



31st March, 2011
WAVES, World Bank,
Washington DC

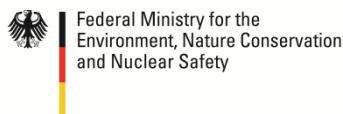
Policy Applications of Ecosystem Services Valuations

Pavan Sukhdev

Study Leader – TEEB

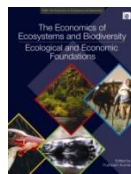
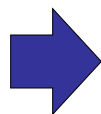
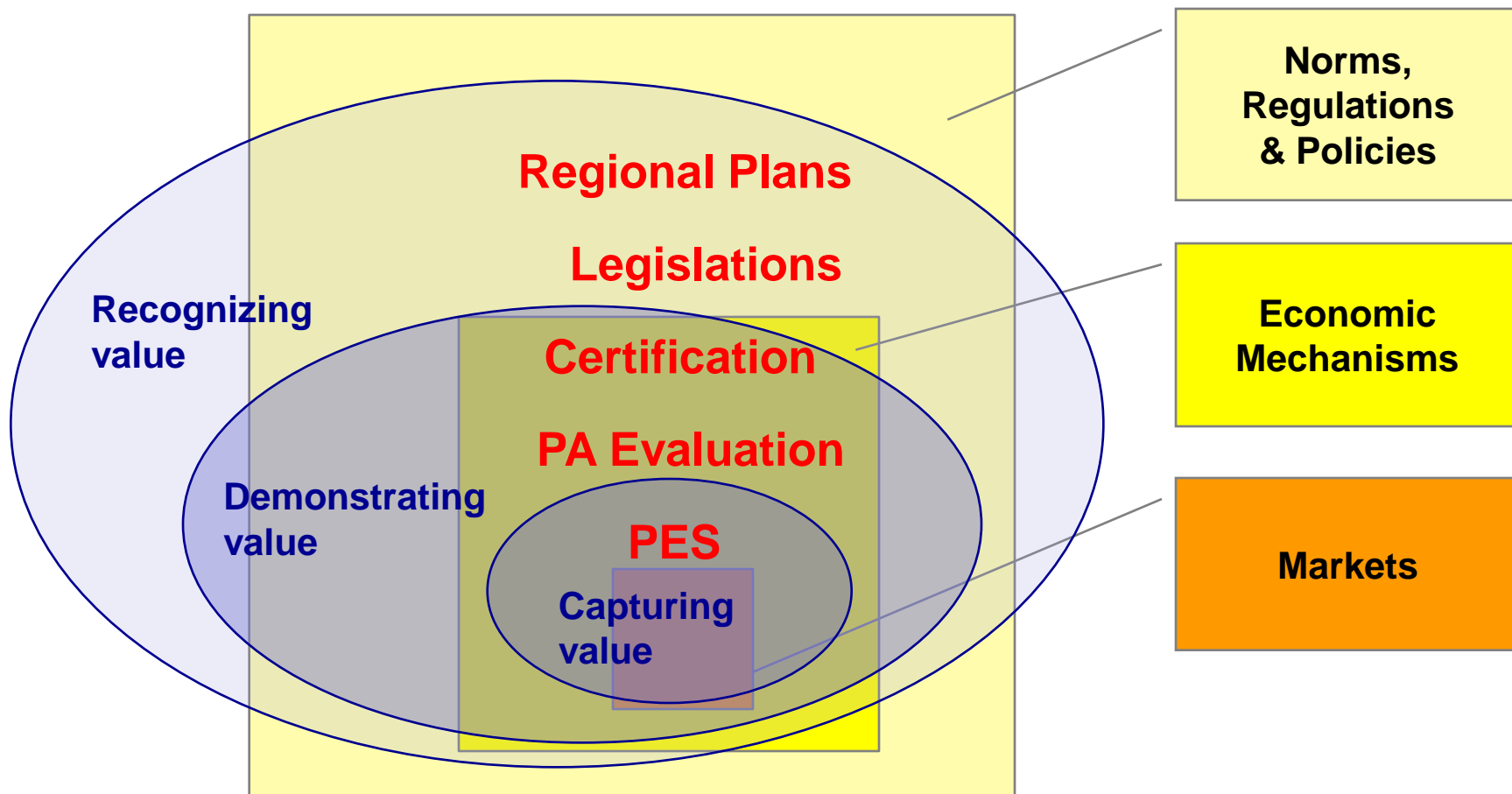
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UNEP





TEEB Approach : Valuation & its Operating Spaces



Ch.5



Ch.4



Ch.3



Ch.3

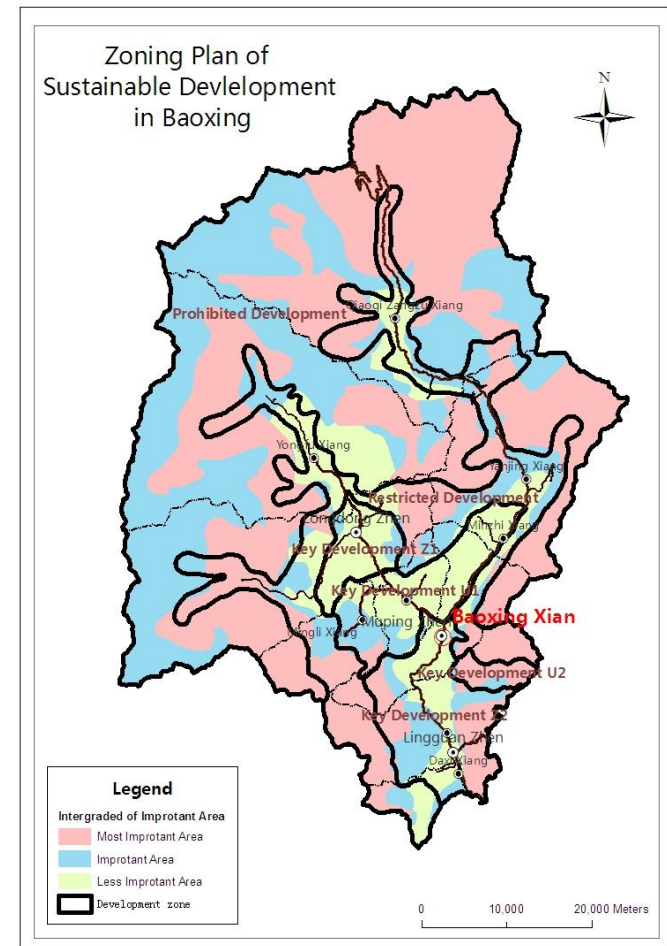


Example : Integrating ecosystem services into land use plans in Baoxing County, Sichuan, China

REGIONAL LAND PLANS

An ecosystem service mapping and modeling tool (**InVEST**) used to plan development zones that avoid areas of high ecosystem service provision and conservation importance

Developments were reconsidered by local government officials during the making of the next **Baoxing County Land Use Master Plan 2010** where mapping had highlighted that activities were planned in areas of several critical ecosystem services





Example : Tubbataha Marine Park, Philippines

UNESCO World Heritage site, contains 396 species of corals & has higher species diversity per square metre than the Great Barrier Reef

LEGISLATION

After 1998 Bleaching –
Stakeholders meeting

“No-take” areas agreed, & later,
President passed the Tubbataha
Reefs Natural Park Act in 2010
(10 mile buffer zone around the
no-take marine reserve) thus
increasing Park by 200%

- ❑ 10% annual increase in live coral cover.
- ❑ fish biomass is four-folds better than the average healthy reef





Example : Kampala Wetland

Services provided by the Nakivubo swamp include natural water purification and treatment & supporting small-scale income activities of slum dwellers

PA EVALUATION

Ecosystems services provided by the swamp equal USD 1 million -1.75 million / year

If the swamp is converted then additional investment into a sewage treatment plant would be required with running costs of over USD 2 million / year



(Nakivubo designated a part of the city's greenbelt zone)



Examples : 'Satoyama' Landscapes

75 - 100% reduction in pesticides, traditional winter flooding rice farming adopted, & White Stork rice & other certified products sold at a "premium"

Konotori no Mai / Flying Oriental White Stork

PES

2003 - 2007: farmers paid 40,000 JYen per 1,000m² of rice paddies .Currently granted 7,000 JYen per 1,000m² by Toyo-oka City

CERTIFICATION

Rice sold at 23 % higher rate for reduced pesticide use, and 54 % more for organic farming



- ❑ White Stork habitat increased from 0.7 ha in 2003 to 212.3 ha
- ❑ Extinct in 1971, now has over 40 breeding pairs
- ❑ 1 billion JPY annually in tourism, & municipal income raised by 1.4 %



TEEB case studies on the Environmental Atlas

<http://www.eea.europa.eu/atlas>



EYE ON EARTH

enter location



European Environment Agency 

**Wolf Reintroduction in
Yellowstone National
Park, USA**

**Watershed Conservation in
the East Cauca Valley,
Columbia**

**Community forest
management in Nepal**

**Blue Flag Certification
for coastal areas, South
Africa**



5000 Miles



Selecting a case study with its key message

<http://www.eea.europa.eu/atlas>

2D 3D | Road Aerial Bird's eye | Labels <<

Community forest management in Nepal

Community forest management is a successful avenue to provide health and family planning services as well as relieving environmental pressure in the Khata area of the Terai region in Nepal.

NEPAL
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bing™

1000 km

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Further case detail can be downloaded

<http://www.eea.europa.eu/atlas>



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NEPAL

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FOREST CONSERVATION FOR ENVIRONMENT AND HEALTH, THE KHATA CORRIDOR PROJECT

Author: Leona D'Agnes

Review: (1) [Bhishma P. Subedi](#) (ANSAB) BhishmaSubedi@ansab.org; (2) [Narpat Singh Jodha](#) (ICIMOD) njodha@icimod.org

Key message: Community forest management is a successful avenue to provide health and family planning services as well as relieving environmental pressure in the [Khata](#) area of the [Terai](#) region in Nepal.

What is the problem?

The [Terai](#) is a fertile [lowlying](#) plain in Nepal. It has an outstanding assemblage of endangered wildlife such as Asian elephant, one-horned rhino, Bengal tiger, river dolphin and endemic birds. This forested landscape has seen much deforestation in recent decades following eradication of malaria in the 1940s, and is now Nepal's most populated region and the nation's rice basket. The [Terai](#) is rich in ethnic diversity: the landscape has a multi-cultural and multi ethnic population of 6.7 million people. Despite the potential of the area's natural resources to contribute to people's livelihoods, challenges of dense population and poor health make it exceedingly difficult to manage them wisely. The people of the [Terai](#) are poor and rely on agriculture for their livelihoods. The majority of the population is reliant on firewood for cooking, and most of the population still uses inefficient traditional stoves. People in the [Terai](#) experience many common diseases, such as dysentery, eye infections, respiratory infections, tuberculosis and HIV.

The main drivers of biodiversity loss in the [Terai](#) include the over-harvesting of forests for fuel wood (increasing population and the lack of affordable alternative energy technologies emphasize the dependency on wood for fuel, which also produces indoor air pollution and

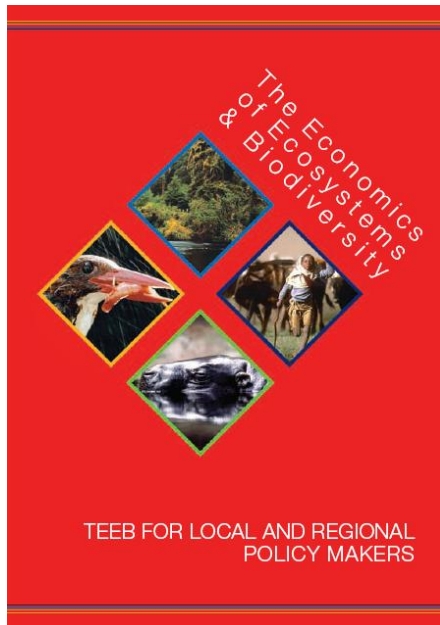


Implementing a TEEB Approach : Six-Step Assessment

Six steps for effectively appraising ecosystem services

This approach is not a fixed recipe. It is intended to guide policy makers in designing their own processes:

1. Specify and agree policy issues with stakeholders
2. Identify which ecosystem services are most relevant
3. Define the information needs and select appropriate methods
4. Assess ecosystem services
5. Identify and appraise policy options
6. Assess distributional impacts of policy options





Some “policy” fabrics for our “valuations” velcro...

- **Fisheries (MPAs and restocking ...)**
- **Agriculture (Soil fertility ; Soil erosion...)**
- **Forestry (REDD+ ; NTFP ; freshwater & nutrients...)**
- **Freshwater ...**
- **Health ..**
- **Cities ...**
- **Etc etc ...**

The Economics of Ecosystems & Biodiversity



Thank You !

www.teebweb.org

www.teeb4me.com

<http://www.eea.europa.eu/atlas>

