

Pre-read for stakeholder workshop
“Natural Capital Valuation Assessment for the Syr Darya River Landscape in
Uzbekistan”

Tuesday 11 July 2023, 14h00 – 16h00 Uzbekistan time (GMT+5)

*With support of the [European Bank for Reconstruction and Development \(EBRD\)](#)
in cooperation with [ARCADIS](#), [IDEEA Group](#) and [RWA Group](#)*

Following the invitation to the stakeholder workshop, we are sharing more detailed information about the Natural Capital Valuation Assessment for the Syr Darya River Landscape in Uzbekistan. The workshop is designed to be interactive, providing an opportunity for all participants to share feedback and contribute their insights. **Your feedback is highly appreciated, and we kindly ask you to make note of any initial thoughts, feedback, or questions you may have while reviewing this document. We also invite you to go through the list of workshop discussion topics provided at the end of this document.**

We look forward to meeting you!

Saltanat BEGALIEVA
Stakeholder Engagement Expert
RWA Group / Green Partners
✉ saltanat@rwagroup.net
☎ +996 556 116 116



Chantal VAN HAM
Senior Expert Sustainability and Natural Capital
ARCADIS Belgium
✉ chantal.vanham@arcadis.com
☎ +32 485 542 272



WORKSHOP REGISTRATION

The workshop is scheduled to take place on **Tuesday, 11 July 2023, from 14h00 to 16h00 (Uzbekistan time, GMT+5)**, via the Zoom platform.

You can register via: https://us06web.zoom.us/meeting/register/tZMoc-yvqDlvE9ND6yg4lalpwd4PtQaQ_T7e

After registration, you will receive a confirmation e-mail with more information to join the meeting.

WORKSHOP AGENDA

14h00 – 14h10 (Uzbekistan time, GMT+5)	Opening remarks and introduction	EBRD, ARCADIS, RWA Group
14h10 – 14h50 (Uzbekistan time, GMT+5)	Results of the Natural Capital Valuation assessment for the Syr Darya River landscape in Uzbekistan's Namangan, Andijan, and Fergana regions	ARCADIS, IDEEA Group
14h50 – 15h40 (Uzbekistan time, GMT+5)	Moderated exchange on the results of the NCV assessment for the Syr Darya River landscape and potential risk management actions and nature-positive investments	Workshop participants, ARCADIS, IDEEA Group
15h40 – 16h00 (Uzbekistan time, GMT+5)	Final reflections, next steps, and closing remarks	EBRD, ARCADIS

BACKGROUND INFORMATION

Natural capital can be defined as the stock of renewable and non-renewable resources (e.g. species, air, water, soil, minerals) that generate a flow of benefits to people.

Investors and financial institutions are exposed to natural capital risks, due to unsustainable land use, over-exploitation of natural resources, climate change, etc. Natural capital valuation is the process of assigning a monetary value to natural capital.

The EBRD, in collaboration with other multilateral development banks (MDBs), has developed the **Natural Capital Valuation (NCV) Model**, which is based on the UN System of Environmental-Economic Accounting (SEEA), supplemented with additional nature-related risk assessments. **The main objective of the NCV assessment is to identify sustainable nature-related risk management actions and investment opportunities, to make progress towards Nature positive and to enable informed decision making.**

The NCV Model evaluates:

- Changes in extent and condition of ecosystem types.
- Key dependencies on natural capital and how this relates to the local economy in terms of monetary ecosystem services flows.
- Key threats to natural capital and related socio-economic risks.
- The current and evolving state of natural capital in a business-as-usual scenario and two sustainable scenarios, including qualitative outcomes for ecosystem services, the economy, human health and progress towards the Sustainable Development Goals.
- Risk management actions/investment opportunities and how these can contribute to environmental, social and economic benefits in the landscape.

Water pollution is a problem in Uzbekistan's Namangan, Andijan and Fergana regions. Untreated wastewater from households and industries poses a significant risk to both terrestrial and aquatic ecosystems. Agricultural runoff carries agrochemicals and elevated salt concentrations, increasing the pollution effects. In addition, **water quantity** is drastically declining, mainly due to the large-scale river diversion for irrigation purposes. Furthermore, **other impacts** such as poor solid waste management and mining activities are degrading natural capital and the related provision of ecosystem services. **In addition to risks for ecosystems, also human health and local economies are at stake due to deteriorating water quality and quantity.**

Based on the implementation of the steps in the NCV Model, i.e. stakeholder dependencies/impacts assessment, assessment of changes in ecosystem extent/condition (stocks), and assessment of changes in ecosystem services (physical and monetary flows), nine **risk areas** were defined. These are linked to the following four **Potential Investment Areas (PIAs)**. In a next step, risk management actions/investment opportunities will be linked to these PIAs.

1. Investment in Wastewater Treatment

- Corresponds to risk areas Water Quality, Water Use & Availability, Soil & Sediment Quality, Waste.
- Related to SDG 6 (Clean Water and Sanitation) and SDG 15 (Life on Land).

2. Climate Adaptation Planning and Investment

- Corresponds to risk areas Temperature & Precipitation, Extreme Events.
- Related to SDG 13 (Climate Action) and SDG 15 (Life on Land).

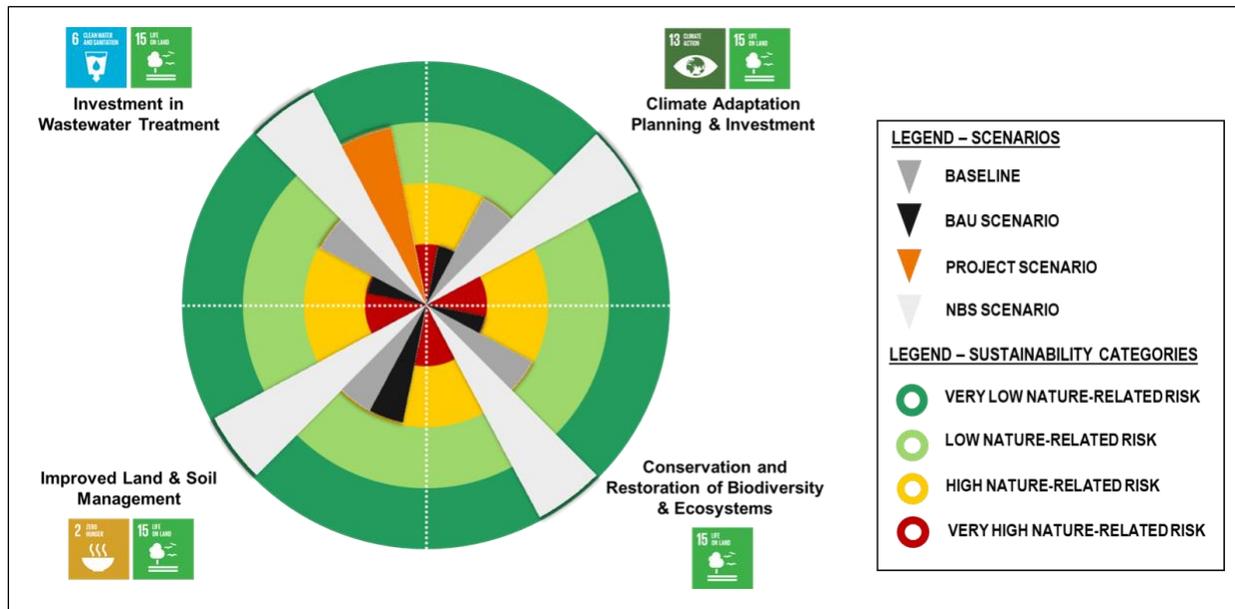
3. Conservation and Restoration of Biodiversity and Ecosystems

- Corresponds to risk areas Species Diversity, Invasive Species & Pathogens, Habitat Structure.
- Related to SDG 15 (Life on Land).

4. Improved Land and Soil Management

- Corresponds to risk areas Soil & Sediment Quality, Habitat Structure.
- Related to SDG 2 (Zero Hunger) and SDG 15 (Life on Land).

In the **scenario analysis**, the risk assessment indicates which **sustainability category** corresponds to the baseline situation (situation at present) for each of the **potential investment areas (PIAs)**. The sustainability category for the baseline situation in turn informs the assignment of the sustainability category to the **business-as-usual (BAU) scenario** and sustainable scenarios per PIA. There are **two sustainable scenarios**: (1) the **Project Scenario**, which focuses on the implementation of grey infrastructure for wastewater treatment; and (2) the **Nature-Based Solutions (NBS) Scenario**, which assumes the implementation of NBS for improving water quality and quantity. The Project Scenario is focused on PIA Investment in Wastewater Treatment through traditional infrastructure solutions. The NBS scenario also focuses on this PIA but offers additional advantages that extend beyond wastewater management and are therefore relevant to the other PIAs as well.



As a result, the NCV assessment has identified risk management actions/investment opportunities for each of the PIAs. Examples of priority investment opportunities are listed below. Note that this list is not exhaustive, and that the order of listing does not correspond to the level of importance.

Key investment opportunities for PIA Investment in Wastewater Treatment

- Improve and modernize the coverage of wastewater treatment plants and public sewage networks. Implement regular maintenance to ensure efficient operation. Explore opportunities such as sludge management for energy recovery.
- Implement appropriate treatment measures for return flows generated from agricultural irrigation before they are discharged into rivers or reused.
- Restore (and expand) historical wetlands and tugai forests to improve the self-purification capacity of natural rivers, water regulation, biodiversity, etc.
- Implement nature-based solutions for wastewater treatment that also offer additional benefits across the other Potential Investment Areas. Examples include: constructed reed beds/wetlands, soil infiltration systems, riparian buffer strips, in-stream restoration.

Key investment opportunities for PIA Climate adaptation planning and investment

- Stormwater management systems; drainage systems to accommodate extreme flood events; monitoring/inspection of infrastructure to monitor wastewater treatment plant vulnerabilities in terms of structural damage related to extreme weather.
- Nature-based solutions can be implemented as part of wastewater treatment infrastructure to address the need for protection against e.g. mudflows and floods while minimizing negative impacts on habitats and preventing ecosystem fragmentation.

Key investment opportunities for PIA Conservation and Restoration of Biodiversity & Ecosystems

- Install fish protective devices (e.g. filters on pump inlets, fish passage structures such as fish ladders to facilitate migration, etc.)
- Improve and implement data collection systems to monitor the state of ecosystems (including surface/soil water quality, soil quality, air quality). Develop the necessary data infrastructure to monitor the state of ecosystems and to collect a time series of data. Communicate the data with local communities and researchers.

Key investment opportunities for PIA Improved land and soil management

- Build modern, water-saving irrigation and drainage infrastructure. Consider rainwater harvesting and recycling of treated irrigation return flows. Implement innovative water-saving techniques such as hydroponics.
- Conservation/climate-smart agriculture: drought and salt tolerant crops, crop rotation and diversification, composting agricultural residues into organic fertilizer/livestock feed/biomass for energy, agroforestry systems, organic agriculture, sustainable grazing, minimal use of agrochemicals through Integrated Pest Management. Development and implementation of free technical support programs and training.
- Implement remediation measures to clean up sites contaminated by radioactive elements. Establish a monitoring system to track and communicate the locations that have been polluted by radioactive substances. Continuously monitor the spread of pollution to ensure timely intervention and mitigation efforts.

WORKSHOP DISCUSSION TOPICS

We are keen to hear your thoughts on the following topics, which will serve as a starting point for the discussion. Participants are also encouraged to introduce subjects of their choice during the discussion.

- Do the analysis/results outlined above align with the local situation in your opinion?
- How is the landscape relevant to local stakeholders; how do they use natural capital to support their basic needs and livelihoods?
- Has the provision of ecosystem services changed over time? What could be the causes?
- How are stakeholders affected by the changing landscape, if at all? Who is most affected?
- What are the solutions?
- Who are the ones that can make a difference?
- Are there ongoing efforts by residents, policy frameworks, government mechanisms, etc. to improve the ecological situation? Who is responsible for steering these efforts?
- Are efforts targeting all sectors? Does everyone benefit?
- To what extent do residents implement measures in their daily activities to mitigate the adverse effects on ecosystems?
- Are the available financial mechanisms sufficient to realize investments in sustainable use and restoration of natural capital?
- What types of financing would be most effective to restore the ecosystem and strengthen its ecosystem services?