Session:

Early stage sustainability

How can it be assessed?

Fekahmed Negash

ENTRO, Nile River Basin

For more information:  www.hydropower.org/congress
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Considerations of Transboundary Perspectives in Hydropower Early Stage Identification

Fekahmed Negash, ENTRO
Considerations of Transboundary Perspectives in Hydropower Early Stage Identification

- Transboundary waters are shared resources among two or more Sovereign States
- Countries sharing transboundary waters have divergent interests which are often conflicting
- The sustainability of TB Basin on the other hand requires cooperation among the Basin States
- Cooperation provides more benefits at a basin level than unilateral and scattered actions
- Hydropower when planned and implemented properly can enhance cooperation in Transboundary basins
- Hydropower in addition to its multitudes of benefits, provides the much need solution of water to TBWM
Considerations of Transboundary Perspectives in Hydropower Early Stage Identification

- Hydropower offers benefits that are transboundary in nature (regulation, flood, sediment, elevation of energy, navigation, additional water, storage,..)
- Hydropower is not a consumptive water use
- The energy generated can be shared among TB States
- Negative impacts of Hydropower are also transboundary (change in flow pattern, filling, environmental and social issues, water quality, dam safety, Water Security,..)
- Proper assessment and consideration of transboundary perspectives during the early stage identification of hydropower projects can maximize benefits and minimize negative impacts
Considerations of Transboundary Perspectives in Hydropower Early Stage Identification

Confidence, trust and transparency

- Cooperative Engagement
  - Legal and Institutional Mechanism
  - Technical Cooperation (Data and information sharing, Coordination, Collaboration, Joint planning and inv. projects)
- Clear understanding of the situation of the basin
  - Scientific assessment and analysis of the situation
  - Proper analysis of the future trend
- Basin wide approach
  - Multipurpose approach
  - Synergy and complimentarity
  - Impacts and benefits across the basin
  - Options and Scenario
Considerations of Transboundary Perspectives in Hydropower Early Stage Identification

Assessment of Demand for Energy (unsubstantiated demand in unreasonable)

- Current and future trend in Demand (national project)
- Current and Future trend in Regional Energy Demand (National project for export, Joint Project)
- Opportunity for power trade
- Possibility for power interconnection

Alternative Options

- Evaluation of Alternative Energy Options (Source)
- Comparison of Different Basins or Hydropower Projects
Considerations of Transboundary Perspectives in Hydropower Early Stage Identification

Identification of Benefits and Risks
- Strategic Social and Environmental Assessment (SSEA)
- Rapid Economic Assessment (costs, benefits and allocation)
- Dam Safety

Finance and Financing
- Possible Sources of Financing
- Modality of financing

Legal and Institutional assessment
- Basin wide or specific agreements
- Opportunity for cooperation if no legal framework
- Institutional arrangement for cooperation
The Joint Multipurpose Project (JMP)

- The JMP is the Joint Project of Ethiopia, Egypt and Sudan
- It comprises sets of investment Projects and enabling institutional environment
- Criteria for JMP Selection
  - Benefit to the three countries
  - Multipurpose Benefits
  - No regret Project
  - Logically the project is in Ethiopia
  - Approaches to identification are in compliance with the requirement of Early Stage Assessment
The Joint Multipurpose Project (JMP)

Demonstrated Need

- The Eastern Nile Power Trade Study
  - Identified the demand for energy, opportunity for power trade and the need for power interconnection

Options assessment

- The Eastern Nile Power Trade study
  - Evaluated Hydropower against other options
  - The Scoping Study
    - Basin wide scoping of Opportunities for Cooperation
    - Compared different basins in Ethiopia
    - Selected and Prioritized different dam projects
The Joint Multipurpose Project (JMP)

Political Risk

- Thematic Studies
  - Assessed national and regional policies and Legal Risks that is related to JMP

Institutional Capacity

- The Strategic Social and Environmental Assessment
  - Evaluated and identified Gap in institutions of the three countries

Technical Issues and Risks

- The one system Inventory
- The Scoping Study
- Thematic Studies
The Joint Multipurpose Project (JMP) Social, Environmental and Economic Issues and Risks

- It provides an analysis of the range of environmental and social issues
- compares water resource development alternatives considering a range of investments from no-investment up to a full cooperative development
- broadly examines connections and impacts of potential development scenarios on the physical, biological, socio-economic, and cultural resources
- Broadly identifies sources, modalities and risks of financing and costs and benefits of the investment and allocation of costs and benefits
The Joint Multipurpose Project (JMP)

Main Conclusions of the JMP

• The Abbay/Blue Nile Sub-basin offers the most favorable opportunities

• New water storage facilities on the Abbay/Blue Nile Sub-basin would generate large amounts of hydropower and multipurpose benefits to the three countries

• Decision made to move to next level

• Three Dam sites selected for advance to preparation where detailed feasibility and design will be conducted

• But the project terminated due to insufficient assessment and identification of political risks

• Un expected circumstances followed
Considerations of Transboundary Perspectives in Hydropower Early Stage Identification

Conclusion

- More than 50 Large Dams Planned in Eastern Nile
- Proper consideration of transboundary perspectives during the early identification of HP projects is critical for sustainability,
- The role of Sustainable Hydropower in ensuring peace, security and Regional integration need to be emphasized
- The Early Stage Assessment tool is being used for the early stage identification of Hydropower projects
- Furthering the adoption and use of the tool can weaken the campaign against Hydropower
- Attachment of incentive mechanism to the use of the tool is critical in enhancing its utilization
Thank You
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