I. Introduction and Context

Country Context

South Asia is home to about 21 percent of the global population, but has only about eight percent of the world’s annual renewable water resources. Population growth and urbanization are major drivers of change and increasing water stress in the region. With an annual population growth of around 1.5 percent, the regional population is projected to increase from around 1.6 billion to over 2 billion by 2050, greatly reducing per capita water availability. South Asia’s average per capita water availability, defined by the sum of internal renewable water sources and natural incoming flows divided by population size, is less than 2,500 m³ annually. This is compared to a worldwide average of almost 7,000 m³ per capita per year. (Per capita water availability in the region has declined by 70 percent since 1950). Almost 95 percent of total water withdrawals in South Asia are for irrigated agriculture, which is higher than the 70 percent global average. Water productivity, in terms of Gross Domestic Product generated per cubic meter of water, is less than US$4, compared to US$24 for the world’s top food producers.

The rivers of South Asia bear the brunt of this new demand for freshwater. The Hindu Kush Himalaya (HKH) region is the source of ten large Asian river systems and provides water, ecosystem services, and the basis for the livelihoods of more than 210 million people in the South Asian region. Five of the eight HKH countries—Bangladesh, Pakistan, India, Nepal and Bhutan—share twenty major rivers emanating from the Greater Himalaya. The basins of these rivers provide water to 1.3 billion people. The river flow regimes, the supply of water and food and energy security in the region are under direct impact from changes in temperature, precipitation and Himalayan glacier dynamics. Due to this trans-boundary interconnectedness in water resources and its high relevance in regional stability and sustainable and inclusive growth, regional cooperation is imperative in the management and development of water resources.
**Sectoral and Institutional Context**

The HKH has one of the largest bodies of ice outside the polar ice caps, covering an area of more than 60,000 km². The glaciers, ice fields, and snow packs provide important intra- and inter-annual water storage facilities, and the mountains are often referred to as the **water towers** of Asia. They are the major source of surface water and groundwater during the dry season. They play a significant role in agriculture and food security, and also have the potential to play a vital role in energy security (hydropower).

Knowledge gaps with respect to present and future hydrology in the HKH pose a real constraint to water resource management. There is little information about the role and changing nature of monsoons, snow cover, permafrost, glacial lakes, wetlands, and groundwater—all essential to understand how much water will be available in the future and in which months of the year.

Universities and research centers play a key role in generating, sharing and disseminating knowledge on water resources and provide evidence for effective intergovernmental integrated water resources management policies and practice. They, however, have largely not been able to fulfill their important tasks. This is mostly due to the lack of resources and inadequate institutional and research capacity. Moreover, an information sharing mechanism and platform as well as substantive coordinated efforts in creating and conducting collaborative research and training between institutions are seriously lacking.

The Himalayan University Consortium (HUC) was founded in 2007 with a mandate to develop an effective, sustainable network of universities in the HKH, for collaboration with academic, research and knowledge generating and exchange institutions both within and outside the region. The Consortium currently consists of thirty-three full member universities and research institutes that have been selected according to various criteria that reflect the spirit of inclusiveness, including commitment to the goals and values of the Consortium, ability to contribute to the development of the HUC (through, e.g., in kind support), and links to major HKH constituencies. Since its inception, membership has progressively grown, a formal Charter has been signed, and a Strategy and Action Plan have been developed, with activities ranging from offering study scholarships, promoting faculty exchange, organized learning courses and lecture series, and supporting joint research. **Seed** and mobility grants have been provided to a total of twelve HUC member institutions to conduct reconnaissance visits and brainstorming workshops, explore common interests and lay the foundation for future collaboration.

As HUC enters the second decade of its existence and given the challenges of building cooperation in a region as vast and diverse as the HKH, there is a strong need to consolidate and sustain the network, strengthen the partnership, and support high quality collaborative research and training on common interests and issues. This grant intends to provide critical support to the process of network consolidation and sustainability.

**Relationship to CAS/CPS/CPF**

The World Bank works to ensure that water is a reliable foundation for poverty reduction and broad prosperity through the delivery of public water **goods** coupled with private initiatives that add value to water services throughout the water cycle. Additionally, the water challenges presented above are recognized in the World Bank’s South Asia Regional Integration (RI) Strategy, and the
World Bank’s most recent Country Partnership Strategies (CPS) and Country Assistance Strategies (CAS) for South Asian countries, as central to reducing poverty and boosting prosperity through economic growth.

The World Bank’s South Asia Regional Integration (RI) Strategy has an objective to Improve the in-country and cross-border authorizing environment (attitudes and policy) for regional integration by systematically building awareness and championship around the need for, and benefits from, increased regional cooperation. Pillar 3 of the RI Strategy, Supporting cooperative management of shared natural resources and disaster risks to enhance resilience will take the approach to use in-country and regional entry points to facilitate dialogue, and generate and share knowledge and capacity; and to inform/strengthen institutional arrangements towards more effective management of shared natural resources and disaster risks. The strategy aims to create new specialized regional networks or communities of practice in areas where regional collaboration can critically enhance sustainable, shared growth and poverty reduction, and aims to generate and disseminate knowledge on RI issues via a deliberate strategy of close collaboration between the WBG and South Asian think tanks and policy institutes, youth, media, CSOs and private sector organizations.

The activity is financed by the South Asia Water Initiative (SAWI) and is closely aligned with SAWI’s Program Development Objective to increase regional cooperation in the management of the Himalaya River systems to deliver sustainable, fair and inclusive development and climate resilience. It is also closely aligned with the SAWI Regional Cross-cutting Knowledge, Dialogue and Cooperation Focus Area specific objective to build knowledge and capacity across the region in support of transboundary basin-focused dialogue and cooperation.

II. Project Development Objective(s)

Proposed Development Objective(s)

The development objective of this grant is to build a sustainable partnership of research institutions in the Hindu Kush Himalayan region working on issues of significance to regional water resources management.

Key Results
The expected outcomes of the grant are:
1. Enhanced partnership of research institutions in the Hindu Kush Himalayan region, with the following associated outputs:
   1.1. a broadened network of universities and research institutions (number of additional member institutions which joined during grant implementation period and based on HUC criteria as outlined above in Institutional Context);
   1.2. establishment of an enabling information sharing platform (collaborative website established);
   1.3. strengthened capacity for HUC Secretariat (number of staff trained).
2. Enhanced capacity for collaborative research in the region, the outputs of which are:
   2.1. education and knowledge sharing (number of knowledge exchange and training events; number of participants, of which female);
   2.2. collaborative research projects (see indicator below);
   2.3. high quality proposals for collaborative research projects (number of proposals for joint research finalized).

The above key results will contribute to SAWI program results in the areas of: (i) building trust and confidence in the region; (ii) building capacity of water resources organizations; and (iii) increasing knowledge and making it accessible to all relevant stakeholders. The expected key results and indicators are aligned with the SAWI Results Framework.

### III. Preliminary Description

#### Concept Description

The grant objective will be achieved through strengthening the Himalaya University Consortium and its secretariat as a platform to facilitate collaborate research partnerships among institutions in the HKH region and beyond. Conferences, training programs and exchange visits will be funded to facilitate contact and establishment of partnership between researchers who may otherwise not have had the opportunity to meet as well as to create a network and build joint research capacity of young researchers. Seed grants will be provided to develop high quality proposals for joint research on issues related to the management of the transboundary water resources of the HKH region.

The initiative has the following components:

Component 1: Strengthening the network of research institutions.
This component will finance activities between the academic institutions across HUC current and potential full and associate members to broaden the network and intensify the interactions, as well as establish a collaborate web-based platform for knowledge and information exchange. Limited support will be provided to strengthening the capacity of the HUC secretariat to effectively perform its role, including providing essential office equipment, contributing towards the costs of the Project Coordinator and Project Associate, and training in project management.

Component 2: Building capacity for collaborative research.
This component will finance conferences for knowledge exchange, training programs and exchange visits to build the capacity of researchers to engage in knowledge exchange and for joint research that builds on synergies between institutions and the collective expertise on water resources management in the Himalayan River Basins. In addition, new grants will be provided to at least twelve institutions from existing and / or potential HUC members for potential collaborative research and to two existing partners for conducting already identified joint research projects.
IV. Safeguard Policies that Might Apply

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V. Financing (in USD Million)

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