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Overview of NBI's Environmental Flows Work Stream

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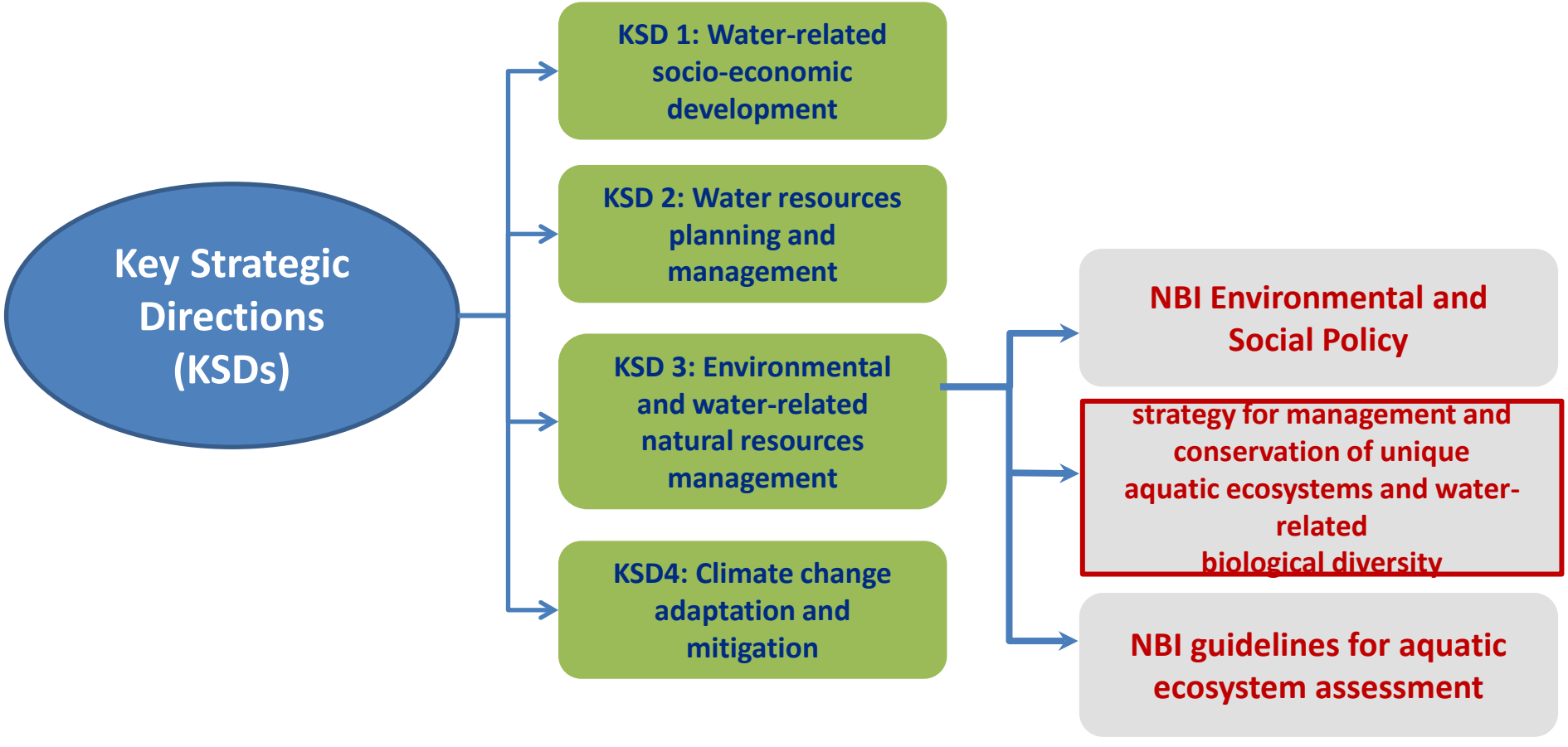
Context and Relevance I

- Nile Basin is characterized by increasing Water Footprint through population increase and urbanization
- Existing and Projected Water Demand; Irrigation, Hydropower, Livestock, Mining, Urban and Rural Water Supply, Evapotranspiration, Environmental Flows
- Increase in utility infrastructural development and Water related economic production indicates Water Footprint magnitude
- Climate Change exacerbates Nile Basin Water insecurity
- The foregoing makes issues of Environmental Flows and Wetlands Ecological Integrity critical in Nile Basin

Environmental flows are important for the maintenance of biodiversity and ecosystems services provided by the river and associated wetlands to sustain the human livelihoods that depend on these services

Context and Relevance II

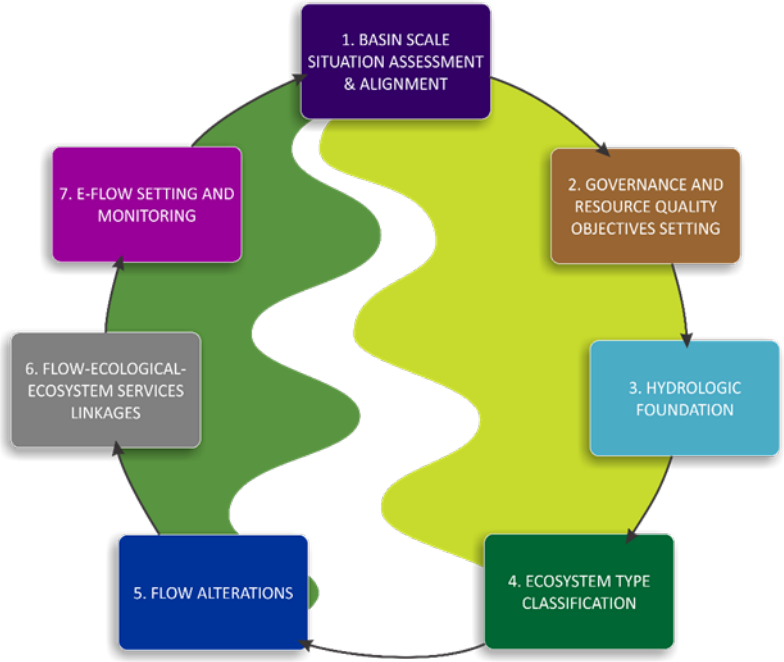
Nile Basin Sustainability Framework (approved July 2011)



This strategy aims at sustaining the freshwater and estuarine ecosystems of the Nile Basin and the human livelihoods and wellbeing that depend on these ecosystems through establishment and management of environmental flows

Key Milestones

- Background Document 1: Environmental Flow Assessment: A review of global practices and experiences.
- Background Document 2:Aquatic ecosystems of the Nile Basin, their wellbeing and response to flow alterations.
- Background Document 3:Management of environmental flows in the Nile River Basin: practices and experiences.
- Nile E-flows Technical Implementation Framework/Manual.
- NBI Environmental Flows Strategy.



The Case Studies

- The Mara River Basin scale E-flows assessment using the PROBFLO holistic EFM with historical data and data obtained from a survey to Mara Basin in November 2015 as a part of this study.

- The rapid E-flows assessment of a site on the Dinder River using a combination of the Desktop Reserve Model and a hydraulic rating procedures with flow-ecological considerations derived from historical evidence and data collected during a survey to the Dinder River in December 2015.

- A desktop E-flows assessment of a site on the Malaba River using the Desktop Reserve Model and historical hydrology data.

- A review of the application of a holistic EFA at a site on the Kagera River as a part of the EIA of the Rusumo Falls Hydroelectric power generation project.

- Nile Basin Basin Wide Eflow Coarse Study

- Mara River Detailed Eflow Study

Nile Basin Freshwater Ecoregions

1) Ethiopian Highlands
2) Lake Tana
3) Lake Victoria
4) Upper Nile
5) Lower Nile
6) Nile Delta.

Overall Wellbeing Evaluation

- ❑ Conservation state,
- ❑ Threats to ecosystem wellbeing,
- ❑ Water quality state,
- ❑ Fish conservation state,
- ❑ State of associated fisheries (fish for food sector),
- ❑ Other ecosystem biota and
- ❑ Ecosystem Services.

Key Issues

- The need to factor issues of environmental sustainability, environmental flows and integrated water resource management in river basin planning
- The need for extra work on Eflows embedding, operation, monitoring and adaptation as there is average advance on methods, funding, capacity development and assessment with respect to Eflows.
- The need for Eflows methodologies and process best practice community in Nile Basin Region
- The need for legal framework for Nile Basin Countries on Eflow learning from Water Acts of Kenya and Tanzania and practice in South Africa

Key Issues

- Harmonization of methodologies for Eflow assessments in Nile Basin region
- Capacity building on Eflows of Nile Basin Counties by Nile Basin Initiative
- Factoring of upstream and downstream perspectives on Eflow
- Developing of National Policies and Laws for Eflow for Nile Basin Countries
- Comprehensive approach to Eflows assessments, strategic assessments, water balance assessments, investments assessments and ecosystem issues
- Legal and institutional framework responsive to environmental flows at regional level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THANK YOU!