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Building an enabling environment for water, energy and food security dialogue in Central Asia

Capacity needs assessment

Kristin Meyer





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Executive summary

The importance of water resources for food and energy security in Central Asia is undisputed. To safeguard socio-economic development in the region, comprehensive action by key institutions and stakeholders is indispensable.

Through the EU-funded Central Asia Nexus Dialogue Project, IUCN (International Union for Conservation of Nature) together with the Regional Environmental Centre for Central Asia (CAREC) support states in investment planning that ensures water, energy and food (WEF) security. Planning and realising such investments, however, is only possible if the relevant capacities and skill sets are available. In this context, an assessment was conducted to provide recommendations for targeted capacity building for WEF Nexus planning and implementation of strategies, programmes and projects at national and regional levels.

Key stakeholders carried out a self-assessment of existing institutional capacities covering (i) governance and decision-making; (ii) institutional frameworks and processes; (iii) knowledge creation, information and data sharing; and (iv) monitoring. The use of a Nexus Capacity Score Card, supplemented with information gathered during training workshops, nexus dialogues, the nexus study tour and other stakeholder engagements in Central Asia, allowed capacity building needs to be identified. Based on the assessment, a capacity building plan was developed, illustrating institutional, organisational and individual capacity building actions in the short-, medium- and long term to create an enabling environment and foster the integration of nexus thinking into Central Asian investment planning.

Currently there is no agreed definition of Water-Energy-Food Security Nexus for Central Asia. This contributes to the observed unequal representation of the three WEF sectors in existing dialogue platforms at the regional level. This also means that opportunities for benefit sharing across sectors and countries, taking into account socio-economic gains and losses of different interventions, are not identified clearly enough. Elaborating an institutional framework that builds on existing structures and integrates all nexus principles will be key. One way forward will be to strengthen the work of national Intersectoral Working Groups (IsWG), established in the frame of the Central Asia Nexus Dialogue Project, and other dialogue platforms, as well as to broaden stakeholder engagement, including private sector, civil society, farmers, international organisations, investors, etc. in such platforms.

To take the nexus dialogue forward in Central Asia, it is critical to identify relevant and ensure the adequacy of national and regional organisations. Existing platforms will need to be mapped and relevant ministries and Basin Water Organisations (BWOs) need to strengthen their capacities in multi-sectoral planning and decision-making. Similarly, the role of the private sector as an investor in nexus interventions needs to be considered carefully.

At the individual level, capacities need to be strengthened in order to promote the use of appropriate tools and methodologies to drive informed nexus decision-making, prepare nexus project proposals and implement nexus interventions. To do so, and to generate ownership, key stakeholders should be included at every step of the way. In the long-term, nexus perspectives and tools should be integrated into university degree programmes and civil servant training.

To create an enabling environment that is favourable to nexus thinking, planning and investment, national and regional nexus dialogues need to take place regularly. Sharing of knowledge and best practices needs to be encouraged to ensure access to clear, informative and tailored data and knowledge on the nexus. To achieve this, clear nexus criteria and indicators will need to be

developed for the Central Asian context and priority intervention areas defined, based on national and regional nexus assessments. To foster the nexus perspective, small pilot applications of the nexus approach will be key to demonstrate its benefits.

The findings of the capacity needs assessment further served as background for the development of a draft Nexus Roadmap for Central Asia. The Roadmap reflects achievements of Phase I of the Central Asia Nexus Dialogue Project and informs the planning of Phase II. The Nexus Roadmap for Central Asia acts as a guide to take stakeholders through a structured process from defining nexus problems to subsequently designing and implementing relevant investment projects. However, targeted support will be needed going forward. Capacity building efforts as outlined in this report will enhance institutional frameworks as well as empower key stakeholders and decision makers by providing them with the required knowledge and skills to advance along the Roadmap.

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I would also like to acknowledge Mr Philip J. Riddell for his help with developing the draft Nexus Roadmap for Central Asia and feedback on the next steps for the operationalisation of nexus in the region. I am very grateful for feedback received by participants of the study tour and the Regional Steering Committee of the Central Asia Nexus Dialogue Project on earlier drafts of this report.

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Very special gratitude goes to the European Union for providing the funding for the Central Asia Nexus Dialogue Project, the development of this report and for its continued dedication to promoting nexus thinking in the Central Asian region.

Acronyms and abbreviations

ASBP	Aral Sea Basin Programme
BWO	Basin Water Organisation
CAREC	Regional Environmental Centre for Central Asia
EC IFAS	Executive Committee of the International Fund for Saving the Aral Sea
EU	European Union
GDP	Gross Domestic Product
ICPDR	International Commission for the Protection of the Danube River
ICSD	Interstate Commission for Sustainable Development
ICWC	Interstate Commission for Water Coordination
IFAS	International Fund for Saving the Aral Sea
IFI	International Financial Institution
ISRBC	International Sava River Basin Commission
IsWG	Inter-sectoral Working Group
IUCN	International Union for Conservation of Nature and Natural Resources
IWRM	Integrated Water Resources Management
RSC	Regional Steering Committee
RWG	Regional Working Group
SDGs	Sustainable Development Goals
SIC	Scientific Information Center
UNECE	United Nations Economic Commission for Europe
WEF	Water-Energy-Food

1 Background

This institutional capacity needs assessment was carried out as part of the EU-funded Central Asia Nexus Dialogue Project: Fostering Water, Energy and Food Security (WEF) Nexus Dialogue and Multi-sector Investment in Central Asia. The project aims to create an enabling environment to facilitate sustainable and climate-resilient investments for increased water, energy and food security in Central Asia. Strengthening regional capacities to enable multi-sectoral planning and decision-making is key to reaching this goal.

The Project works in three areas:

1. Dialogue and cooperation;
2. Capacity building;
3. Support for the selection of multi-sectoral investment projects.

This report supports project activities associated with building institutional¹ capacities for the effective application of nexus approaches in Central Asia. The training workshops organised under the Central Asia Nexus Dialogue Project and participants' feedback collected during those workshops as well as nexus dialogues provided additional insights into capacity building needs and the desire for new skills in the region.

A lack of institutional capacity is often at the core of fragmented legislation and incoherence in policy. However, the discourse on the WEF Nexus, especially in Central Asia, has not sufficiently addressed institutional capacity needs, despite the significance of an enabling institutional environment and governance frameworks for multi-sectoral planning and decision-making.

While human capacity building should go hand-in-hand with a broader capacity development plan on the nexus, institutional capacity needs are generally much more difficult to assess and to address. Yet, strong institutions are crucial to ensure the long-term sustainability and mainstreaming of nexus perspectives. Whether states and stakeholders cooperate on nexus challenges and whether recommendations on how to strengthen institutional capacity will be accepted, depends on the availability of a holistic approach for holding regular multi-sectoral dialogues, building a knowledge base through nexus assessments and analysis, sharing of best practices and mutual learning as well as engagement at political and policy levels. In addition, demonstrating the applicability and value of the WEF Nexus in the context of Central Asia (e.g. through pilot projects) will be key.

To this end, IUCN (International Union for Conservation of Nature), in collaboration with the Regional Environmental Centre for Central Asia (CAREC), supported stakeholders from key organisations and bodies in Central Asia to develop a Nexus Roadmap for Central Asia. This Roadmap enables a strategic discussion on particular nexus challenges and helps identify appropriate actions that promote the application of nexus perspectives in the region.

¹ Institutions here are understood as the body of rules, including policies, rules, incentives, practices, etc., that govern decision-making

2 Purpose

This capacity needs assessment identifies opportunities for institutional capacity development to strengthen multi-sectoral planning and implementation in order to create an enabling environment for nexus perspectives in Central Asia. Specifically, the assessment aims to:

- Offer an overview of conditions, institutional drivers and constraints for multi-sectoral cooperation in terms of technical, financial, regulatory, planning, monitoring, knowledge, etc.;
- Assess current institutional capacities in Central Asia for multi-sectoral cooperation through the Nexus Capacity Score Card;
- Identify institutional capacity gaps based on the Nexus Capacity Score Card and feedback from stakeholders during nexus dialogues and training events; and
- Provide recommendations for institutional capacity building measures, in particular relating to the effective design, implementation and monitoring of nexus investment projects.

The assessment should not be viewed as a static capacity building plan, but rather as a catalogue to develop appropriate activities and strategies that can be further adjusted if necessary, following an iterative approach. Recommendations drawn from this assessment aim to inform future nexus activities in the region and facilitate strategic targeting of capacity building efforts. They serve as a guide, which can be tailored to specific needs in light of new information or the level/scale of a given intervention.

3 Methodology

This assessment gathered primary and secondary data through desk research, semi-structured interviews and face-to-face consultations with officials of relevant international organisations, representatives of regional and national bodies as well as selected national and regional experts, members of regional and national ASBP-4 working groups, representatives of the Amu Darya and Syr Darya Basin Water Organisations (BWO) and other relevant stakeholders and experts.

A self-assessment tool, a Nexus Capacity Score Card² (Annex 1), was used to gather quantitative data on existing capacities and to produce a baseline for the analysis. Additionally, such self-assessment helped to create ownership and acceptance of key findings by stakeholders.

This assessment builds on the *Regional institutional arrangements advancing water, energy and food security in Central Asia*³ report. Together they provide a strong basis for identifying priority areas and actions for designing multi-sectoral investment projects, stakeholder engagement via nexus dialogue platforms, collaboration with EC IFAS and short, medium- and long-term capacity building needs.

² Based on IUCN report "Towards Strengthened Conservation Planning in South-Eastern Europe".

³ See Meyer, K., Issakhojayev, R., Kiktenko, L. and Kushanova, A. (2019). *Regional institutional arrangements advancing water, energy and food security in Central Asia*. Belgrade, Serbia: IUCN.

4 Building capacity on and for the nexus

Capacity building is key to providing organisations and stakeholders with the tools to achieve water, energy and food security goals in a sustainable manner. Appropriate, tailored and targeted institutional capacity building facilitates the creation of an enabling environment for effective negotiation of trade-offs, joint decision-making, financing and implementation of strategies, programmes and projects that incorporate nexus perspectives and approaches. Important prerequisites to bring about and maintain such an enabling environment are:

- All WEF sectors are represented in capacity building efforts, in particular energy;
- Key stakeholders are ready to move beyond the water domain;
- Political will to champion nexus thinking and pursue integrated approaches exists;
- WEF sectors, states and other relevant actors (e.g. private sector, civil society, donor community, etc.) are ready to cooperate and embrace institutional change.

Introducing a new concept, such as the WEF Nexus, can be a challenging endeavour. This is especially true for the Central Asian region, where complex geopolitical and diverse socio-economic conditions⁴ prevail. The capacities of governing and expert organisations involved in decision-making at national and regional level have a bearing on whether the nexus concept is successfully integrated into laws, policies and strategic documents. Because effective institutions are essential for the creation of an enabling environment conducive to multi-sectoral planning and decision-making, this assessment particularly considers the inherent properties of associated laws, regulations and policies and characteristics of existing institutional cultures and political systems to cooperate across sectors.

Nexus thinking requires a holistic perspective that takes account of: (i) planning and implementation frameworks; (ii) existence of dialogue and cooperation platforms; (iii) data and information needs and; (iv) scientific evidence-base. Political commitment is integral in pursuing such comprehensive and inclusive perspectives. Therefore, the assessment on hand uses a set of Nexus Principles⁵ (see Box 1) to guide decision makers towards the adoption of nexus thinking during planning and implementation processes, hence ensuring multi-sector cooperation.

For the purpose of this assessment, “capacity building” refers to the process of developing and strengthening institutional frameworks as well as the skills, instincts, abilities, processes and resources of key institutions and stakeholders through a nexus process that enables them to:

- Understand the nexus concept and principles in the context of Central Asia;
- Identify priorities, synergies, trade-offs and opportunities of benefit sharing between WEF Nexus sectors;
- Recognise challenges inhibiting multi-sectoral dialogue, negotiation and decision-making and determine means to overcome them;
- Share best practices, benefit from mutual learning and co-create knowledge, data and information that is shared between sectors and countries;

⁴ See Meyer, K., Issakhoyev, R., Kiktenko, L. and Kushanova, A. (2019). *Regional institutional arrangements advancing water, energy and food security in Central Asia*. Belgrade, Serbia: IUCN.

⁵ These Nexus Principles emerged as part of IUCN involvement in nexus activities in the Mekong River Basin and the Central Asia Nexus Dialogue Project. Learnings from the former were instructive in developing the Nexus Roadmap for Central Asia and a related training workshop: Brunner, J., Carew-Reid, J., Glemet, R., McCartney, M. and Riddell, P., (2019). *Measuring, understanding and adapting to nexus trade-offs in the Sekong, Sesan and Srepok Transboundary River Basins*. Ha Noi, Viet Nam. IUCN: Viet Nam Country Office.

- Hold effective multi-sectoral dialogues that lead to cooperation in achieving water, energy and food security in the Central Asian region;
- Build an institutional framework conducive to holistic, integrated approaches for long-term nexus planning, including for large-scale investment projects;
- Explore new and traditional financing modalities for multi-sectoral strategies, programmes and projects, especially blended financing; and
- Make use of modern technologies and communication tools.

BOX 1: NEXUS PRINCIPLES

- Principle 1:** There is no single “nexus”; rather there is a range of “nexi”.
- Principle 2:** Nexus is often construed as a response to perceptions of insecurity by the state, civil society, private sector and by those responsible for environmental sustainability and productivity.
- Principle 3:** Nexus is about compromise.
- Principle 4:** Nexus is about trade-offs.
- Principle 5:** Nexus is about synergies.
- Principle 6:** Water is widely considered the senior nexus element.
- Principle 7:** Nexus is not the same as Integrated Water Resources Management (IWRM).
- Principle 8:** Nexus may be our last chance to achieve sustainable and equitable investments in water, agricultural and energy infrastructure.
- Principle 9:** Nexus makes economic and socio-economic sense.

A nexus process is best introduced and bolstered iteratively, requiring political will and ownership of key stakeholders, in order to facilitate changes at institutional and policy levels. While capacities of key individuals are important and steps to strengthen them should be undertaken, this assessment focusses primarily on institutional capacities, thereby, adopting a long-term view to applying nexus perspectives to achieve lasting and sustainable socio-economic development while protecting ecosystems in Central Asia. Thus, a broader definition of capacity building is applied here, taking account of the wider context, while narrowing down specific recommendations on how to move forward.

5 Results of the Nexus Capacity Score Card

Key stakeholders, who are either directly involved in the Central Asia Nexus Dialogue Project or who have an interest in the WEF Nexus in Central Asia more broadly, were asked to self-assess institutional capacities through a Nexus Capacity Score Card (Annex 1). The Score Card is structured around four dimensions of capacity needs to make multi-sectoral approaches and the WEF Nexus a reality in Central Asia (Figure 1). The scores from the 13 respondents were then presented to the members of the Central Asia Nexus Dialogue Project's Regional Steering Committee (RSC) for their feedback and validation⁶.



Figure 1: Dimensions of capacity needs assessed

The evaluation of the score card results shows low capacities in all dimensions (Table 1). Annex 2 provides a detailed account of the scores per dimension and area, especially highlighting the lowest scores. The data demonstrates that institutional frameworks that enable multi-sectoral decision-making are weak or non-existent. The general lack of regional bi- and multi-lateral agreements and strong regional organisations with capacities to facilitate multi-sectoral nexus dialogue hampers the mainstreaming of nexus thinking. The sub-sections below will present key findings of each dimension, with a particular emphasis on areas with the lowest scores (30% or lower). Although capacities vary between sub-dimensions, overall, the scores point to a need for more concrete, structured and strategic capacity building interventions to establish and anchor WEF Nexus thinking and processes in the Central Asian region. To pave the way for building capacities and enable WEF Nexus thinking and processes, a Nexus Roadmap for Central Asia (see Section 6) was developed.

⁶ The score is based on a 0 to 3 scale.

Table 1: Results of the Nexus Capacity Score Card assessment per dimension

Dimension	Average score	Score as % of maximum
1. Governance and decision-making	1.03	34.5%
1. Institutional frameworks and processes	0.96	32.1%
2. Knowledge creation, information and data sharing	0.95	31.7%
3. Monitoring	0.88	29.5%

Dimension 1: Governance and decision-making

The capacity of the following three areas of the *governance and decision-making* dimension were found to be particularly weak:

- institutional systems for multi-sectoral governance and management;
- ability to mobilise sufficient financial, human and material resources for multi-sectoral dialogue, planning and decision-making;
- review and updating of policies employing collaborative, cross-sectoral approaches.

Comments provided by the respondents pointed to broad acknowledgement of the contribution of the Central Asia Nexus Dialogue Project towards promoting a nexus approach in Central Asia. However, more concrete and hands-on actions are needed to facilitate the implementation of joint projects on the nexus and to identify adequate mechanisms for the financing of regional nexus projects involving several countries of the region.

Regardless of past attempts of multi-sectoral engagement at national level, coordination as well as an adequate institutional framework that could facilitate this process are currently missing. Additionally, discussions remain largely in the water domain. Whereas multi-sectoral cooperation may take place at individual project level, the absence of an effective, unified regional institutional and legal framework means that single sector planning, decision- and policymaking prevail. At the same time, not all WEF sector perspectives are represented adequately. Particularly energy sector perspectives are often not taken into account sufficiently. The only multi-sectoral cooperation strategies are the “Schemes for the integrated use and protection of water resources of the Amu Darya and Syr Darya River Basins”. However, these are neither comprehensively implemented by all Central Asian countries, nor do they follow all nexus principles as highlighted above.

Going forward, new regional legal instruments regulating cooperation will need to be adopted, taking into account and complementing existing transboundary water resource management frameworks.

Dimension 2: Institutional frameworks and processes

Based on the scores on the *institutional frameworks and processes* dimension, basic institutional frameworks in support of multi-sectoral nexus dialogue, planning and decision-making already exist. The most significant need for capacity building within this dimension was found to be the definition of clear nexus criteria and indicators that inform the planning and implementation of multi-sectoral investment projects that address water, energy and food security challenges.

There is a lack of clarity on how to develop multi-sectoral nexus projects. This is attributed to the lack of an adequate institutional framework to facilitate dialogue and negotiation that address and reconcile WEF Nexus sector interests and challenges adequately and comprehensively. There is a

demand for capacity building on different types of methods and tools to support such dialogues and negotiations, such as trade-off analysis, the calculation of economic benefits, multi-criteria decision-making, etc. In addition to that, knowledge of and skills to design, plan, implement and monitor multi-sectoral programmes and projects in the region is insufficient.

Dimension 3: Knowledge creation, information and data sharing

There are a number of challenges pertaining to *knowledge creation, information and data sharing*, as well as exchange of best practices. The following two areas of this dimension were found to most significantly hamper mutual learning between sectors and countries:

- availability of information and data to develop and monitor multi-sectoral strategies and plans;
- ability to collaborate and co-create relevant knowledge on the WEF Nexus.

These findings suggest that knowledge, information and data are largely contained within individual sectors and shared only rarely. Hardly any mutual learning is taking place across sectors, inhibiting the co-creation of knowledge to develop multi-sectoral projects that can generate benefits for all three WEF Nexus sectors.

In addition to the lack of collaboration and sharing of data, available data is often incomplete or inaccessible. Multi-sectoral cooperation to establish effective data sharing arrangements and protocols is needed to ensure that information and data are reliable, adequate and accessible. Awareness and knowledge about data analysis tools, such as nexus models, scenario development and other tools, is low among stakeholder, but will be key to enable multi-sectoral planning and decision-making. Furthermore, existing information on issues and challenges related to water, energy and food interlinkages is not used systematically during planning processes.

To avoid duplication of data collection efforts in the region, ensure efficiency in planning processes, promote the co-creation of knowledge among WEF sectors and across Central Asian states and close the gap between existing knowledge, tools and their utilisation, mutual peer-to-peer learning events and regular multi-sectoral dialogues are indispensable.

Dimension 4: Monitoring

The *monitoring* dimension scored the lowest when compared to other dimensions. While institutional mechanisms for monitoring and evaluation are weak in general, the area that received the lowest score is the ability to effectively adapt and respond to change and environmental risks.

The evident lack of monitoring capacity in Central Asia also relates to the absence of criteria and indicators in the planning process as mentioned above. Although some promising political and economic development reforms that promote regional integration can be observed, national policies still need to be adapted and revised to adequately reflect regional realities and cross-sectoral linkages. Change remains slow and institutions generally lack the flexibility to accommodate new risk factors or changes affecting the WEF sectors.

Improved, well-organised monitoring mechanisms will be needed to identify necessary modifications of policies and priority interventions. In addition, enhancing capacities on building consensus, developing relevant legislation and transferring best practices will be crucial.

6 A Nexus Roadmap for Central Asia

Nexus investments in Central Asia are possible if institutions and key stakeholders gain the necessary capacity and skills to integrate nexus thinking into planning approaches, negotiations, cooperation frameworks and implementation of projects. During the implementation of the Central Asia Nexus Dialogue Project, the need to provide guidance in structuring a nexus process became apparent. As a result, a roadmap that provides clear and targeted outputs and outcomes was developed during the study tour in May 2019.

The Nexus Roadmap for Central Asia (the "Roadmap") details necessary steps towards achieving water, energy and food security and therewith contributes to the creation of an enabling environment for WEF Security Nexus in the region (Figure 2). The Roadmap contains priority areas for cooperation and necessary outcomes and outputs to be achieved in order to advance nexus thinking in Central Asia (Table 2).

Applying a structured approach, the Roadmap helps to catalyse cooperation, build trust among sectors and countries and subsequently prepares stakeholders for the implementation of investment projects that embed nexus thinking. The broader outcomes and findings of Phase I of the Central Asia Nexus Dialogue Project are reflected in the Roadmap, acknowledging the achievements to date and paving the way for future actions. The Roadmap also presents a framework for monitoring progress. Therefore, the overall goal of the Roadmap is to facilitate concrete steps to balance sectoral interests through regional cooperation to increase water, energy and food, including agriculture, security to achieve sustainable socio-economic development in Central Asia.

The Roadmap answers to the following key questions:

- What is required to catalyse the shift towards nexus thinking?
- Which key sectors and stakeholders should be involved?
- What needs to be understood and who needs to understand it?
- What political messages can secure nexus buy-in and who needs to convey, believe and act on these messages?

Table 2: Expected outputs and outcomes of the Nexus Roadmap for Central Asia

OUTPUTS	OUTCOMES
1) A schedule of indicative nexus investments (through six-step process) prepared	1) Key stakeholders understand nexus principles 2) Nexus principles mainstreamed into planning 3) Stakeholder agreements in place
2) Institutional capacity building undertaken	4) Institutions committed to and aligned with nexus principles
3) A dossier of investment options prepared 4) A nexus financing model (for Central Asia) developed	5) Increased water, energy and agricultural security in Central Asia

BOX 2: MOVING NEXUS THINKING FROM THEORY TO PRACTICE

- Measure 1:** understand the underlying politics influencing investment planning in the nexus sectors
- Measure 2:** assemble a dossier of case studies, which may potentially catalyse political action
- Measure 3:** acknowledge that a shift to nexus thinking may require an expenditure of political capital
- Measure 4:** facilitate peer-to-peer processes between nexus practitioners and decision makers
- Measure 5:** undertake an institutional and capacity needs assessment and, based on the results, implement an appropriate capacity building programme

Box 2 highlights the measures necessary to move nexus thinking from a theoretical concept to practice. The Central Asia Nexus Dialogue Project design addressed a number of these measures, as highlighted in blue in Figure 2. Supported by targeted institutional and human capacity building, these endeavours facilitate the transition from dialogue to action. Strong and effective institutions and a focus on nexus governance as well as the identification of adequate financial mechanisms will be key.

These five measures rely on the results of a nexus assessment, which helps to clarify opportunities and challenges in support of achieving Outcomes 1-3 of the Roadmap. A typical nexus assessment comprises six steps:

1. Understanding the basin in terms of:
 - a. current natural resource use;
 - b. status of the basin's ecosystems and ecosystem services;
 - c. basin demography;
 - d. economic productivity of water in the basin;
 - e. nature and extent of competition for and conflict over water; and
 - f. which stakeholders are winners and which are losers, now and in the future.
2. Diagnosis of the current policy framework pertaining to the three nexus sectors to understand sector objectives; identify potential conflicts between them both cross-sector and transboundary.
3. Analysis of the threats that any such conflicts identified in Step 2 represent in terms of how a single sector benefit for one nexus sector may represent a threat to one or more of the others.
4. Decision on which nexus to focus on, so that all sectors associated with the benefits and threats are included (note that nexus is not limited to three sectors).
5. Identification of key stakeholders and understanding the constraints relevant to each of them using a stakeholder-problem typology.⁷ Possible nexus options that might mitigate or alleviate the perceived threats are then considered.
6. Mapping of nexus investment opportunities against all possible combinations in terms of sector (water, energy, food, environment), objective (e.g. ecosystem rehabilitation, expansion of irrigation, hydropower development) and threat (e.g. overpumping of

⁷ See IUCN (2019). *Increasing returns on investment opportunities by applying a nexus approach: Best practice nexus case studies*. Geneva, Switzerland and Belgrade, Serbia: IUCN.

groundwater, increased irrigation diversion, increased dam and reservoir area). Here, it is essential to understand that investments can be supported by complementary non-nexus or nexus-neutral measures⁸ and can consist of both natural and built infrastructure defined as follows:

- a. *Natural infrastructure* constitutes investments in the conservation, adaptation or modifications of natural landscape features – examples could be natural or constructed and include wetlands, reforestation, restored floodplains, catchment stabilisation, etc. More specifically, investment in natural infrastructure is done **with** the landscape, either to conserve or enhance natural landscape functions.
- b. *Built infrastructure* is the multi-purpose, civil works infrastructure needed to attenuate or otherwise manage flooding and/or increase water security and water supplies for energy and food security (both production and livelihood based) and for the environment. It may comprise dams, reservoirs, water harvesting facilities, facilities needed to increase the physical efficiency of water use, drains, re-use/recycling facilities and even inter-basin transfers. Therefore, investments in built infrastructure are done **to** the landscape, changing its natural functions.

Nexus interventions also require adequate financing. Therefore, mapping nexus investment opportunities is critical. However, a clear understanding of blended finance mechanisms has not yet manifested itself in Central Asia. Blended financing constitutes one way to mobilise private sector capital for public infrastructure by reducing risks and creating benefits for the state, development partners, private sector and communities (these could include water utilities, industries, etc.) depending on the mix of financing options selected. In the context of Central Asia, the links between nexus and financing options that show favourable cost-benefit ratios and could lead to higher returns on investments in multi-purpose solutions have not been explored enough and are generally not well understood. This hinders using all available financing options.

Initial feedback on the Nexus Roadmap for Central Asia showed that, despite clear evidence that understanding of nexus principles is growing among stakeholders in the region, there is still a lack of practical and targeted strategies for developing nexus solutions and influencing the all-important policymaking and decision-making processes along with any necessary reform of relevant legal frameworks. Additionally, the lack of a clear problem statement and inadequately defined objectives hamper discussions on possible nexus solutions or specific investment projects. In response to this need, the Roadmap provides tools and methods that can be tailored to the context of Central Asia.

⁸ Non-nexus solutions include capacity building, effective enforcement, demand management, etc.

TIME SLICES								
	First Steps	Phase I of the Central Asia Nexus Dialogue	Enabling Environment	Capacity Building	Phase I of the Central Asia Nexus Dialogue	River Basing Planning	Potential Financing Model	Implementation
ELEMENT Investments	OUTPUT 1 Indicative nexus investments for the Central Asian river basins (rationale cluster A)	Portfolio of regional investment projects prepared and agreed with Regional Steering Committee Members				OUTPUT 3 A dossier of multi-scale investment options for water, agricultural and energy security in Central Asia, including natural as well as built infrastructure		OUTCOME 5 Increased water, agricultural and energy security in Central Asia as a result of multi-scale investments in multi-purpose built or natural infrastructure
Institutions	OUTCOME 1 Key stakeholders understand nexus principles (rationale cluster B)	Nexus dialogues at national and regional level Training workshops and a study tour were conducted Best practice nexus case studies were developed Other awareness raising material were prepared	OUTCOME 3 Agreements drafted, negotiated, validated and in-force - including cost/benefit sharing arrangements - for national and/or transboundary multi-purpose investments in water, agricultural and energy security	OUTPUT 2 An institutional analysis and capacity building plan designed and implemented OUTCOME 4 Institutions that are aligned with and committed to nexus	Institutional analysis and capacity needs assessment conducted Recommendations and capacity building plan to inform next steps			The end goal
Politics and policies	OUTCOME 2 Nexus principles are mainstreamed into river basin planning (rationale cluster C)	WEF security nexus mentioned in ASBP-4 concept Institutional analysis provides recommendations for institutional strengthening						
Finance							OUTPUT 4 A nexus financing model for Central Asia	

Figure 2: Framework of the Nexus Roadmap for Central Asia – achievements of Phase I (year 1-3) are detailed in blue

Going forward, the Nexus Roadmap for Central Asia should serve as the foundation to designing interventions and priority activities for Phase II of the Central Asia Nexus Dialogue Project, building on the accomplishments of Phase I (Figure 3). The Roadmap can support stakeholders in deepening their understanding of nexus perspectives and principles and offer guidance to create an enabling institutional environment supported by relevant stakeholder agreements, regulations and policies.

The capacity building plan (Table 3), the recommendations derived from the institutional analysis⁹ as well as available organisational and individual capacities support the implementation of small-scale demonstration projects to prepare for the implementation of nexus investment projects. Doing so will allow Central Asian countries to strategically expand their dossier of investment options. Coupled with possible nexus financing models that are tailored to specific interventions, Central Asia can create a strong foundation towards greater water, energy and food, including agriculture, security. Nevertheless, and most critically, Central Asian states need to demonstrate their readiness to move along the Roadmap by adopting relevant agreements, policies and strategies.

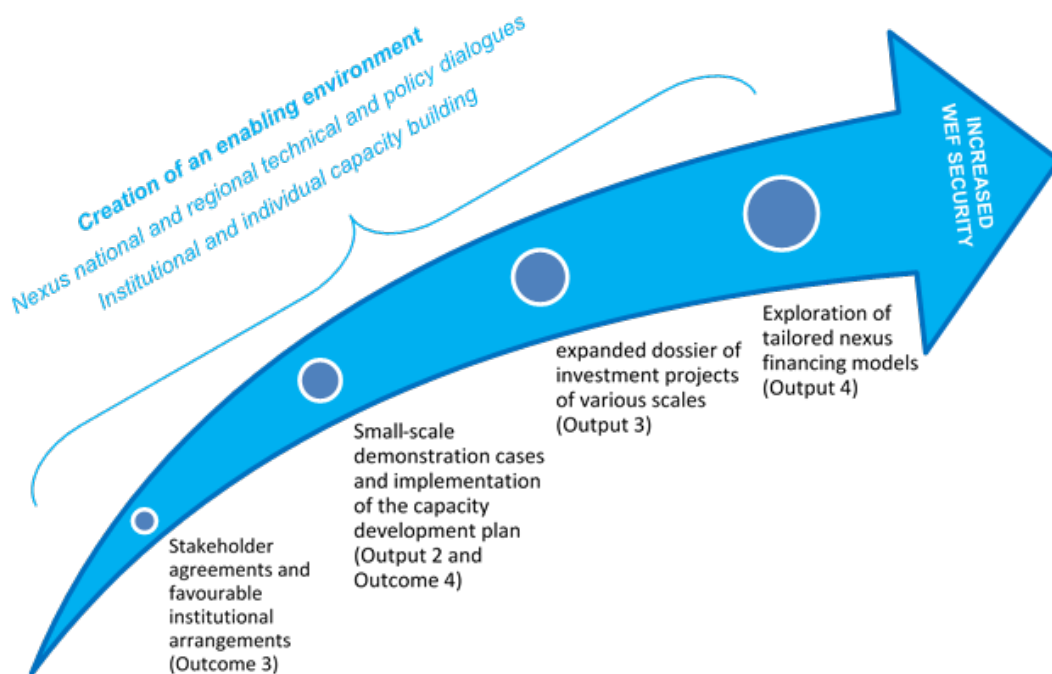


Figure 3: Moving from dialogue to action – next steps

⁹ See Meyer, K., Issakhojayev, R., Kikitenko, L. and Kushanova, A. (2019). *Regional institutional arrangements advancing water, energy and food security in Central Asia*. Belgrade, Serbia: IUCN.

7 Conclusion

In the context of the complex geopolitical setting of Central Asia, a structured approach based on practical steps is crucial to move nexus dialogues into action. The Nexus Roadmap for Central Asia acts as a guide to help define nexus problems and subsequently design relevant investment projects. However, targeted support and capacity building will be needed going forward. This should be done in a holistic manner, considering both institutional and individual capacity building needs. Additionally, Central Asian states will have to demonstrate their readiness to move along the Roadmap by adopting relevant agreements, policies and strategies, which would enable agreement of a long-term action plan on the WEF Nexus.

There is a need for a step-by-step approach to introducing nexus thinking in Central Asia, starting with an understanding and official recognition of the need and usefulness of the WEF Security Nexus for the region. Capacity building efforts should enhance institutional frameworks as well as empower key stakeholders and decision makers by providing them with the required knowledge and skills. Figure 3 and Table 3 offer an overview of actions that need to be taken in the short-, medium- and long-term. It is expected that CAREC and IUCN through Phase II of the Central Asia Nexus Dialogue Project funded by the EU, will be able to guide stakeholders through this process and develop tailored and detailed action plans, including indicators and clear timeframes in line with the recommendations below.

8 Recommendations

Capacity building activities should form an integral part of the structured process that promotes nexus thinking in Central Asia and supports the creation of an enabling environment for new investments and implementation of nexus projects. The following recommendations reflect the findings of the Nexus Capacity Score Card as well as feedback received during training workshops, RSC meetings, the study tour and other engagements with stakeholders in the region.

Recommendations for building institutional, organisational and individual capacities as well as capacities to create an enabling environment have been integrated into the capacity building plan. The recommendations further present required actions in the short-, medium- and long-term and specify whether they are of high or low priority (Table 3).

The short-term and some of the medium-term capacity building actions may inform the design of Phase II of the Central Asia Nexus Dialogue Project and, thereby, continue supporting Central Asian countries in adopting nexus perspectives. As a critical first step, it should be explored whether existing national and regional organisations and institutional frameworks should be strengthened and reformed, or whether new forms of cooperation need to be established. This will greatly influence the execution of the capacity building plan. Additionally, since individual capacity building actions target different types of stakeholders and organisations, they should be tailored in accordance with the requirements of the respective intervention (e.g. pilot project) and scale.

Just as important is to come to a consensus on a regional definition of WEF Security Nexus in Central Asia, including the definition of priority areas for the short- and long-term. Finally, the capacity building plan is an integral part of the Nexus Roadmap for Central Asia (see above), as represented by Output 2, and ensures a structured process for mainstreaming nexus thinking in the region.

Table 3: Capacity building plan for Central Asia

Short-term (1-2 years)	Medium-term (2-5 years)	Long-term (>5 years)
A. Institutional		
<i>high priority</i>		
<ul style="list-style-type: none"> • Agreement on a definition of Water-Energy-Food Security Nexus for Central Asia • New innovative ways to engage all three WEF sectors, especially energy • Analysis of the barriers to participation of underrepresented sectors at various scales • Comparative policy analysis, including how national policies influence regional institutional frameworks and cooperation by identifying opportunities for introducing nexus perspectives into existing planning processes • Identification of opportunities for benefit sharing across sectors and countries taking into account socio-economic gains and losses • Build on existing capacities of national Inter-sectoral Working Groups (IsWG) established as part of the Central Asia Nexus Dialogue Project • Develop a strategy on how to continue the work of IsWG and other dialogue platforms 	<ul style="list-style-type: none"> • Broaden stakeholder engagement, including private sector, civil society, farmers, international organisation, investors etc. • Based on policy analysis, take steps to achieve policy coherence • Integration of nexus perspectives into national and regional planning processes • Reconciliation of national priorities with regional political priorities to enable joint decision-making an investment 	<ul style="list-style-type: none"> • Establishment of clear nexus governance framework at regional level • Development of enabling legal frameworks, strategies, programmes and policies
<i>low priority</i>		
	<ul style="list-style-type: none"> • Monitor the implementation of ASBP-4 against nexus indicators 	
B. Organisational		
<i>high priority</i>		
<ul style="list-style-type: none"> • Identify relevant national and regional organisations to take the nexus dialogue forward in Central Asia • Map existing national multi-sectoral cooperation platforms • Explore the role of the private sector as an investor in nexus interventions 	<ul style="list-style-type: none"> • Strengthen capacities of BWOs to undertake multi-sectoral planning and decision-making • Nominate nexus focal points in national ministries • Strengthen capacities of regional organisations and national authorities to undertake effective monitoring and evaluation of nexus interventions 	<ul style="list-style-type: none"> • Fully integrate nexus approaches and nexus into regional governance, e.g. IFAS or alternative mechanisms

<ul style="list-style-type: none"> Strengthen capacities of relevant ministries in multi-sectoral planning and decision-making 		
<i>low priority</i>		
	<ul style="list-style-type: none"> Strengthen capacities of relevant organisations (e.g. IFAS, ICWC, ICSD) to undertake multi-sectoral planning and decision-making 	<ul style="list-style-type: none"> Mainstream nexus into IFAS organs and activities
C. Individual		
<i>high priority</i>		
<ul style="list-style-type: none"> Development of guidance on how to design and implement nexus interventions Support the preparation of nexus project proposals Collection of tools and methodologies for informed nexus decision-making Training on nexus investments with a particular focus on the links between nexus, financing options and gains in terms of cost-benefit ratio allowing for higher returns on investments in multi-purpose solutions 	<ul style="list-style-type: none"> Generate ownership by involving key stakeholders in pilot studies Co-create knowledge and develop appropriate approaches and methodologies for Central Asia Support the implementation of nexus projects Develop and implement targeted training workshops/modules on nexus planning, assessment, trade-off analysis, visualisation, quantification of shared benefits, etc.; possible topics include: <ul style="list-style-type: none"> Multi-sectoral assessments and quantification of trade-offs Economic valuation/quantification and cost analysis Nexus investment planning and project development Trade-off modelling and visualisation Scenario development and benefit sharing WHAT-IF Model Multi-criteria decision-making Processes for multi-sectoral negotiation, consensus building and dispute resolution Nexus investment opportunities and blended financing models 	<ul style="list-style-type: none"> Integrate nexus perspectives into university degree programmes and civil servant training
<i>low priority</i>		
<ul style="list-style-type: none"> Involvement of universities and research institutes in the development of curriculum 	<ul style="list-style-type: none"> Assess implementation challenges of nexus interventions Increase knowledge exchange and mutual learning between different types of stakeholders Strategic study tours and exchange visits to other regions to enhance the global nexus network and enable cross-regional learning 	
D. Enabling environment		

<i>high priority</i>		
<ul style="list-style-type: none"> • Continuation of national and regional nexus dialogues to enable knowledge and best practice sharing; these should take place regularly and allow for open discussions on nexus challenges • Establishment of technical nexus expert dialogues that provides guidance and advice • Access to clear, informative and tailored data and information on the nexus • Develop clear nexus criteria and indicators • Comprehensive national and regional nexus assessments, including problem identification, trade-off analysis and multi-sectoral, multi-stakeholder negotiation • Feasibility studies on moving nexus into action • Development of guidance on nexus investment opportunities in Central Asia, especially through blended financing 	<ul style="list-style-type: none"> • Identification of priority intervention areas based on national and regional nexus assessments • Small pilot applications of nexus approach to demonstrate its benefits in the Central Asian context • Collection of best practice cases from Central Asia • Strengthen monitoring and evaluation capacities • Develop appropriate data and information sharing frameworks • Facilitation of dialogue with international financial institutions and other investors to discuss common interests 	<ul style="list-style-type: none"> • Large scale interventions • Institutionalised, multi-sectoral dialogues funded by states <p style="text-align: right;">nexus regular dialogues</p>
<i>low priority</i>		
<ul style="list-style-type: none"> • Convene multi-stakeholder action learning workshops 	<ul style="list-style-type: none"> • Support the creation of an online portal for best practice and data/information sharing 	

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Annexes

Annex 1 – Nexus Capacity Score Card

Addressing the institutional arrangements and capacity needs for the development, selection and implementation of Water-Energy-Food Security Nexus investment projects

STAKEHOLDER INTERVIEWS

This interview is conducted as part of the capacity needs assessment within the framework of the EU-funded Central Asia Nexus Dialogue Project [Fostering Water, Energy and Food Security Nexus Dialogue and Multi-Sector Investment in Central Asia](#). The aim of the Project is to create a multi-sectoral enabling environment to facilitate sustainable and climate-resilient investments for increased water, energy and food (WEF) security in Central Asia. Part 2 of the interview consists of a capacity score card to provide a baseline evaluation of existing capacities in quantitative terms. Key stakeholders involved in multi-sectoral dialogues were asked to rate current institutional capacities for multi-sectoral investment planning, negotiation and implementation. Respondents were asked to score existing capacities based on a 4-point scale:

- 3 – This element of an institutional framework for multi-sectoral planning, decision-making and implementation is very well implemented.*
- 2 – This element of an institutional framework for multi-sectoral planning, decision-making and implementation is quite well implemented, but there are some important gaps.*
- 1 – This element of an institutional framework for multi-sectoral planning, decision-making and implementation is overall inadequately implemented.*
- 0 – This element of an institutional framework for multi-sectoral planning, decision-making and implementation is not at all or minimally implemented.*

This assessment draws on the experiences, perceptions and knowledge of the key stakeholders, actors and experts involved in the water, energy and agriculture sectors at national and regional levels. After collecting and analysing the data, the areas with the lowest scores will be discussed with Members of the Regional Steering Committee. The results of the capacity score card and the subsequent discussions will serve as the basis for a capacity building action plan and inform training seminars offered as part of the Central Asia Nexus Dialogue Project.

The process of collecting data will take place either through a self-scoring exercise via an online survey system or facilitated by an interviewer (the interviewer should introduce her/himself and introduce the process as well as answer any questions that interviewees may have before the start of the interview). It should be made clear that the confidentiality of interviewees will be protected.

PART 2

Nexus Institutional Capacity Score Card¹⁰

This is Part 2 of the interview focussed more specifically on existing capacities as well as institutional

¹⁰ Based on IUCN report “Towards Strengthened Conservation Planning in South-Eastern Europe”.

capacity needs. Since this part of the interview includes filling in a score card, there are a number of options:

- 1) The interviewee can self-score and then the interviewer can ask follow-up questions;
- 2) The interviewer fills in the score card together with the interviewee, who asks follow-up questions along the way;
- 3) It is also possible to conduct it as a group exercise, where individuals self-score and then go into more detail during small group discussions.

It would be useful to understand the perspectives of different sectors, hence, if self-scoring and group discussion is the preferred option, then the general information section from Part 1 should be added to the score card and facilitators should take note of who says what during the group discussion.

For each outcome/indicator, one of the four possible statements of the score description should be chosen. Depending on the answer, the score can be calculated and the current capacity assessed. Interviewees should provide evidence or any additional comments that explain their chosen score or may offer suggestions for building that particular capacity.

It should be made clear that the confidentiality of interviewees will be protected. Prior to starting the scoring and interviews/discussions, any questions that interviewees may have about the process, scoring or use of the results should be answered.

NEXUS CAPACITY DEVELOPMENT SCORE CARD					COUNTRY
NAME OF INTERVIEWEE:					Evidence/Comments
NAME OF ORGANISATION/MINISTRY/DEPARTMENT:					
AREA OF RESPONSIBILITY/EXPERTISE (WATER, ENERGY, FOOD/AGRICULTURE/LAND-USE, ECONOMIC DEVELOPMENT, IF OTHER PLEASE SPECIFY):					
GENDER:					
Outcome	Worst State (Score 0)	Marginal State (Score 1)	Satisfactory State (Score 2)	Very Good State (Score 3)	
1. Governance and Decision-Making					
1.1 Capacity and/or interest to conceptualise and formulate multi-sectoral investment projects	Multi-sectoral dialogue, planning and decision-making is effectively championed/driven forward	no one is championing the Water-Energy-Food Nexus	some institutions actively pursue the Water-Energy-Food Nexus	there are a number of institutions that champion the Water-Energy-Food Nexus, but more is needed	institutions have a strong ability to drive forward the Water-Energy-Food Nexus
	There is a strong and clear legal mandate for multi-sectoral cooperation, negotiation, planning and decision-making	there is no legal framework for multi-sectoral dialogue and cooperation on the Water-Energy-Food Nexus	there is a partial legal framework that encourages multi-sectoral dialogue and cooperation on the Water-Energy-Food Nexus, but the framework is inadequate/ineffective	there is a reasonable legal framework for multi-sectoral dialogue and cooperation on the Water-Energy-Food Nexus, but it has a number of weaknesses and gaps	there is a strong, comprehensive and clear legal framework for multi-sectoral dialogue, cooperation and decision-making on the Water-Energy-Food Nexus
1.2 Capacity and/or interest to implement multi-sectoral investment projects	Institutional systems are in place that enable integrated management and governance of water, energy and food/agriculture	no or only a few examples exist where integrated management of water, energy and food/agriculture is applied	integrated management of water, energy and food/agriculture occurs only sporadically, covers a small geographical area and has many gaps in terms of collaboration/ participation	integrated management of water, energy and food/agriculture covers a reasonably representative area of major ecosystems, but some gaps remain	integrated management of water, energy and food/agriculture occurs frequently, coherently and systematically at appropriate geographical scales
	Multi-sectoral strategies and plans on the Water-Energy-Food Nexus are implemented in a timely manner effectively achieving their objectives	there are no multi-sectoral strategies and plans or there is very little implementation of multi-sectoral strategies and plans	Multi-sectoral strategies and plans are poorly implemented and their objectives are rarely met	Multi-sectoral strategies and plans are usually implemented in a timely manner though delays typically occur and some objectives are not met	Multi-sectoral strategies and plans are implemented in a timely manner and effectively achieve their objectives
	Implementing institutions* are able to mobilize sufficient	institutions are underfunded and have no	some funding is available and institutions are able to	institutions have reasonable capacities to	institutions are able to mobilize sufficient financial, human and

	financial, human and material resources for multi-sectoral dialogue, planning and decision-making		capacity to mobilize sufficient resources	mobilize some human and material resources, but not enough to effectively implement multi-sectoral dialogues, planning and decision-making	mobilize resources, but not always in sufficient quantities for fully effective implementation of multi-sectoral dialogues, planning and decision-making	material resources to effectively implement multi-sectoral dialogues, planning and decision-making	
Multi-sectoral policies are continuously reviewed and updated in a collaborative, cross-sectoral manner	Multi-sectoral policies are continuously reviewed and updated in a collaborative, cross-sectoral manner	▲	there are no multi-sectoral policies or they are old and not reviewed regularly	policies are only reviewed at irregular intervals and/or focus on one sector	policies are reviewed regularly, but not annually and only sometimes in a collaborative manner	policies are reviewed and updated annually in a collaborative manner	
1.3 Capacity and/or interest to engage and build consensus among all stakeholders and prevent conflict	NATIONAL LEVEL: Multi-sectoral dialogue and cooperation on the Water-Energy-Food Nexus has the political commitment and support it requires	▲	there is no political will at all, or the prevailing political will runs counter to the interests of integrated approaches to water, energy, food/agriculture	some political will exists, but is not strong enough to make a difference	reasonable political will exists, but is not always strong enough to engage in meaningful multi-sectoral dialogue, cooperation and planning	there are very high levels of political will to engage in meaningful multi-sectoral dialogue, cooperation and planning	
	REGIONAL LEVEL: Multi-sectoral dialogue and cooperation on the Water-Energy-Food Nexus has the political commitment and support it requires	▲	there is no political will at all, or the prevailing political will runs counter to the interests of integrated approaches to water, energy, food/agriculture	some political will exists, but is not strong enough to make a difference	reasonable political will exists, but is not always strong enough to engage in meaningful multi-sectoral dialogue, cooperation and planning	there are very high levels of political will to engage in meaningful multi-sectoral dialogue, cooperation and planning	
Implementing institutions* can establish the partnerships necessary to achieve their objectives	Implementing institutions* can establish the partnerships necessary to achieve their objectives	▲	sectors and institutions work in isolation	some partnerships exist, but these are not effectively utilised	there are many partnerships in place with a wide range of agencies, but these partnerships are not always effective and do not always enable efficient achievement of objectives	effective partnerships are established by institutions to enable the achievement of objectives in an efficient and effective manner	

2. Institutional Frameworks and Processes

<p>2.1 Capacity and/or interest to develop methods, indicators, incentives and standards for multi-sectoral planning and implementation of investment projects</p>	<p>Implementing institutions* have the ability to develop models, scenarios and/or other decision support tools that enable integrated planning and implementation across water, energy, food/agriculture sectors</p>	<p>there are no and/or institutions do not have the knowledge or means to develop models, scenarios or other decision support tools for multi-sectoral planning and implementation</p>	<p>some models, scenarios or other decision support tools exist, but they are old, there is a lack of data/knowledge and/or they are focus on one sector only</p>	<p>a reasonable number of models, scenarios or other decision support tools exists, they integrate at least two of the three nexus sectors, but they are not frequently used for multi-sectoral planning and implementation</p>	<p>there are effective multi-sectoral models, scenarios or other decision support tools that integrate all three nexus sectors, are updated regularly and are frequently used for multi-sectoral planning and implementation</p>	
<p>Implementing institutions* have the knowledge and expertise to design, plan, implement and monitor multi-use/multi-functional systems that cover water, energy and food/agriculture</p>	<p>institutions have no knowledge or expertise on how to design, plan, implement and monitor multi-use/multi-functional systems</p>	<p>institutions have some knowledge or expertise on how to design, plan, implement and monitor multi-use/multi-functional systems, but the knowledge is dispersed, not accessible, outdated and not shared across sectors</p>	<p>institutions have adequate knowledge and expertise on how to design, plan, implement and monitor multi-use/multi-functional systems, but implementation remains siloed and knowledge is only occasionally shared</p>	<p>institutions have sufficient knowledge and expertise on how to design, plan, implement and monitor multi-use/multi-functional systems, they cooperate across all three nexus sectors, knowledge is shared and updated regularly across sectors</p>		
<p>Expert knowledge on social and environmental safeguards is easily accessible to Implementing institutions* and integrated into planning and implementation processes of multi-sectoral investment projects</p>	<p>There are clear criteria/indicators on social and environmental safeguards that inform the planning and implementation process of multi-sectoral investment projects</p>	<p>institutions neither access expert knowledge on nor integrate social and environmental safeguards into planning and implementation</p>	<p>institutions access expert knowledge on an ad-hoc basis, sporadically integrating social and environmental safeguards</p>	<p>institutions frequently access expert knowledge, but lack capacity to comprehensively integrate social and environmental safeguards</p>	<p>institutions easily access expert knowledge and effectively integrate social and environmental safeguards into planning and implementation processes</p>	
<p>2.2 Capacity and/or interest to integrate all available environmental and social safeguards</p>		<p>there are no criteria/indicators on social and environmental safeguards</p>	<p>a limited number of social and environmental safeguards exist, but gaps remain, they are old and they are not effectively implemented/enforced</p>	<p>adequate criteria/indicators on social and environmental safeguards are in place, but they are no regularly reviewed and updated and enforcement is sometimes challenging</p>	<p>Comprehensive social and environmental safeguards are in place, they are implemented and enforced effectively and reviewed/ updated on a regular basis</p>	

3. Knowledge creation, information and data sharing

3.1 Capacity and/or interest to mobilize information and knowledge	Implementing institutions* have the information and data needed to carry out effective multi-sectoral dialogue, cooperation and planning	information and data is not readily available and there are no effective mechanisms for sharing data to enable integrated Water-Energy-Food management and planning	some information and data exists, but is of poor quality, limited usefulness, very difficult to access and not shared or harmonised between sectors	an adequate level of information and data is available and mostly of good quality, but there remain gaps in the quality, coverage, availability and access (including comparability / harmonisation) to information and data held by various sectors	all the information and data required for effective multi-sectoral dialogue, planning and decision-making is available, accessible, harmonised and shared between sectors	
	Implementing institutions* have the information and data they need to develop and monitor strategies and implementation plans for the integrated management of water, energy and food/agriculture	information and data is not readily available and there are no effective mechanisms for monitoring the implementation of integrated Water-Energy-Food management strategies	some information and data exists, but is of poor quality, limited usefulness, very difficult to access and not shared between sectors	an adequate level of information and data is available and mostly of good quality, but there remain gaps in the quality, coverage, availability and access to information and data held by various sectors	all the information and data required for the development and monitoring of strategies and implementation plans for the integrated management of water, energy and food/agriculture is available, accessible and shared between sectors	
2.2 Capacity and/or interest to generate and share data and knowledge between stakeholders/sectors	Implementing institutions* are able to collaborate to co-create relevant national and regional knowledge on the Water-Energy-Food Nexus	institutions have never developed knowledge, collected information and data in a collaborative manner	institutions have developed knowledge, collected information and data in a collaborative manner, but these are old, out of date or driven by one sector only	institutions have put mechanisms in place to develop knowledge, collect information and data in a collaborative manner striving towards comparability and data harmonisation between sectors and in the region	institutions effectively and regularly develop knowledge, collect information and data in a collaborative manner and have put frameworks in place that ensure comparability and harmonisation of data	
	Implementing institutions* share data and knowledge between sectors regularly	institutions never share data and knowledge with other sectors	institutions sometimes share data and knowledge with other sectors, but this process is not structured, there is no data harmonisation and information is generally dispersed	institutions frequently share data and knowledge with other sectors, there is some harmonisation of data	institutions share data and knowledge across sectors, data is harmonised	

4. Monitoring

4.1 Capacity and/or interest to monitor, evaluate and report and learn from multi-sector investment projects	Implementing institutions* are highly adaptive, responding effectively and immediately to change and environmental risks	▲	institutions resist change	institutions do change, but only very slowly or when risks are imminent	institutions tend to adapt in response to change and risks, but not always very effectively, in siloes or with some delay	institutions are highly adaptive, responding effectively and immediately to change and risks in a collaborative, multi-sectoral manner	
	Implementing institutions* have effective internal mechanisms, procedures and standards for monitoring, evaluation, reporting and learning	▲	there are no mechanisms for monitoring, evaluation, reporting or cross-sectoral learning	there are some mechanisms for monitoring, evaluation, reporting and cross-sectoral learning, but they are limited and weak	reasonable mechanisms for monitoring, evaluation, reporting and cross-sector learning are in place, but are not as comprehensive as they could be	effective internal mechanisms for monitoring, evaluation, reporting and cross-sector learning are in place	

AT THE END OF THE INTERVIEW

Thank the interviewee for their participation and time. Briefly explain what will happen next and how the data may be used (confidentiality of the interviewee will be protected; the data will be used to strengthen the institutional capacity to develop, select and implement multi-sectoral investment projects on the WEF nexus; lessons learned will be published). If there is any need for follow-up questions or enquiries, the interviewee may be contacted again.

Ethics framework for stakeholder engagement

The following are a set of minimum requirements and principles to be respected when engaging with stakeholders during this capacity needs assessment. In particular, they establish the standards to be applied during design, data collection and analysis. These ethics principles ensure the credibility, reliability and transparency of applied methods as well as contribute to preserving the integrity, rights and confidentiality of key stakeholders.

- A focus on mutual learning in order to build understanding and capacity of those involved rather than making this assessment a purely technical exercise.
- Transparency in the design, purpose and use of analysis and resulting data, including clear communication with stakeholders concerning the purpose of the interview, questions and the intended uses of the results.
- Respect for the rights and interests of stakeholders, particularly with regards to culture, customs, fundamental values and the right to or not to participate. Assessments must be appropriate, representative and respectful, ensuring accessibility (e.g. language translation), meaningfulness and usefulness. Due regard should be given to the welfare, beliefs and customs of those involved, including respect for divergent perceptions and views. In particular, measures should be taken to avoid harm, including by consideration of the political sensitivity of the assessment and its results.
- Full disclosure and free, prior and informed consent, meaning that interviewees have the right to consent to, decline or withdraw from participation in the analysis.
- An unbiased approach of the interviewer when conducting interviews to ensure the necessary openness and respect for stakeholder views, perceptions and opinions. Additionally, the analysis should be based on reliable and quality data and observations, providing credible results. Credibility is achieved if interviewers ensure their objectivity, independence and impartiality, meaning that vested interests of the interviewer do not interfere with this analysis.
- Due credit and acknowledgement of contributors, respecting intellectual ownership, while ensuring confidentiality of individuals and groups.
- Gender representation and participation should be ensured to the extent possible. This may be a challenge in Central Asia, where key stakeholders and decision makers are traditionally male.

Annex 2 - Nexus Capacity Score Card results

Dimensions and areas	Cumulative score (max. possible score = 39)	Average score	Score as % of maximum
Governance and decision-making			
1. Multi-sectoral dialogue, planning and decision-making is effectively championed/driven forward	20	1.54	51%
2. There is a strong and clear legal mandate for multi-sectoral cooperation, negotiation, planning and decision-making	14	1.08	36%
3. Institutional systems are in place that enable integrated management and governance of water, energy and food/agriculture	11	0.85	28%
4. Multi-sectoral strategies and plans on the Water-Energy-Food Nexus are implemented in a timely manner effectively achieving their objectives	13	1	33%
5. Implementing institutions are able to mobilize sufficient financial, human and material resources for multi-sectoral dialogue, planning and decision-making	10	0.77	26%
6. Multi-sectoral policies are continuously reviewed and updated in a collaborative cross-sectoral manner	11	0.85	28%
7. NATIONAL LEVEL: Multi-sectoral dialogue and cooperation on the Water-Energy-Food Nexus has the political commitment and support it requires	16	1.23	41%
8. REGIONAL LEVEL: Multi-sectoral dialogue and cooperation on the Water-Energy-Food Nexus has the political commitment and support it requires	13	1	33%
9. Implementing institutions can establish the partnerships necessary to achieve their objectives	13	1	33%
Institutional frameworks and processes			
10. Implementing institutions have the ability to develop models, scenarios and/or other decision support tools that enable integrated planning and implementation across water, energy, food/agriculture sectors	16	1.23	41%
11. Implementing institutions have the knowledge and expertise to design, plan, implement and monitor multi-use/multi-functional systems that cover water, energy and food/agriculture	12	0.92	31%
12. Expert knowledge on social and environmental safeguards is easily accessible to Implementing institutions and integrated into planning and	17	1.31	44%

implementation processes of multi-sectoral investment projects			
13. There are clear criteria/indicators on social and environmental safeguards that inform the planning and implementation process of multi-sectoral investment projects	5	0.38	13%
Knowledge creation, information and data sharing			
14. Implementing institutions have the information and data needed to carry out effective multi-sectoral dialogue, cooperation and planning	15	1.15	38%
15. Implementing institutions have the information and data they need to develop and monitor strategies and implementation plans for the integrated management of water, energy and food/agriculture	11	0.85	28%
16. Implementing institutions are able to collaborate to co-create relevant national and regional knowledge on the Water-Energy-Food Nexus	10.5	0.8	27%
17. Implementing institutions share data and knowledge between sectors regularly	13	1	33%
Monitoring			
18. Implementing institutions are highly adaptive, responding effectively and immediately to change and environmental risks	11	0.85	28%
19. Implementing institutions have effective internal mechanisms, procedures and standards for monitoring, evaluation, reporting and learning	12	0.92	31%



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