

TEEB Phase III:

Mainstreaming biodiversity into national and sectoral development plans and processes

CBD-COP-13 11 December



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UNEP TEEB Office

TEEB Phase III

1. National Implementation

- Tanzania, Liberia, Bhutan, Philippines, and Ecuador
- Next funding phase 2017: Colombia, Kenya, Indonesia, Thailand
- +15 other countries (e.g. Germany, China, Malaysia, Brazil, India)

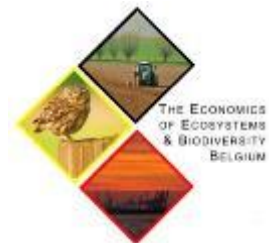
2. Sectoral/ biome studies

- TEEB Agriculture & Food
- TEEB for the Arctic, TEEB Water and Wetlands, TEEB Oceans and Coasts

3. Macro-level accounting (with UN Statistics Division)

- SEEA Experimental Ecosystem Accounts

www.teebweb.org/areas-of-work/teeb-country-studies/



TEEB Country Studies 6 step approach

- STEP 1:** Refine the objectives of a TCS by specifying and agreeing on the key policy issues with stakeholders
- STEP 2:** Identify the most relevant ecosystem services
- STEP 3:** Define information needs & select appropriate methods
- STEP 4:** Assess and value ecosystem services
- STEP 5:** Identify and outline the pros and cons of policy options, including distributional impacts
- STEP 6:** Review, refine and report: Produce an answer to each of the questions

Policy Identification: Over-arching questions

What policy issues are critical to the host country?

1. What will the policy act *upon*?
 - Single biome; multiple biomes; single sector; cross-sectoral
2. How *valuable* is/are the biome(s)/sector(s) to the economy?
3. What is the *incremental change* brought about by the policy?
4. Who are the *key stakeholders* and governance bodies (sub-national and national)?
5. On-going research



TEEB Country Studies



Bhutan

1. TEEB Bhutan informs the **Sustainable Hydropower Development Policy** (2008) and the **Alternative Renewable Energy Policy** (2013), both of which call for a diversification of energy sources.
2. Each scenario designed to meet Bhutan's 2020 energy goals (10,000 MW).



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Who needed to be round the table?

1. Facilitation:

- i. Ugyen Wangchuck Institute for Conservation and Environment (UWICE)
- ii. UNEP; KnowEdge Srl

2. Industry:

- i. Druk Green Power Corporation
- ii. Tangsibji Hydro Energy Limited

3. Ministries/Government agencies:

- i. Forest Resources Management Division
- ii. Watershed Management Division
- iii. Department of Renewable Energy
- iv. Department of Hydro-Met Services
- v. Department of Hydropower and Power Systems.
- vi. National Statistics Bureau
- vii. National Environment Commission

4. NGOs, civil society groups:

- i. WWF Bhutan, WWF – Living Himalayas

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What background information is provided?

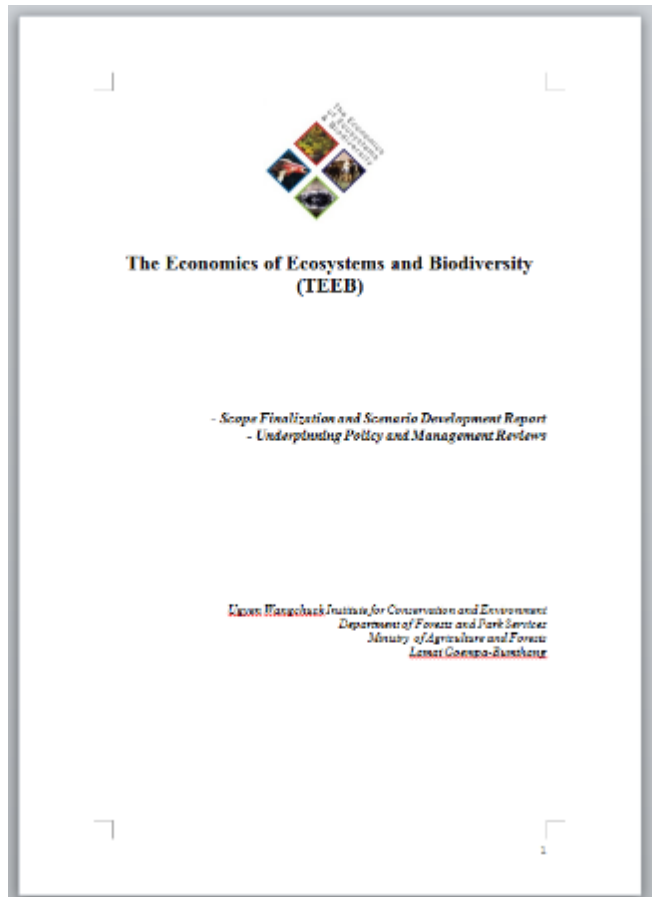
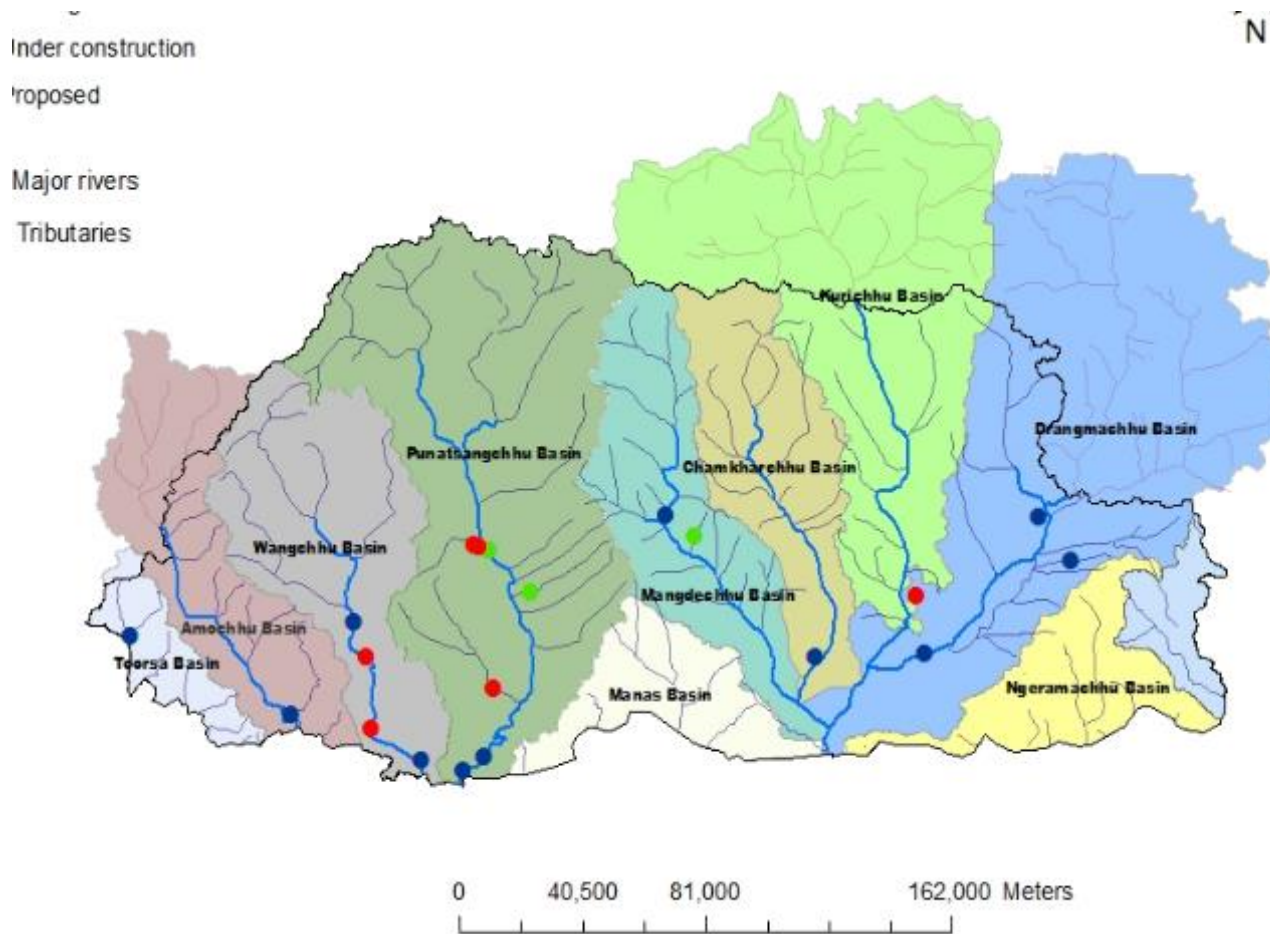


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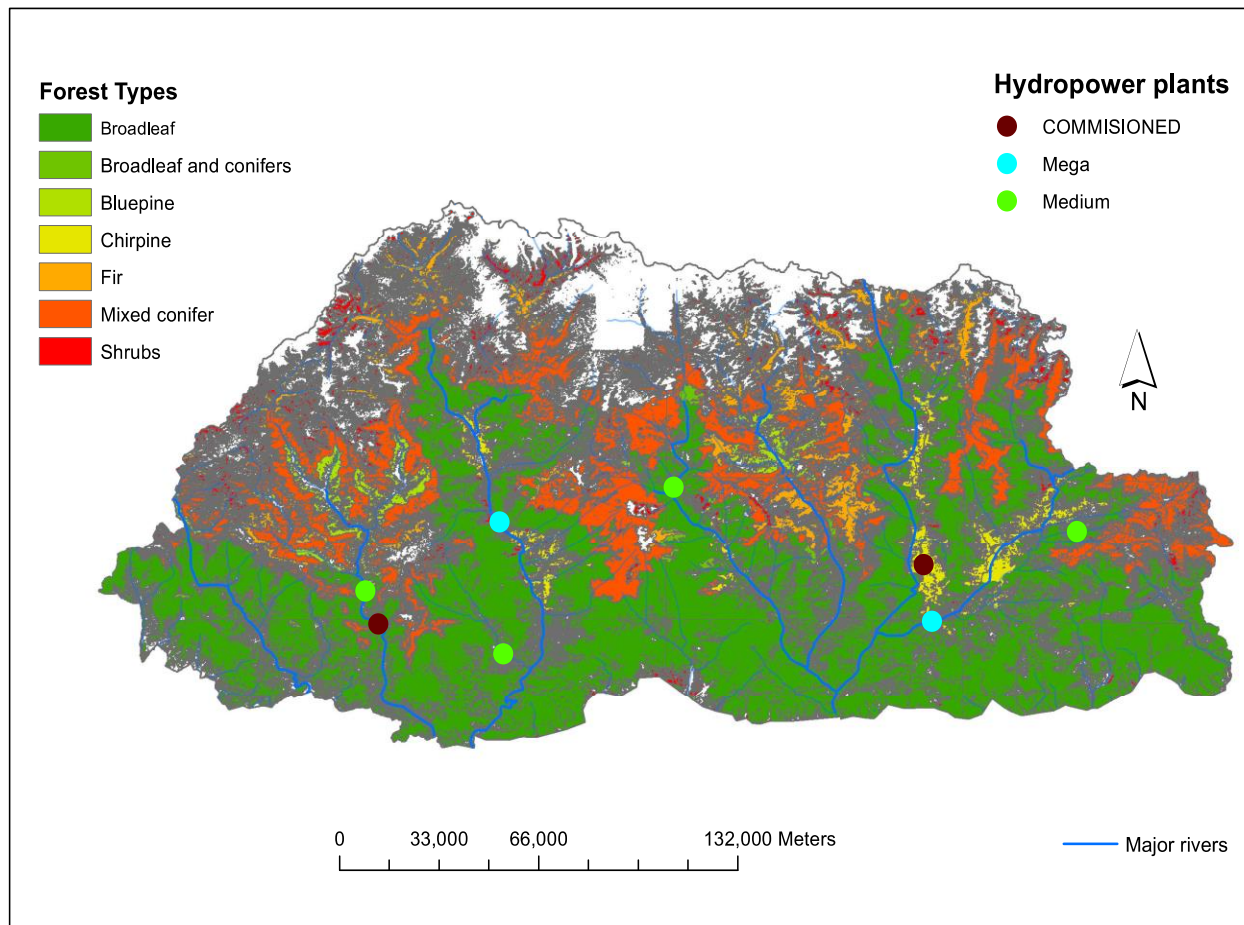
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Data assessment and gap analysis: 6 sites

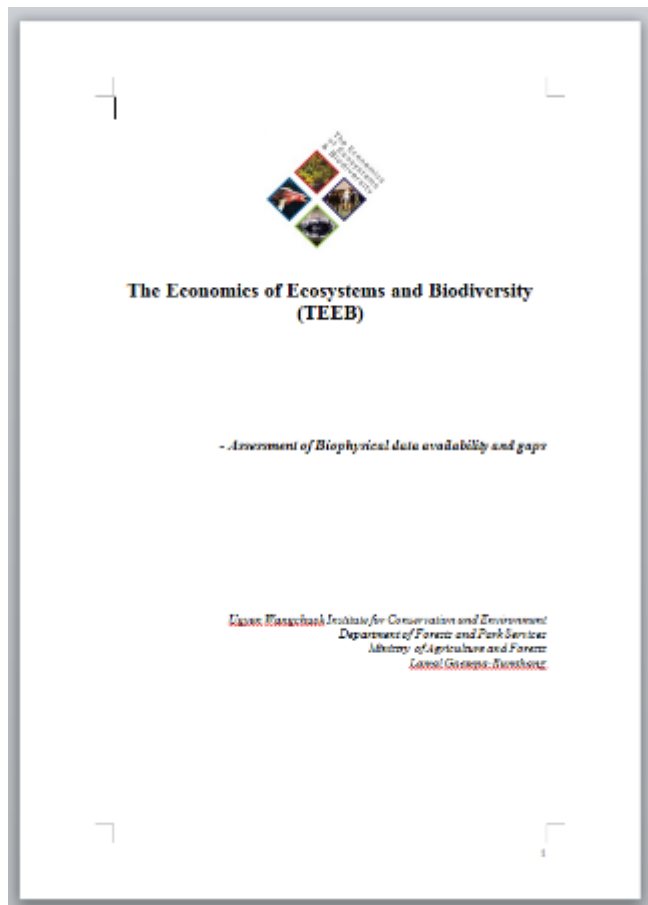


Table 2: Summary of biophysical data availability and gaps

Ecosystem Services	Data Available	Data Gaps	Way Forward
<u>Punatsangchhu Hydropower Plant</u> Capacity: 1200 MW Location: <u>Wangdue</u>			
<i>Provision of food/fuel wood</i>	Yes		
<i>Provision of medicinal resources</i>	Yes	How Affected	Socio-economic surveys
<i>Provision of raw materials</i>	Yes	How Affected	Socio-economic surveys
<i>Provision of fresh water (quality and quantity)</i>	Yes	Data during construction	Sample collection and analysis
<i>Habitat for species</i>	Yes	Aquatic diversity during construction	Field surveys
<i>Regulation of local climate and air quality</i>	Yes	Data during construction	Air sample analysis
<i>Regulation of carbon sequestration and storage</i>	Yes		
<i>Regulation of extreme events</i>	Yes		
<i>Regulation of soil erosion and soil fertility</i>	Yes	Soil sample analysis during construction	Soil sample collection and analysis
<i>Pollination</i>			NA
<i>Biological control</i>	Yes	Present scenario	Biodiversity assessment
<i>Habitats for species</i>	Yes		
<i>Maintenance of genetic diversity</i>	Yes		
<i>Recreation and tourism</i>			NA
<i>Aesthetic appreciation and inspiration for culture, and spiritual experience</i>			NA

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Using spatial modelling/links to systems models

1. Land use changes due to hydropower development relates to environmental changes *downstream*
 - i. Recognize, demonstrate and capture impacts on communities
 - ii. Consider boundary of analysis (currently 5km radius from site ESIA)

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2. Land use changes *upstream* impact the quality of water delivered to hydropower stations
 - i. manage land use → manage sediment loads
 - ii. Druk Power spends 16 million USD on turbine repair/other infrastructure as a result of sediment loading).

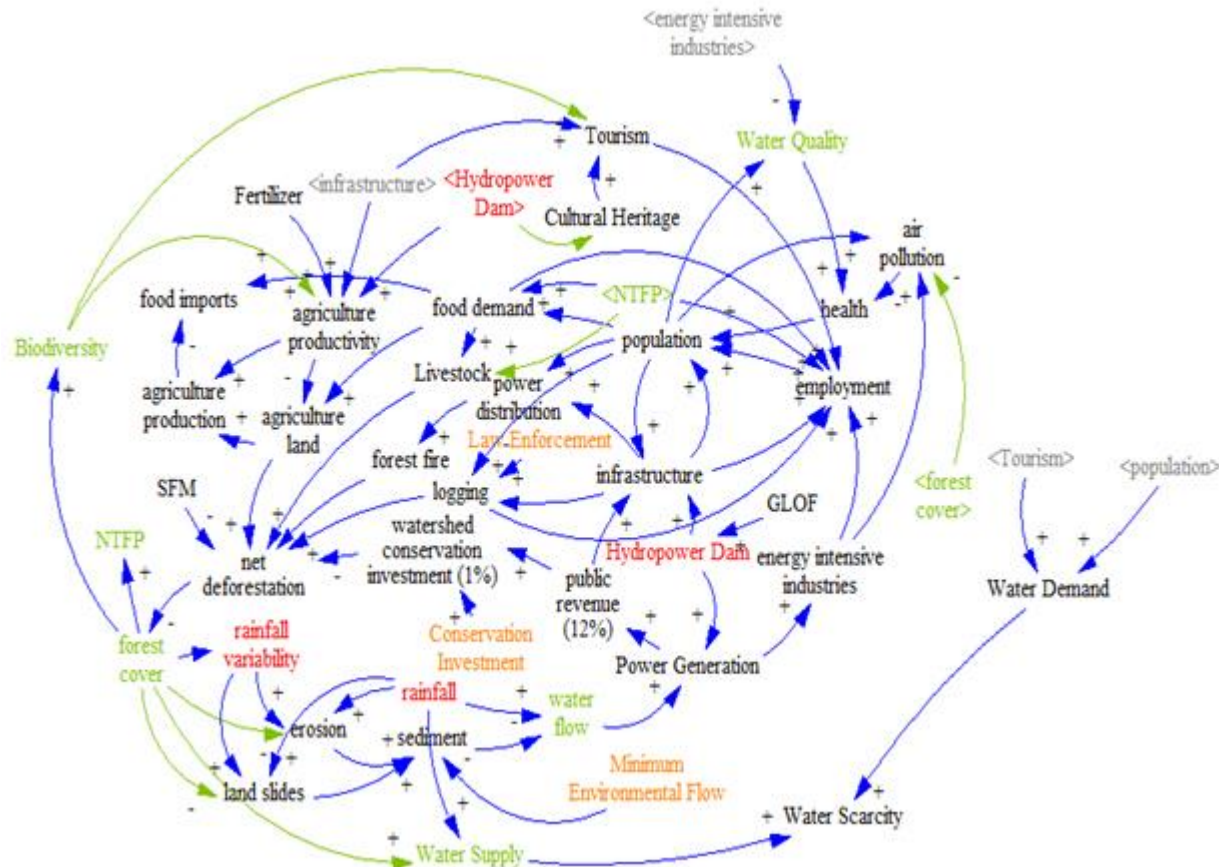
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3. These spatial models will be linked to systems models which would include *social and economic variables* to ensure that relationships between hydropower development and socio-economic variables are also captured.

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What are the inter-linkages?



TEEB Country Studies: Next steps

1. Completion of EC ENRTP studies by June 2017, with interim results presented at CBD COP Cancun, Mexico
2. Knowledge and media training at final Project Workshops
3. Theory of Change: working with Steering Committee to push for policy uptake

Thank You!



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