Water
Water, landscapes and ecosystems: Contributing to human development for Asia

A. Rationale

Current demographic change through population growth, rapid urbanization and changes in living standards can affect upstream development, resulting in either positive or negative impacts on conditions downstream in both urban and rural settings. From the 'Water Towers' of Asia – the mountainous areas that are rich in biodiversity and provide freshwater to people living downstream – to the sea, water sustains the terrestrial and aquatic ecosystems that regulate flows and quality, while providing ecosystem services and a base for economic development and the livelihoods of millions. Downstream, deltas and estuaries connect terrestrial water systems to the sea, where river sediments and pollutants determine the morphology of the coasts and quality of marine waters that are critical for fisheries.

Greater understanding and effective management of river basins and their ecosystems is needed for better knowledge to achieve sustainable management and planning of water resources, both in function and cost. Basins and terrestrial ecosystems must be managed as one inter-dependent system to manage risk and build resilience to cope with future changes in climate and reduce the impacts of disasters. We therefore invite concept notes which address the inter-dependency of the water systems, landscapes and ecosystems that provide the basic building blocks of communities' social fabric, whether they are rural or urban. Each concept note must support the objectives of one or more existing international conventions and agreements that include: the Sustainable Development Goals (SDGs); Conventional on Biological Diversity (CBD); UNFCCC-Framework Convention on Climate Change; CCD-UN Convention to Combat Desertification, along with the Land Degradation Neutrality target; Ramsar Convention; the Strategic Plan on Forests 2017-2030; and the Strategic Plan for Biodiversity 2020.

B. Important keywords

Water tenure, water ecosystems, local and indigenous knowledge, gender, rural and urban landscapes, nature-based solutions, big data, resilience and resources management

C. Sub-themes

1) **Multifunctional rural and urban landscapes**: This theme will address water and food security, climate change resilience, and human well-being, with a focus on challenges and opportunities in restoring degraded rural and urban landscapes in Asia. Action under this theme must directly contribute to the reinstatement of ecosystems services, leading to enhanced water and food security for all.

2) **Nature-based Solutions (NBS) for rural and urban landscapes**: This theme will provide case study evidence of NBS' as practices, or that mimic natural processes to contribute to improved management of water and land resources whilst maintaining the integrity of ecosystems. Focus will be on NBS as an innovative approach that builds on practical applicability for restoring ecosystem services, in addition to how this approach can be used for water security in both rural and urban settings in Asia while contributing to resources rehabilitation.

3) **Achieving urban and rural watershed resilience to future climates**: The theme will address how a coordinated, watershed-scale plan can be adopted to optimize investments for multiple benefits and improve the climate resilience of urban and rural watersheds. This will showcase spatial tools to support engagement and negotiation between communities, stakeholders and investors. It will also explore the roles of industry and citizens in contributing to ecosystem and watershed management in rural and urban settings, including the expansive roles of the private sector in driving innovation, public policy, technology, business models, partnerships and financing/funding of solutions.

4) **Governance and ecosystem-based water management**: This theme will focus on moving from innovation to practical implementation and sustainable, measurable and positive outcomes on the ground in addressing the challenge of functional ecosystems based-water management. It will cover three main pillars: 1) well-crafted policies, 2) scalable and resilient practices, and 3) sound theory and innovation. It will also explore how policies incentivize implementation at local, national and regional scales, in addition to needs to catalyse critical change.