



# Nature-based Solutions and Sustainable Consumerism

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## We are facing complex challenges



**Climate change**



**Food security**



**Water security**



**Human health**



**Disaster risk  
reduction**



**Ecosystem  
degradation and  
biodiversity loss**



**Socioeconomic  
development**

*Floods caused by rising sea levels could cost as much as **\$14 trillion** if we fail to keep global warming below 2°C.*

*- Jevrejeva et al, 2018*

*The population currently affected by land degradation/desertification and drought is estimated at 1.8 billion people*  
*– UN Water*

*Over 2/3 of world population will live in urban areas by 2050*  
*– UN DESA*

## But nature can help - The concept of ecosystem services: services provided that benefit people (human well being)

### Provisioning

- food, wood and fiber, fuels,...



### Regulating

- climate regulation, water cycle regulation,...



### Cultural

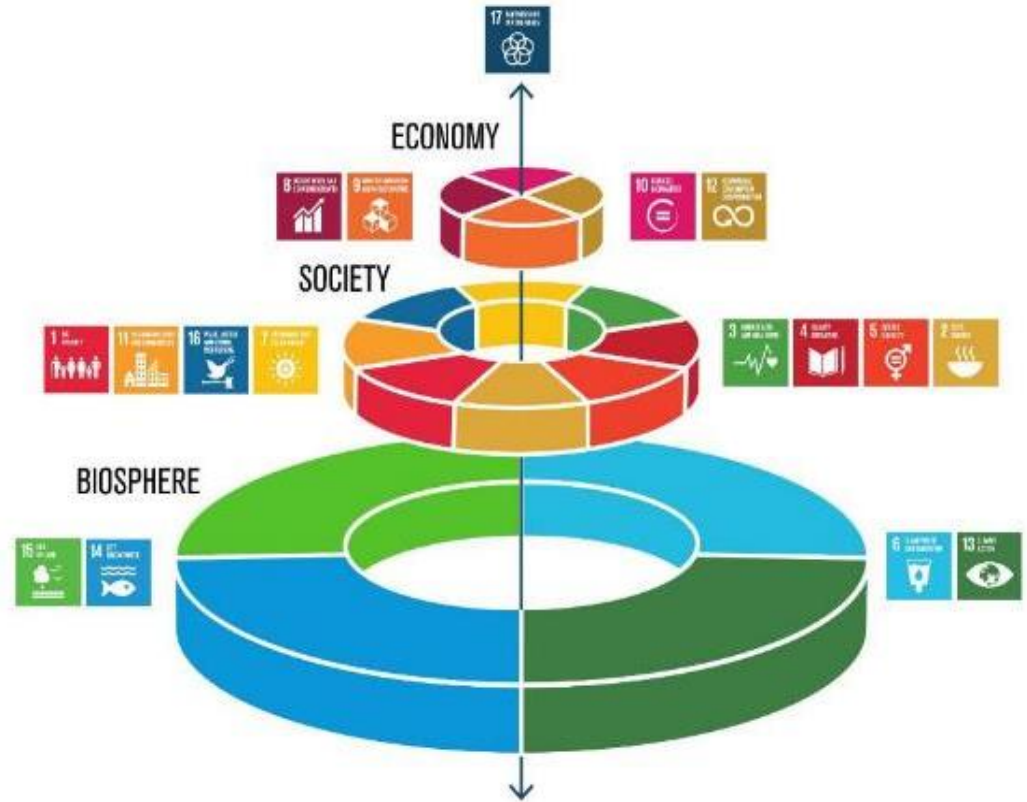
- aesthetic, spiritual, recreational,...



### Supporting

- e.g. photosynthesis, soil formation, nutrient cycle,...

With countries, especially in the developing world depending on natural capital for economic activities, the **state of natural resources** have direct impact on the **society's overall well-being**.



## What are Nature-based Solutions?

IUCN defines nature-based solutions as: “actions to protect, sustainably manage and restore natural or modified ecosystems, that address societal challenges (e.g. climate change, food and water security or natural disasters) effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”

“  
NbS are often described as ‘no-regret’ options, providing benefits to people in a range of scenarios  
”





## What is the scope of Nature-based Solutions?



Nature-derived  
solutions  
*“direct tapping  
into nature for  
solutions”*



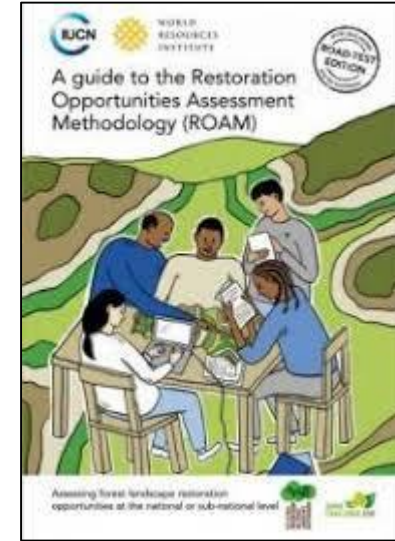
Nature-inspired  
solutions  
*“following  
nature’s natural  
design”*



Nature-based solutions  
*“actions to protect,  
sustainably manage and  
restore ecosystems, that  
address societal  
challenges”*

## Example 1 - Forest Landscape Restoration

- India targets **26 million hectares** of restored forestlands by 2030 as a commitment to the Bonn Challenge. The highest target among all Asian countries.
- The Bonn Challenge is a global effort to bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.





## Example 2 - Ecosystem Based Adaptation, Mitigation and Eco-DRR

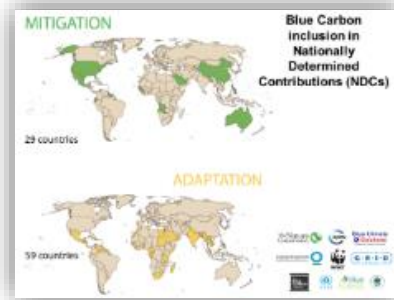
Build climate resilience by harnessing the benefits of wetlands in Cambodia, Lao PDR, Thailand, and Viet Nam



Increasing resilience of infrastructures to disasters in Nepal



Restoring and managing Blue Carbon ecosystems for carbon storage and coastal protection







## Example 3 - Nature based solution to human health in the context of Covid 19

### NbS to prevent epidemics



Science shows that humanity's destruction of biodiversity is creating the conditions for new viruses and diseases

### NbS to build back better



NbS will allow us to establish strong accounting of our natural capital to bounce and build better and more resilient world

### NbS for mental health



Exposure to nature not only makes you feel better emotionally, it contributes to your physical wellbeing, reducing blood pressure, heart rate, muscle tension, and the production of stress hormones.



# Example 4- Agro Ecosystems & Ecosystem Services

## Ecosystem Services

### Regulating Services

- Soil Retention
- Food Source & habitat for beneficial insects
- Pollination
- Natural Control of Plant Pests
- Water purification and
- Atmospheric regulation

### Supporting Services

- Soil Structure and Fertility
- Nutrient Cycling
- Water Provision
- Genetic biodiversity

### Ecosystem Dis-Services:

- More Pests
- Depletion of Soil Fertility
- Low potential water infiltration and retention



### Provisioning services

Food fiber and fuel production

### Non Marketed Services

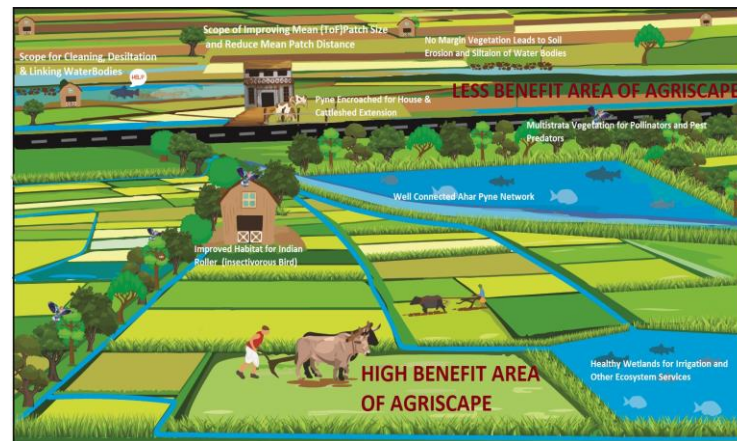
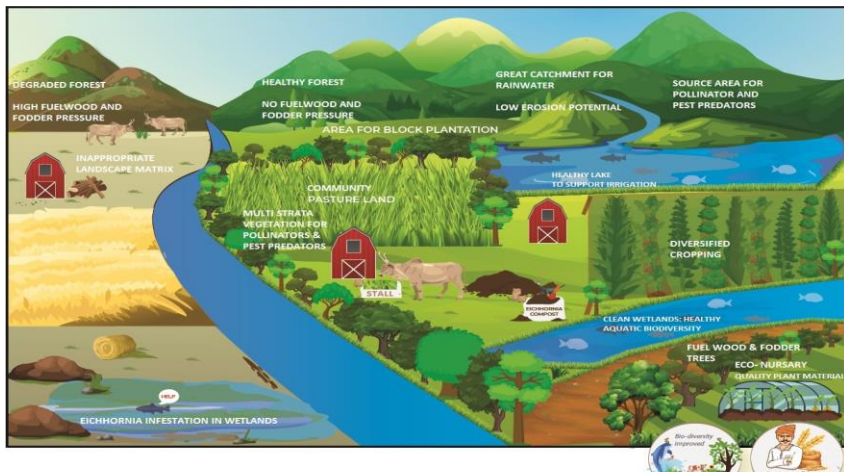
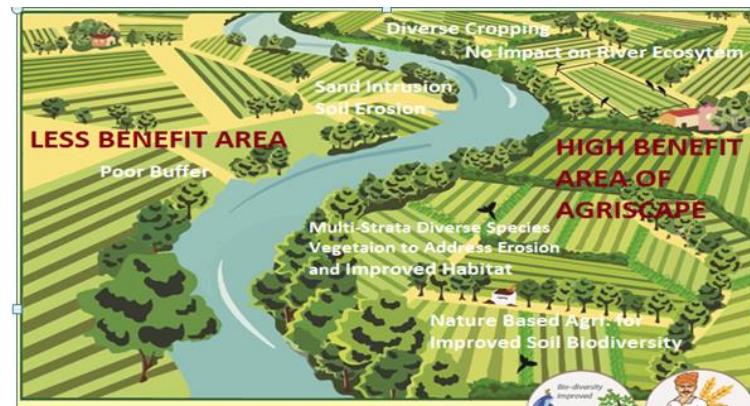
- Water Supply
- Soil Conservation
- Aesthetic Landscapes
- Wildlife habitats
- Climate Change mitigation

### Ecosystem Dis-Services:

- Loss of Biodiversity below and above soil (Friendly Insects)
- Degradation of Water Quality
- Degradation of health of other ecosystems

Feedback effects from agri dis-services to agri – inputs ( eg. Removal of natural enemy habitat can encourage pest outbreak)

# Agriscape approach





## Connections between NbS and sustainable consumerism



**NbS** generates awareness for responsible consumption, ecological education and sustainable actions.



**NbS** allows market to innovate products and services that are aligned with sustainable management of natural resources.



**NbS** enhances sustainable urbanisation, which stimulates connections between people and nature, raising awareness of the societal benefits of nature.



A person is silhouetted against a bright, hazy sunset sky, sitting on a wooden structure that appears to be part of a traditional fishing gear or a small boat. The structure is made of vertical and horizontal wooden poles. The background shows a calm body of water and distant, hazy hills. The overall scene is peaceful and evokes a sense of traditional labor and nature.

**THANK YOU**

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