerc-IIASA
Matthew Gidden-IIASA
Juraj Balcovik-IIASA
Barbara Willaarts – IIASA

Agenda

Thursday 8 June

08:00 - 11:30	Transfer from airport to hotel (Pension Falknerhaus , Laxenburg)	
12:15 -12:30	Walking over to lunch	
12:30 -13:45	Welcoming lunch (Laxenburger Hof Restaurant , Laxenburg)	
14:00 – 14:15	Opening and welcome from IIASA Directorate	Pavel Kabat Nebojsa Nakicenovic
14:15 -14:45	Introduction and project overview <ul style="list-style-type: none">– 20' Presentation on ISWEL goals, approach, timeline and expected outcomes and outputs– 10' Questions and clarifications <p><i>Documents:</i> <i>Project Proposal</i> <i>Presentation</i> <i>Progress Report I</i> <i>Project Timeline</i></p>	Simon Langan
14:45 -17:15	Regional assessment of nexus solutions <ul style="list-style-type: none">– 5' Introduction to the session –Petr– 15' presentation on water-energy in the regional nexus. Presenter: Yoshi Wada and Simon Parkinson– 15' Questions and clarifications– 15' presentation on the hydro-economic framework in the regional nexus. Presenter: Yoshi Wada– 15' Questions and clarifications– 15' presentation on water-land in the regional nexus. Presenter: Michiel van Dijk– 15' Questions and clarifications– 5' Next steps -Petr– 50' Overall discussion <p><i>Documents:</i> <i>Presentation</i></p>	Chair: Petr Havlik
17:15	Return to hotel	
18:30	Transfer from hotel to restaurant	
19:00 -22:00	Social dinner (Thallern Kloostergasthaus , Gumpoldskirchen)	

Friday 9 June

8:45	Arrival to IIASA	
9:00 -10:30	Global Hotspot analysis	
	<ul style="list-style-type: none">– 5' Introduction to the session– 10' Presentation on conceptual overview on Hotspot analysis. Presenter: Ed Byers– 10' Questions and clarifications– 10' Presentation on land-water-biodiversity hotspots and drivers Presenter: David Leclere– 10' Questions and clarifications– 10' Presentation on water-energy hotspot analysis and drivers Presenters: Ed Byers, Matthew Gidden– 10' Questions and clarifications– 10' Outlook on Global Analysis and next steps. Presenter: Volker Krey– 15' Questions and clarifications	Chair: Volker Krey
	<i>Documents:</i> <i>Presentation</i>	
10:30-11:00	Coffee break	
11:00-12:00	Global Hotspot analysis	
	<ul style="list-style-type: none">– 60' Overall discussion, including global users/ beneficiaries and alignment with GEF7.	Chair: Volker Krey
12:00-13:00	Lunch (finger food, IIASA)	
13:30 -15:15	Regional stakeholder Engagement	
	<ul style="list-style-type: none">– 5' Introduction to the session– 20' Presentation on Regional Stakeholder strategies. Presenter: Piotr Magnuszewski– 15' Questions and clarifications– 60' Overall discussion (partners and networks that can support us on the ground, B plan if one basin fails)	Chair: Simon Langan
	<i>Documents:</i> <i>Presentation</i>	
15:15-15:45	Session PSC members	
15:45-16:00	Coffee break	

16:00 -16:45 **Wrap Up and Next Steps:**

- *Summary of key discussions and agreements*
- *Contents of Second Progress Report*
- *ISWEL participation in events and HLP*
- *Next PSC meeting*

Chair:
Astrid Hillers/Robert Novak

17:00-18:00 **Transfer to airport**

Annex II Project Outcomes and Outputs

ISWEL is structured around 4 components or work packages. Table 1 summarizes the outcomes and outputs for each of the components included in the approved project proposal.

Table 1. Expected outcomes and outputs of ISWEL

Component 1. Development of a systems analysis framework for assessing solutions to nexus challenges				
<i>Outcome 1.1. Development of scenarios describing uncertainties in future trends and drivers</i>				
	Indicators	Targets	Means of verification	Assumptions
Output 1.1.1 Stakeholder-informed scenario co-design for capturing uncertainties in future trends and drivers	Number of stakeholder-informed regional change pathways Number of stakeholder informed 'solution' and 'policy' scenarios Number of stakeholder consultations	At least two stakeholder-informed regional change pathways per case study At least eight stakeholder informed 'solution' and 'policy' scenarios One stakeholder consultation in each case study	Document summarizing the stakeholder-informed regional change pathways Document summarizing the stakeholder-informed 'solution' and 'policy' scenarios Agenda, minutes, and presentations from stakeholder consultation posted to project website	Good attendance at stakeholder consultations and interest in the development of regional change pathways Interest in regional stakeholder meetings from different sectors to discuss scenario design and nexus challenges
<i>Outcome 1.2 Method and tool development</i>				
	Indicators	Targets	Means of verification	Assumptions
Output 1.2.1 Nexus modeling tool developed and presented with preliminary results: Tool will illuminate trade-offs among sectors and explore solutions for achieving multiple development and environmental objectives	Nexus modeling tool developed (yes/no) Number of presentations of nexus modelling tool and preliminary results	A completed nexus modelling tool Two presentations of the nexus modelling tool and preliminary assumptions and results (one in each region)	Preliminary results based on model runs presented at stakeholder meetings (ppt) Minutes from regional stakeholder meetings and demonstration (ppt) available on project website	Model development is not delayed by unforeseen technical challenges; required data are available and accessible
Component 2. Exploring nexus solutions at global and regional scales				

Outcome 2.1 Regional assessment of nexus challenges and solutions. Understanding of sectorial trade-offs, synergies, and solutions for meeting nexus challenges improved among regional stakeholders

	Indicators	Targets	Means of verification	Assumptions
Output 2.1.1 Tangible strategies for improving regional decision-making across sectors and borders identified for two selected regions	Identification and documentation of key regional insights (yes/no)	Joint GEF-IIASA-UNIDO Summary for Policymakers (SPM)	SPM available on project website	Regional model development is successful and yields clear insights regarding trade-offs, synergies, and solutions for regional nexus challenges

Outcome 2.2 Global nexus hotspots and transformation pathways: multi-sectorial vulnerability hotspots under different socioeconomic and hydro-climatic scenarios identified

	Indicators	Targets	Means of verification	Assumptions
Output 2.2.1 Global assessment of multi-sectorial hotspots and transformation pathways	Global assessment of multi-sectorial hotspots and transformation pathways (yes/no) Identification and documentation of knowledge and data gaps (yes/no)	Documentation and communication of key insights from global assessment in publications and SPM Inclusion of knowledge and data gaps in SPM	Scientific publications and white papers completed; SPM available on project website	Global model development is successful and yields clear insights into global nexus hotspots and sustainable transformation pathways Global and regional model development is successful and yields insights regarding knowledge and data gaps

Component 3. Capacity Building and Knowledge Management: Building the foundation for a knowledge and capacity network on nexus decision support

Outcome 3.1 A foundation of a regional and global knowledge and capacity network established

	Indicators	Targets	Means of verification	Assumptions
Output 3.1.1 Establishment of connections and interactions among stakeholders from a wide array of institutions, sectors and countries; including expert advisory meetings	Number of stakeholder meetings per case study region Expert advisory meetings (yes/no)	Three total stakeholder meetings in each case study region (includes consultation on study design) (~one per year) Number of informal expert advisory meetings conducted	Minutes and participant lists from stakeholder meetings Summary from advisory meeting	Interest in regional stakeholder meetings from a wide array of institutions and sectors; willingness of stakeholders to interact; progress on project to enable stakeholder feedback

Outcome 3.2 Capacity building: Regional capacity for nexus assessment and solution identification improved

	Indicators	Targets	Means of verification	Assumptions
Output 3.2.1.a Two capacity building workshops per case study region, held concurrently with stakeholder meetings	Number of capacity building workshops	Two capacity building workshops per case study region	Minutes and presentations from capacity building workshops posted on project website	Interest and engagement from regional scientists and practitioners
Output 3.2.1.b Exchange of scientists/experts with partner academic institutions, ministries and/or multilateral organizations	Number of scientists/experts exchanged	At least one scientist/expert per case study region	Report by exchange scientist on their research and contribution to the project	Interest from regional and IIASA scientists; sufficient quality of scientists

Outcome 3.3 Knowledge dissemination: Infrastructure established to disseminate findings of the project

	Indicators	Targets	Means of verification	Assumptions
Output 3.3.1.a Participation in high-level panels, conferences, and events	Number of presentations at high level events	Presentations at a minimum of three high level events per year	Links to event agendas and/or presentations posted on project website	External interest in project, model, and insights
Output 3.3.1.b Online database for sharing of scenario results	Development of online database (yes/no)	Online database accessible and populated with scenario results	Link to online database on project website	Successful implementation of models scenario results
Output 3.3.1.c Two experience notes shared via IW:Learn	Number of experience notes shared	One experience note per case study completed	Link to experience notes on IW:Learn website	Material available for drafting of experience notes
Output 3.3.1.d Joint GEF-IIASA-UNIDO Summary for policymakers describing project insights and outcomes	Development of a Joint GEF-IIASA-UNIDO Summary for Policymakers (SPM) (yes/no)	Joint GEF-IIASA-UNIDO Summary for Policymakers (SPM)	SPM available on project website	All components of model development are successful and yield valuable insights for inclusion in the SPM
Output 3.3.1.e Scientific publications and white papers	Number of publications	At least eight scientific publications and/or white papers submitted over the life of the project	Links to scientific publications and white papers on project website	All model development yield worthy of scientific publication

