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Bio-resources Valuation for Access and Benefit Sharing: Emerging Issues

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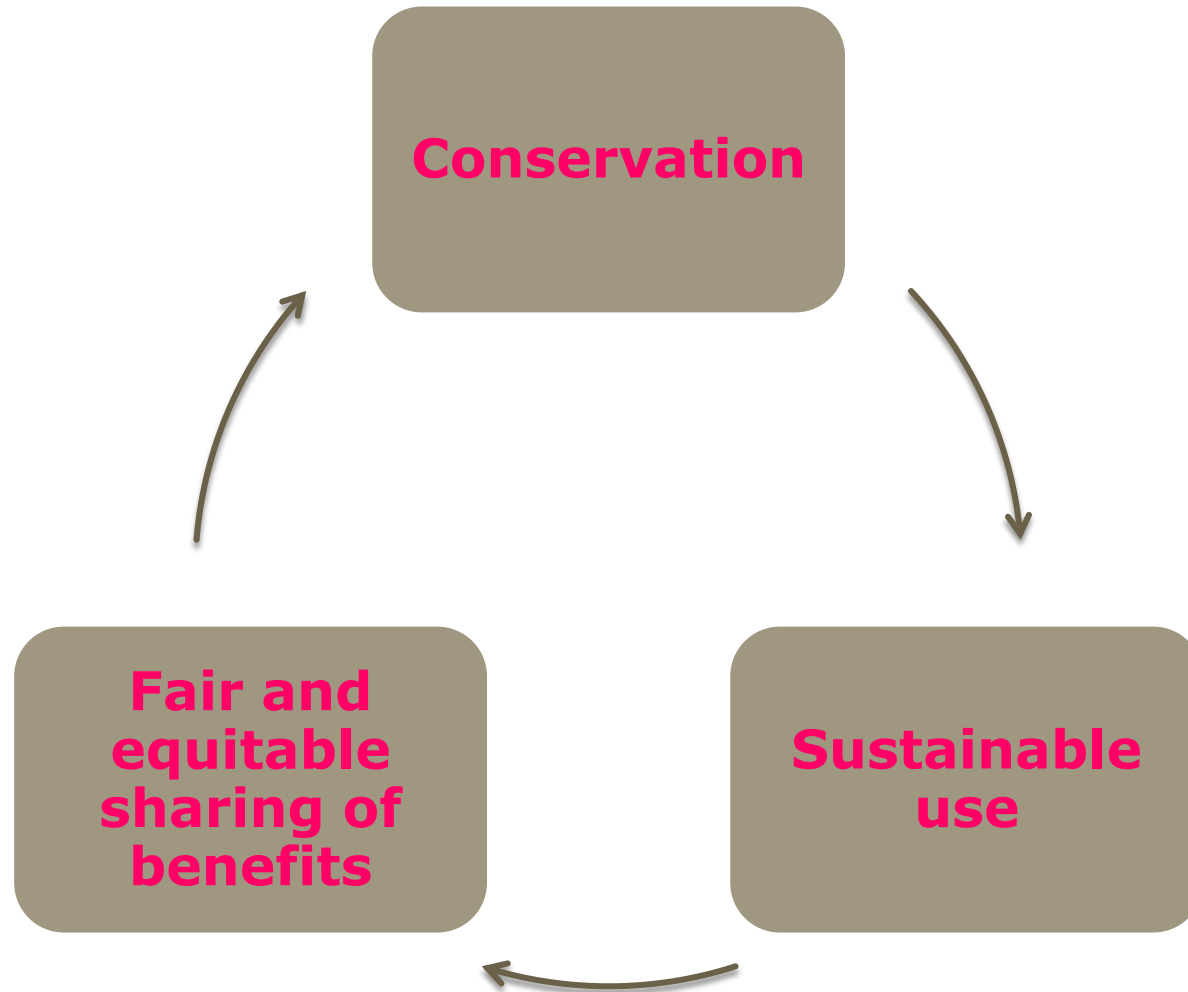


Access and Benefit Sharing (ABS)

- **Indiscriminate exploitation of** biodiversity
- Increasing **demand** for the bio-resources and **biopiracy**
- **Convention on Biological Diversity** (1992)
- 193 countries as parties
- Further legally binding **Nagoya Protocol** (2010) on ABS
- CBD → **indigenous and local communities role** in conserving the biological diversity and in protecting the traditional knowledge associated with the genetic resources.
- **India** is one of the leading countries advocating for its early enforcement.



CBD Objectives



ABS ...

- **Innovative approach** and an **incentive mechanism** in biodiversity Conservation and Sustainable Use.
- Provides a **formal guidance** for the way in which biological or genetic resources are **accessed**, and the way **benefits are shared** between people or countries using the resources (users), and the people or countries that provide them (providers).
- Philosophy proposes that providers of bio-resources are entitled to receive **fair benefits** from the users.
- Balances the **rights** of the **users** of BR with the rights of the **providers**



ABS:

- Manage biodiversity as a **community asset**, and support biodiversity-based businesses in an effective and sustainable manner
- Based on **prior informed consent (PIC)** being granted by a provider to a user, and negotiations between both parties that result in **mutually agreed terms (MAT)**.
- The negotiation between a provider and a user of resources should be based on the **true/actual value of the resources**.



ABS Process in India

- India: Party to the CBD and as one of the mega-diverse countries
- India enacted the **Biological Diversity Act in 2002**, and notified the **Rules** thereunder in **2004**.
- The objectives of the Act are similar to those of the CBD (**ABS** key)
- **NBA, SBBs, BMCs**
- ABS agreements under the Act are: **Four categories**
- More than **100 agreements** have been signed so far
- Benefit sharing criterion: **2-3 % of the sale value of the final products derived from the bio-resources (royalty)**



ABS: UNEP GEF MoEF Project

- “Strengthening the Implementation of the Biological Diversity Act and Rules with focus on its Access and Benefit Sharing provisions”
- Implemented in **5 states** in India (**Andhra Pradesh, West Bengal, Sikkim, Himachal Pradesh and Gujarat**)
- **Developing standardized economic valuation methods for valuing bio-resources from selected ecosystems (Forests, wetlands and Agriculture)** is the one of the objectives
- BRs are used as an **unavoidable input factor** for manufacturing **various value added products, having a huge market potential.**



Timber and Non-timber Forest Products



Wetland / Marine Species and Products

Fish



Seaweeds



Agriculture Resources and Products

Wheat and Wheat Products



Milk and Milk Products



Poultry and Poultry Products



Valuation of Bio-resources

- Bio-resources / Biological resources means: plants, animals and micro-organisms or parts thereof, their genetic material and by-products (excluding value added products) with actual or potential use or value, but does not include human genetic material (The Biological Diversity Act, 2002)
 - Bio-resources: **a subset of biodiversity.**
- Biodiversity is a '**stock**' and bio-resources are '**flow**' (renewability)



Linkages Between Biodiversity and Bio-resources

Biodiversity

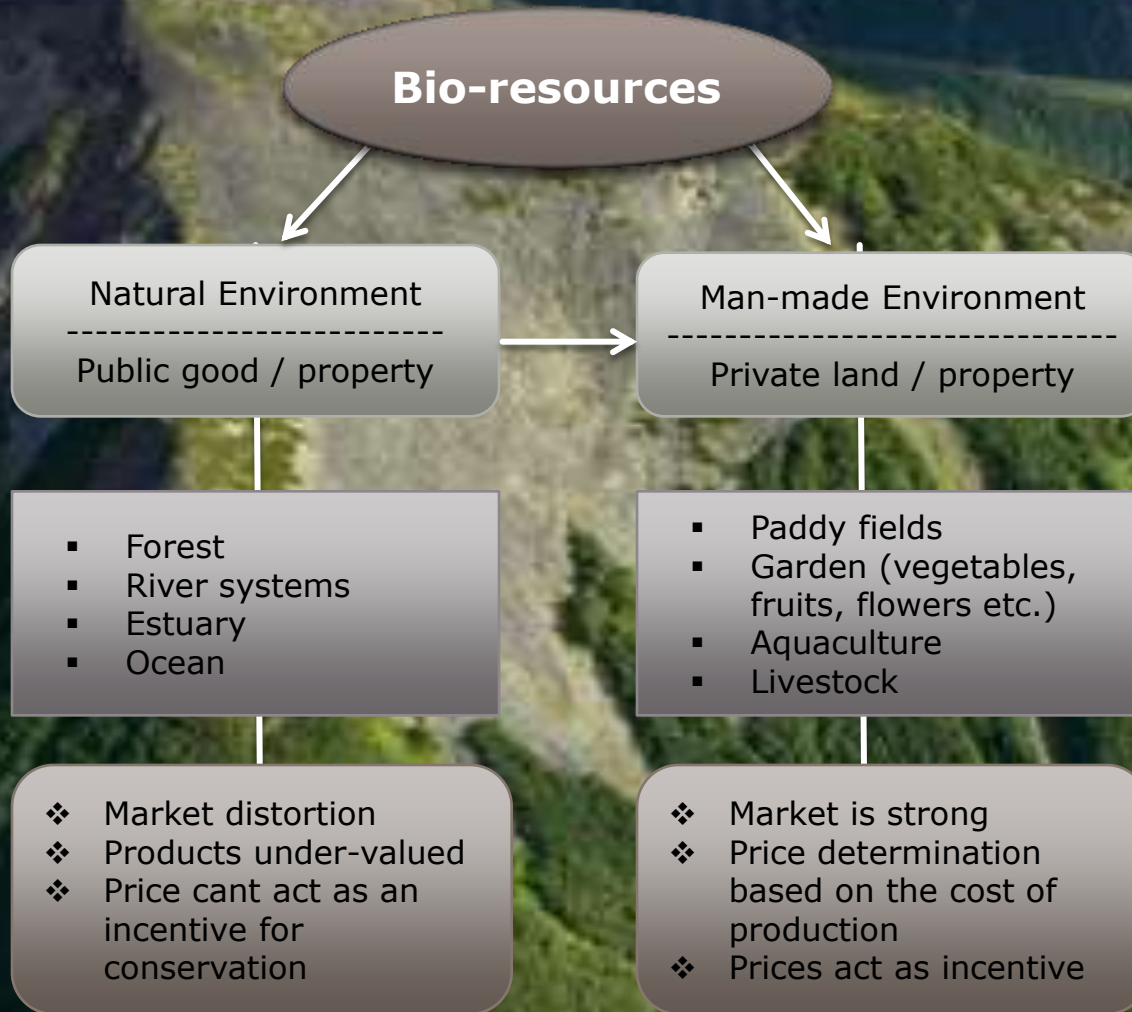
Bio-resources

Forests
Water body
Paddy fields
Garden

Medicinal plants
Honey
Timber
Fish
Fruits
Grains
Seeds



Bio-resources: Property Rights



Valuation of Biodiversity and Ecosystems

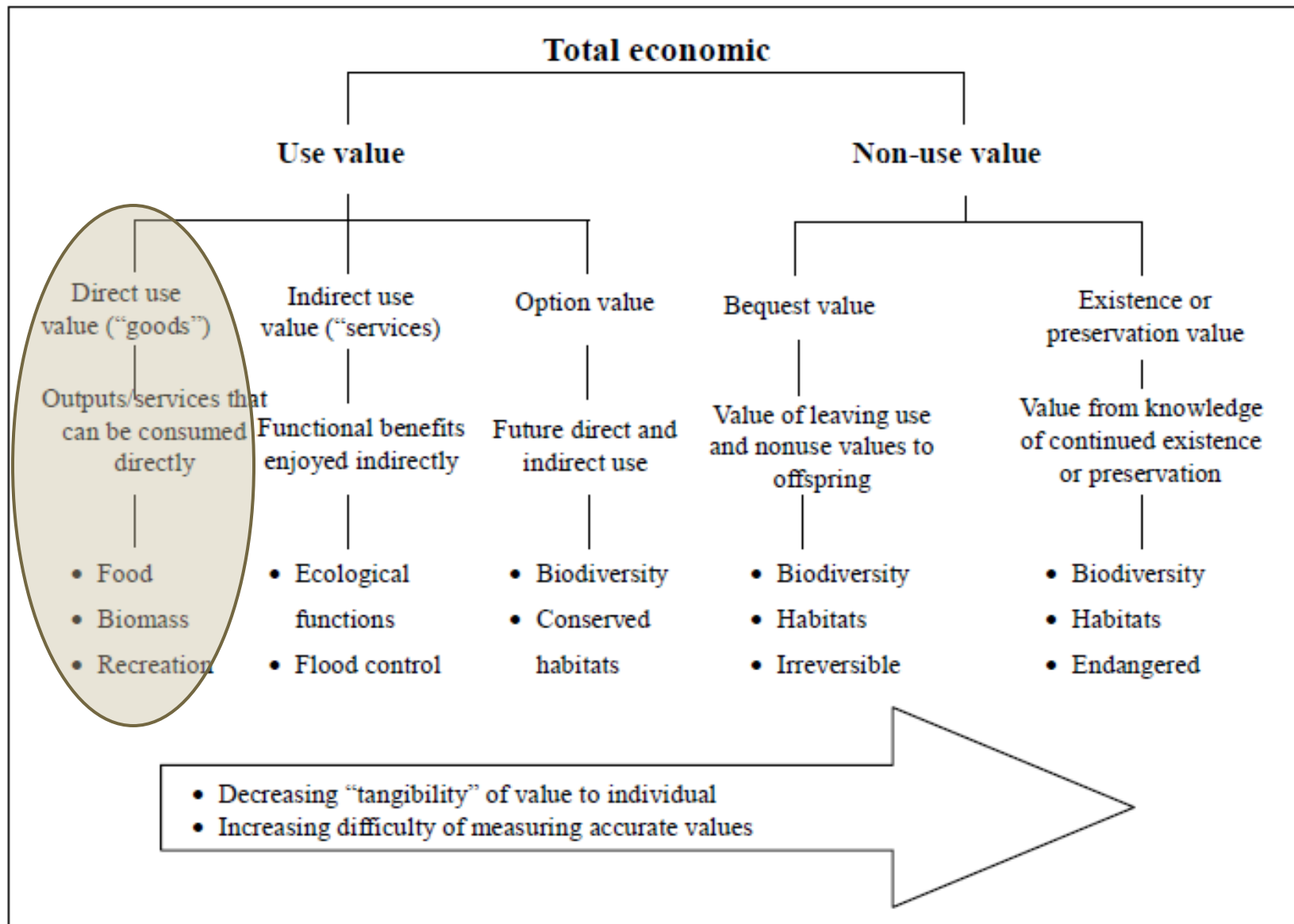


Fig. 1 Total Economic Value of Coastal Resources

Paradox in Valuation

- Most of the ecosystem/Biodiversity values: **not captured by market**
- **Total Economic Value** (TEV) Approach (**Goods + Services**)
- Methodology development: valuing the non-marketed services of the ecosystem has progressed
- **Goods Value**: Based on their current exchange rate or price (**quantity of goods X price**) at their collection point
- **Services Value**: **Based on actual valuation with the help of an appropriate methodology** (Replacement costs, Damage cost avoided, Production function, Hedonic price, Travel cost and Contingent valuation).



Why the Real Value Estimation of Bio-resources is Significant?

- **Basic raw-material/input factor** in manufacturing many products.
- Also involved in **research and development** (which lead to the innovation of new consumer products)
- Most of our ecosystems (forests, rivers, estuaries, oceans, etc) are **common properties**.
- Goods from these sources experience **market failure or distortion**
- Current **market price at their collection point does not represent their real or true value or but only an exchange rate (arbitrarily assessed or fixed)**.



- Due to the market imperfections: ecosystem goods 'under-priced'.
- The providers (**local communities**) are being exploited (obtaining only a meagre price), by the traders and companies, who make substantial profits from the business.
- Valuation of biodiversity goods is helpful towards determining the **real value** of bio-resources, and operationalizing the ABS





Thank You

