

# Forests for Green Economy: The case of South Asia

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# Overview

- **Forests and Green Economy: Key concepts**
- **Forests in South Asia: Direct economic uses**
- **Forests in South Asia: Ecological Services**
- **Towards green economy: Signs of hope**

# Green Economy

## Green Economy

- Still an evolving concept: many definitions
- “One that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities (UNEP, 2011)”
- All definitions envision to achieve some desired state of human welfare subject to fulfillment of certain conditions relating to environment
- Hence, the role of forestry sector towards green economy should be assessed against their contribution to fulfillment of required conditions of environment

# Green Economy

## Conditions usually associated with green economy concept

- Reducing environmental risks
  - Reducing ecological scarcities
  - Remain within the planet's finite carrying capacity and ecological limits
  - Ensuring that natural assets and environmental services are protected and maintained
  - Low carbon: Using fewer resources and generating fewer emissions
  - Inclusive: Meeting the demands of all who need the goods and services
- **Forests in Green Economy: How forest can help fulfilling these conditions**

# Forests & Green Economy

## Total Economic Value of Forests

### Use Values

#### Direct Use Values

E.g.

Arable lands

Timber

NWFP

Recreation.

(Usually involve exploitative and amenity uses of the forests )

#### Indirect Use Values

E.g.

Conservation of biodiversity

Watershed protection

Mitigation of climate change (REDD+)

(Mostly concerned with positive externalities associated with conservation)

### Non-use Values

#### Option Values

Values due to expectations on potential future uses

E.g. medicinal products

#### Existence Values

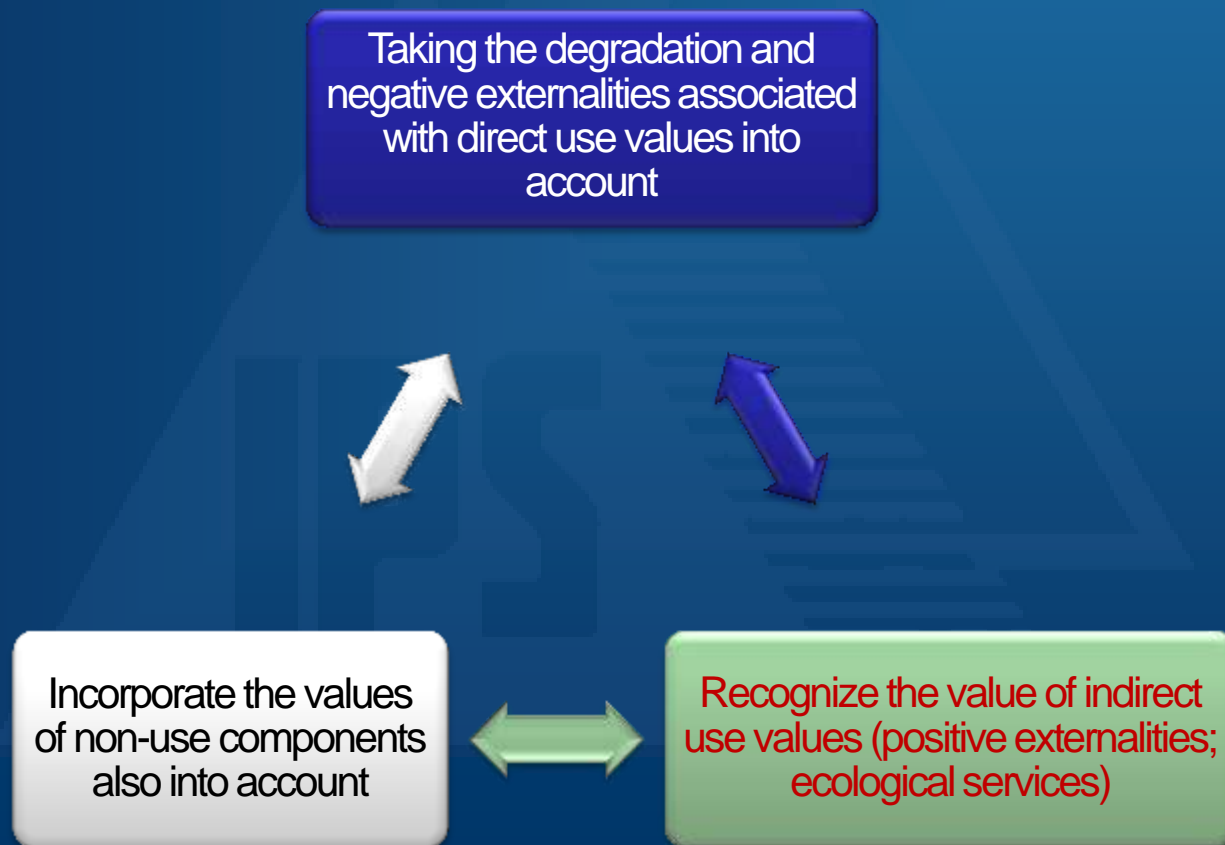
Value for the existence of the resource without any expectations of current or future uses

#### Bequest Values

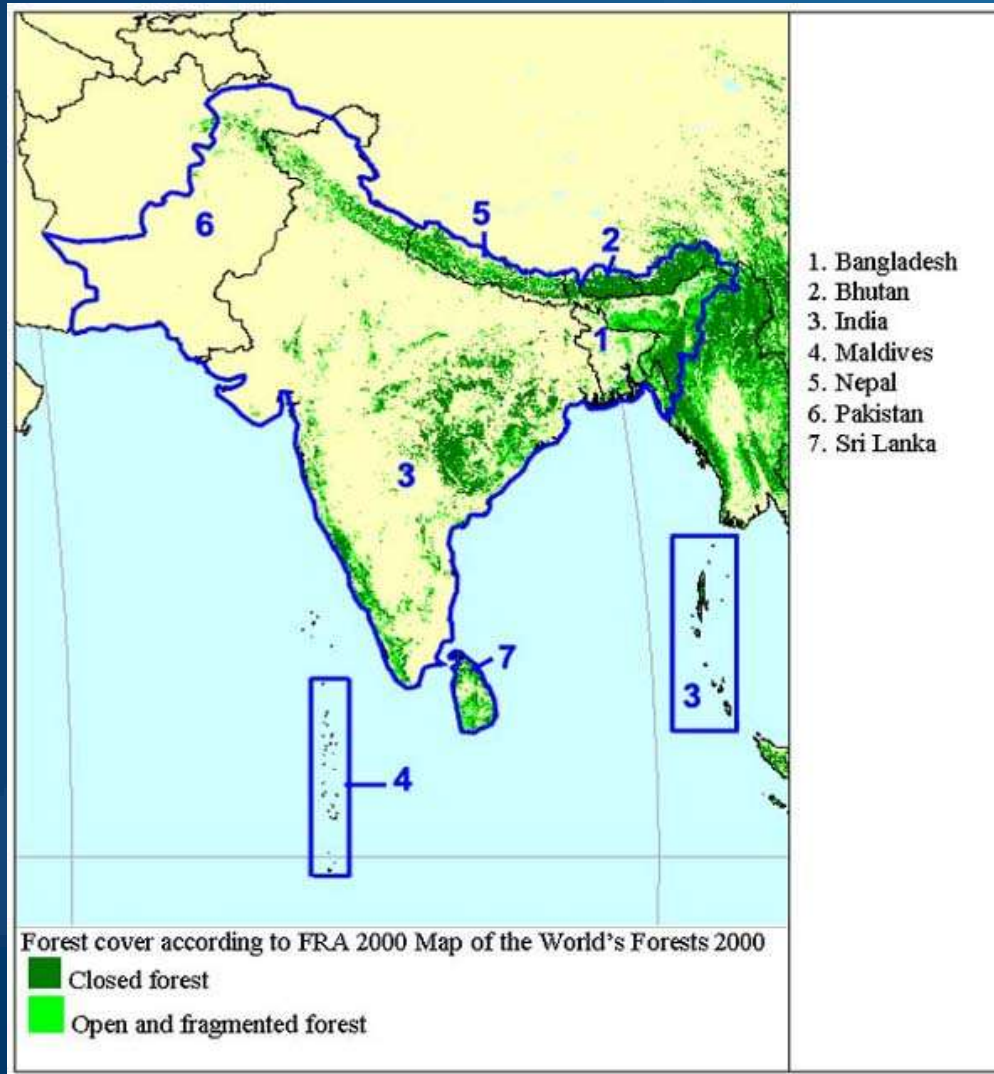
Values due to expectations on benefits to the future generations

# Forests & Green Economy

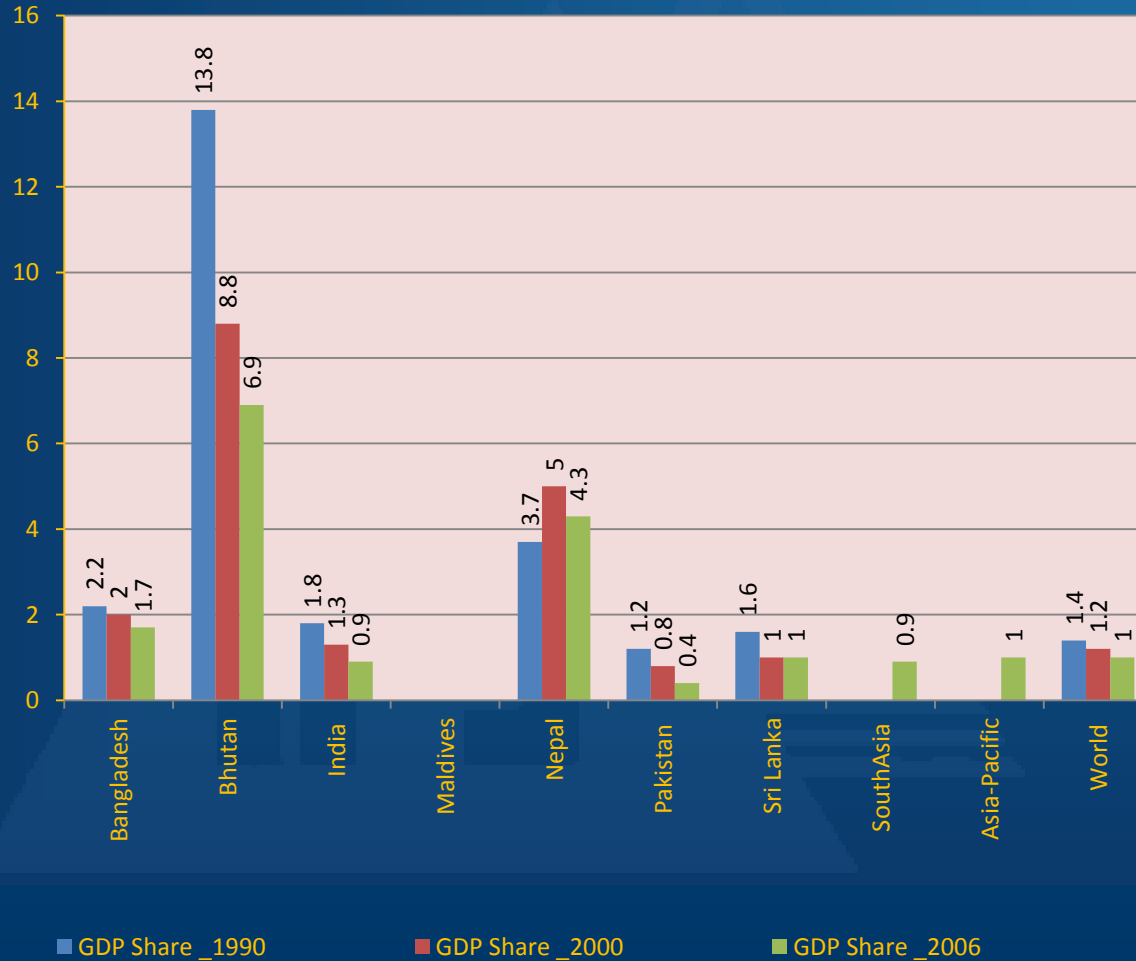
- Achieving the conditions necessary for green economy implies reordering the priorities placed on different components of TEV based on the evidence on realistic assessments of their values



# Forests in South Asia



# Forests in South Asia





# Forests in South Asia: Direct Economic Uses

- Conversion for agriculture has been the most intense form of direct use in the region until recently
  - **Conversion for subsistence agriculture:** e.g. Slash-and-burn agriculture. Widespread throughout the region
  - **Conversion for commercial agriculture:** e.g. Encroaching the boundaries of rainforests in South West quarter in Sri Lanka for Tea cultivation. In response to rising demand for commodities
- Rate of conversion has declined gradually over the years

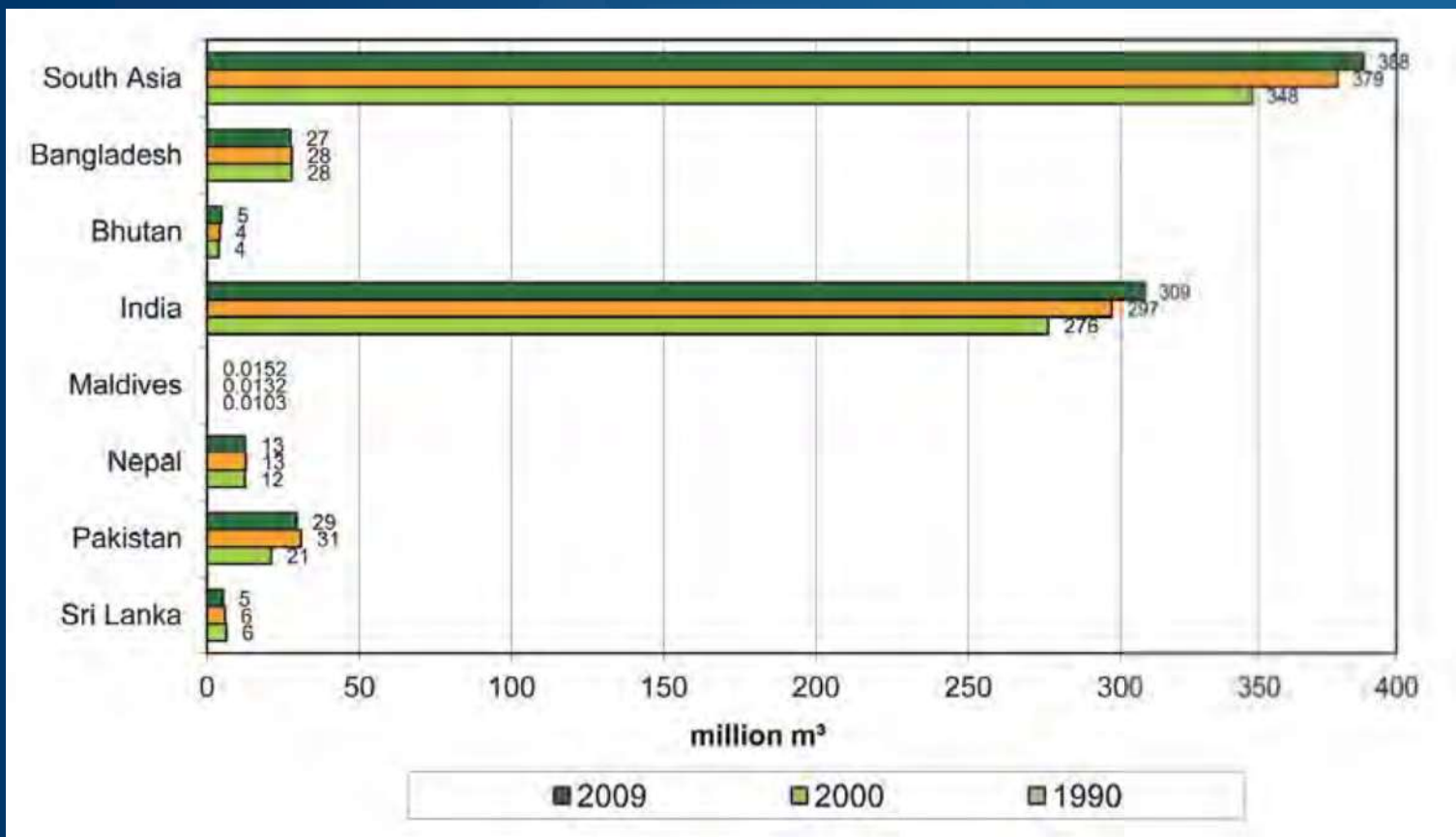
# Forests in South Asia: Direct Economic Uses

## Direct uses

- Demand for other forms of direct uses is rising
  - Domestic wood fuel - Major use of wood
  - Industrial wood
    - Industrial round wood; sawnwood; wood-based panels
    - Paper and paper board
    - Pulp for paper
  - Mining operations and infra-structure development
- However, demand for industrial uses in the sub region is still low compared to other regions
  - Low income levels
  - Gradually expanding with rising income
- Non-timber forest products
  - Demand for commercialized products growing rapidly
  - E.g. Bamboo, rattan, resins, gums, beedi leaf

# Forests in South Asia: Direct Economic Uses

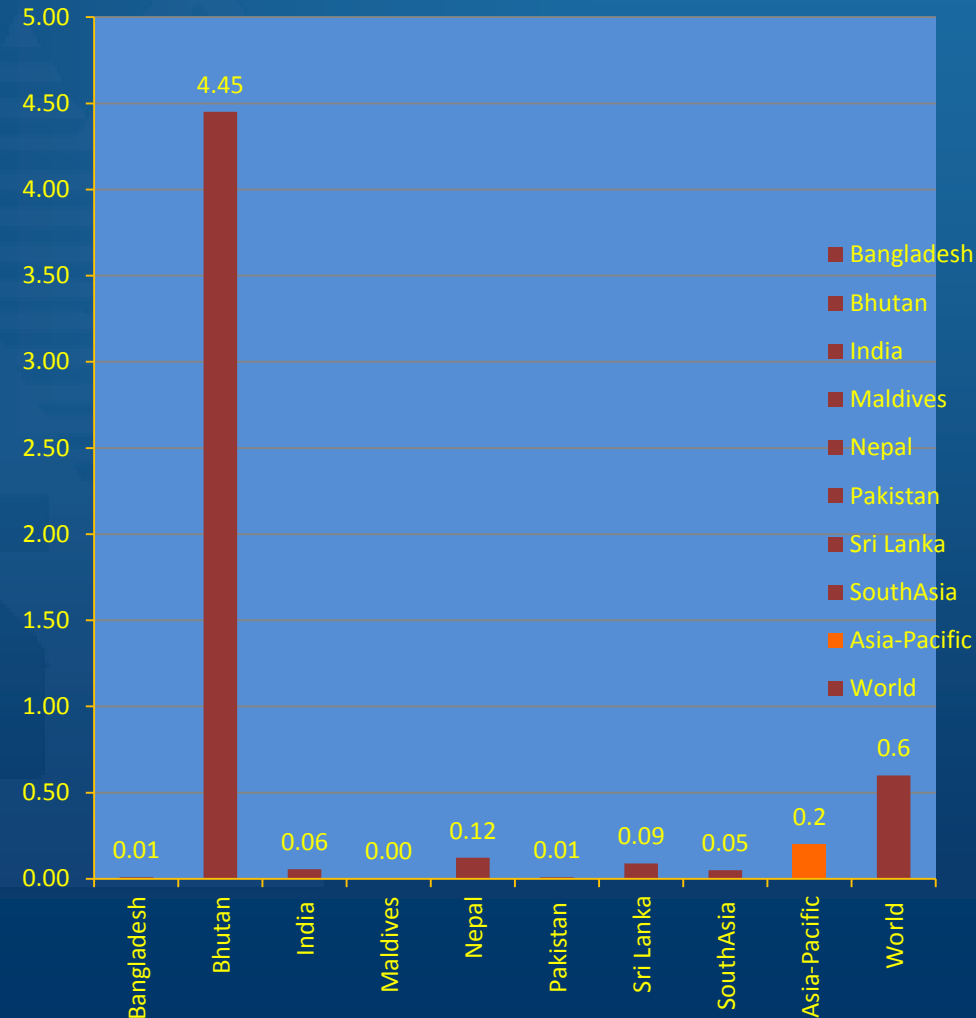
## Wood fuel consumption, 1990-2009 (million cu.m)



# Forests in South Asia: Direct Economic Uses

## Consequences of direct uses: Deforestation

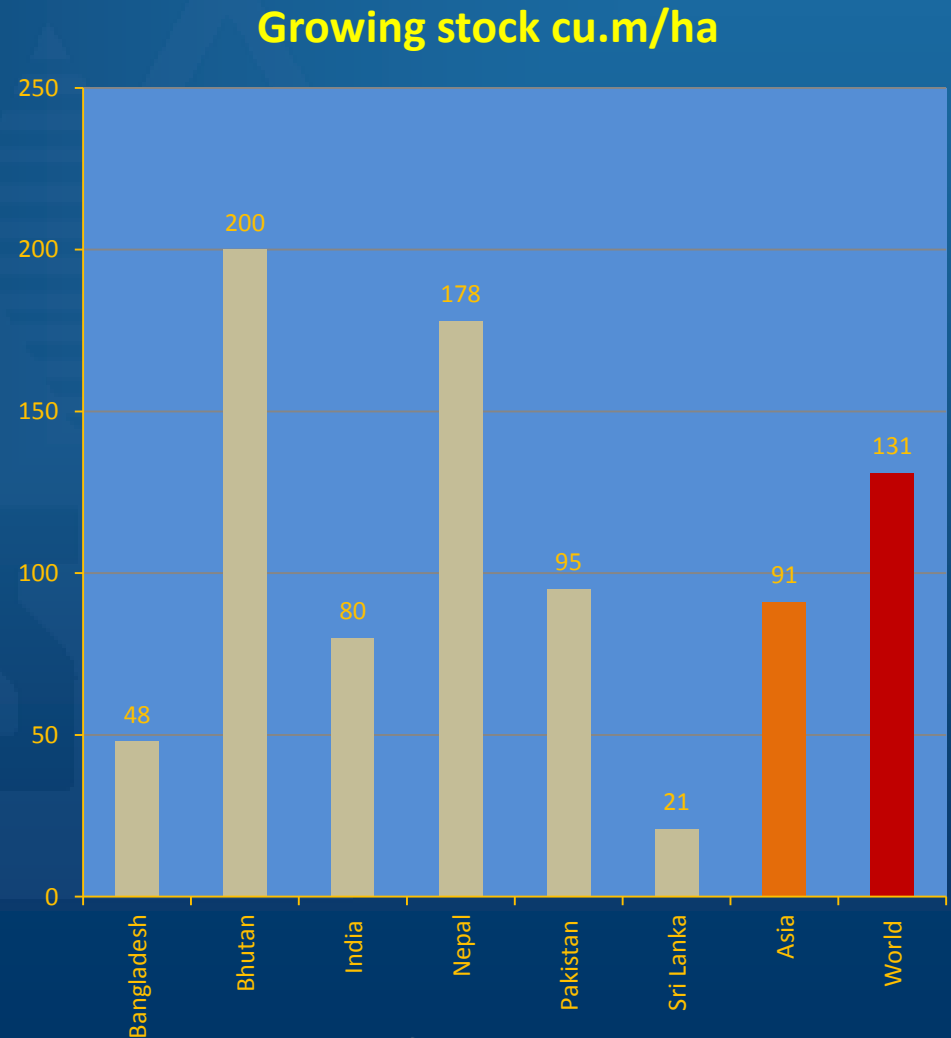
- Conversion lead to high rate of deforestation
- South Asia is the sub-region with the lowest per capita forest area
  - South Asia - 0.05 ha
  - Asia-pacific - 0.20 ha
  - World - 0.60 ha



# Forests in South Asia: Direct Economic Uses

## Consequences of direct uses: Degradation

- Quality measured in terms of growing stock
- Situation is favorable in Bhutan and Nepal
- Growing stock is declining in other countries except Bhutan and India



# Forests in South Asia: Direct Economic Uses

## Direct uses: General characteristics

- Per capita forest cover has reduced to very low level
- Low level of value addition compared with other sub regions
- Low level of forest productivity except in Bhutan and Nepal
- Underutilization of even the existing productive capacity
- Low level of technology use
- Growing dependence on imports

# Forests in South Asia: Ecological Services

- Major forms

- Conservation of bio diversity
- Watershed protection
- Mitigation of climatic change

- Conservation of biodiversity

- Sub region with high level of biodiversity
  - High variation in climate, soil, latitude and altitude
  - **Global bio-diversity hot spots:** Western Ghats and Sri Lanka; Himalaya; Indo Burma
- However, region's biodiversity is highly threatened
  - Intense pressure from human activities for direct uses: Deforestation and fragmentation
  - Fragile eco-systems
  - Most countries have declared protected areas and prepared national bio-diversity action plans

# Forests in South Asia: Ecological Services

Main type	Sub Type	Countries
<b>Tropical forests</b>	Tropical wet evergreen forests	Bangladesh, India, Sri Lanka
	Tropical semi-evergreen forests	Bangladesh, India, Sri Lanka
	Tropical moist deciduous forests	Bangladesh, India, Nepal, Sri Lanka
	Tropical dry deciduous forests	India, Pakistan, Sri Lanka
	Tropical thorn forests	India, Pakistan
	Littoral and swamp forests	Bangladesh, India, Maldives, Pakistan, Sri Lanka
<b>Subtropical forests</b>	Subtropical broadleaved hill forests	Bhutan, Bangladesh, India, Nepal, Pakistan
	Subtropical pine forests	Bhutan, Bangladesh, India, Nepal, Pakistan
	Subtropical dry evergreen forests	India, Pakistan
<b>Temperate forests</b>	Montane wet temperate forests	India, Sri Lanka
	Himalayan moist temperate forests	Bhutan, India, Nepal, Pakistan
	Himalayan dry temperate forests	Bhutan, India, Nepal, Pakistan
<b>Alpine and subalpine forests</b>		Bhutan, India, Nepal, Pakistan



# Forests in South Asia: Ecological Services

- **Watershed protection**
  - Highly scattered and un even distribution of water resources  
**Trans-boundary watersheds:** Ganges, Indus and Brahmaputra
    - Vegetation cover in major watersheds has declined significantly
    - Groundwater levels are declining due to intense pumping
    - Further aggravated by reducing glacial run-off due to climate change
  - **Deforestation in critical watersheds has led to severe livelihood impacts**
    - Critical for human use, agriculture and power generation
    - Increase in population creates more pressure

# Forests in South Asia: Ecological Services

- **Mitigation of climate change**
- Melting of glaciers and sea level rise affect numerous communities in South Asia
  - **Melting of glaciers** : India Bangladesh, Pakistan, Nepal
  - **Sea level rise**: Maldives, Sri Lanka, Bangladesh
- **Forest s' role as carbon sinks fast being recognized**
  - Deforestation and forest degradation contribute to about 17% carbon emissions
  - Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD+)
- **Decline of growing stock of forests lead to decrease in forest carbon stock**
  - Growing stock of forests is declining in all countries except Bhutan and India

# Towards Green Economy: Signs of Hope

## Some signs of hope are appearing

- Changing focus of forest management towards integration of ecological services
  - Priority is shifting towards protection of ecological services
  - Expansion of area under protected forests
- Growing community participation in forest management
  - Forest user groups in Nepal
  - Joint forest management in India
  - Community forestry in Sri Lanka

# Towards Green Economy: Signs of Hope

- **Increase in trees and supply of wood from outside forests**
  - Share of wood from sources outside natural forests is increasing
  - e.g. Sri Lanka
    - Traditional Kandyan home gardens
    - Growing area under commercial wood lots
- **Initiatives for climate change mitigation: REDD+; CDM**
  - CDM: Afforestation and reforestation programs. India is leading.
  - REDD+: Implementation already started in Nepal under Forest Carbon Partnership Facility (FCPF)
- **Growth in use of non-wood substitutes**
  - Non-conventional materials developed through technology

*Thank you*

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