

# Nature Based Solutions: Concepts and Applications in MGNREGS

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# Preamble

- **For enhancement of Livelihood Security of rural households by providing at least 100 days of guaranteed wage employment in every financial year to every households whose adult members volunteer to do unskilled manual work.**

# Focus of the program

- Wage employment
  - Livelihood security , Gender etc
- Assets Creation
  - Ecological Security , Connectivity , infrastructure
- Decentralized Governance
  - Strengthening grassroots democracy and planning

# Nature Based Solutions (NbS)

- Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”.

# Basic Principles of NbS

- 1. Embrace nature conservation norms (and principles);
- 2. can be implemented alone or in an integrated manner with other solutions to societal challenges
- 3. are determined by site-specific natural and cultural contexts that include traditional, local and scientific knowledge;
- 4. produce societal benefits in a fair and equitable way, in a manner that promotes transparency and broad participation;

# Basic Principles of NbS

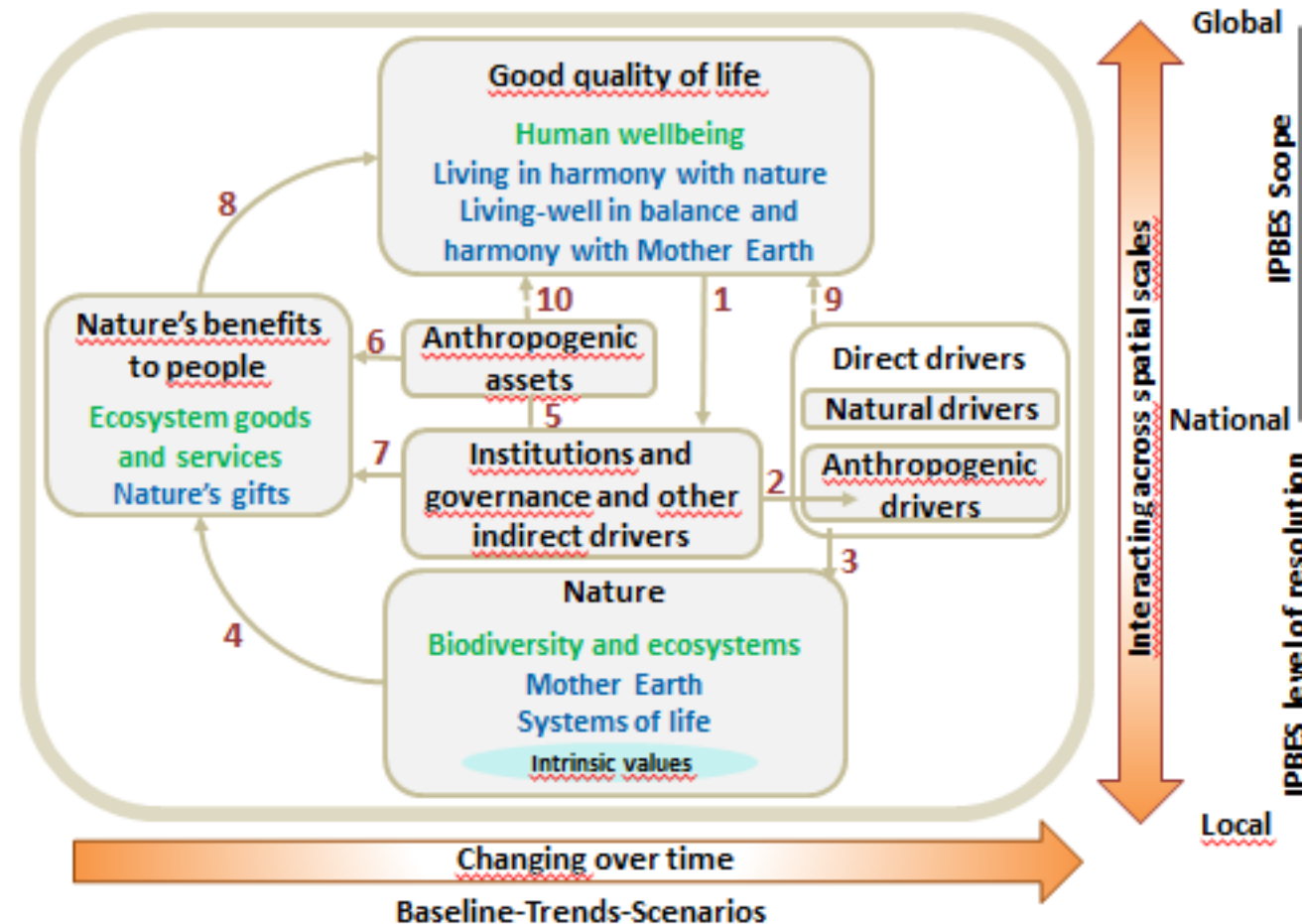
- 5. maintain biological and cultural diversity and the ability of ecosystems to evolve over time;
- 6. are applied at a landscape scale;
- 7. recognise and address the trade-offs between the production of a few immediate economic benefits for development, and future options for the production of the full range of ecosystems services; and
- 8. are an integral part of the overall design of policies, and measures or actions, to address a specific challenge.

# Basic

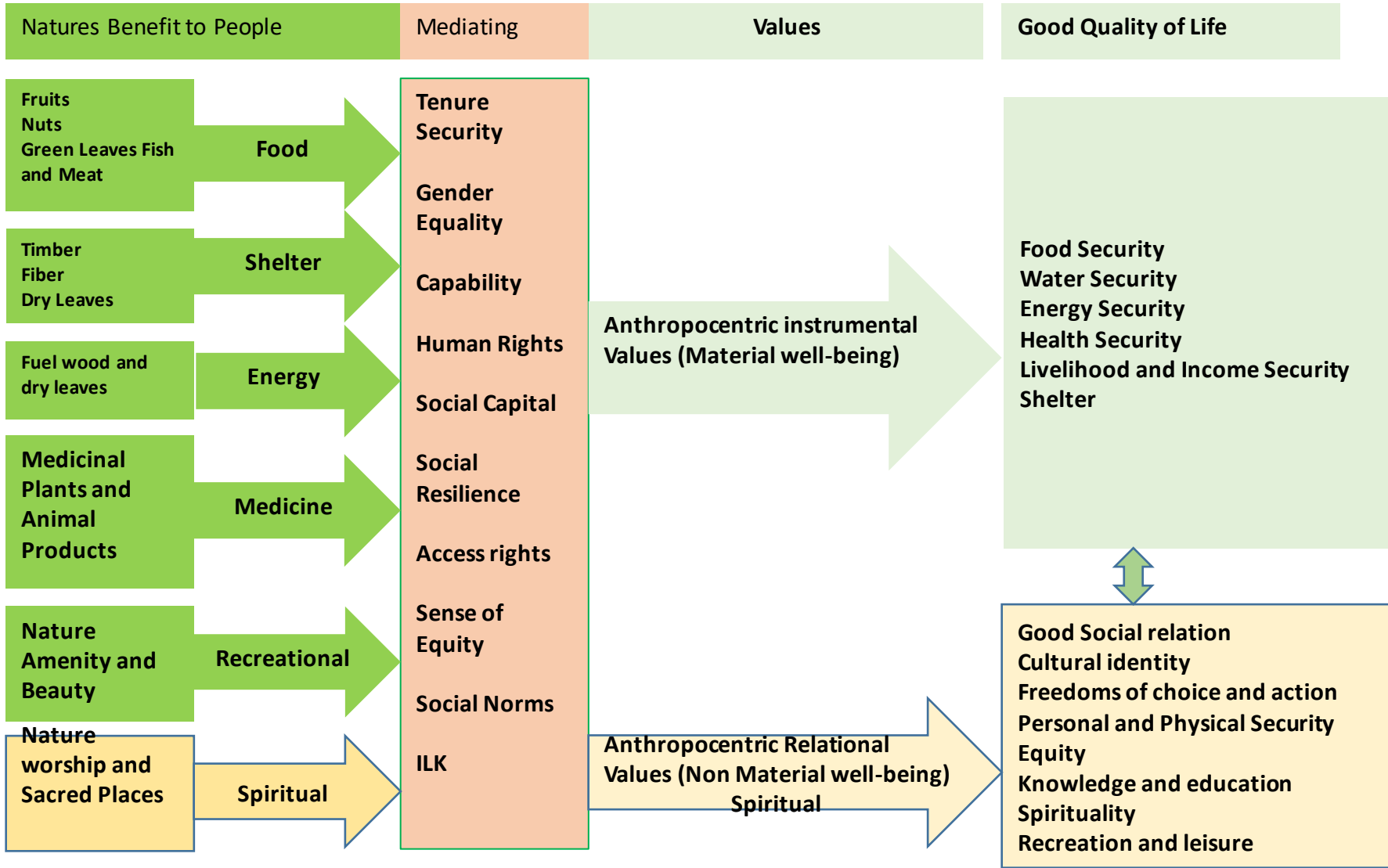
Category of NbS Approaches	Examples
<b>Ecosystem restoration approaches</b>	<ul style="list-style-type: none"><li>• Ecological restoration</li><li>• Ecological Engineering</li><li>• Forest landscape restoration</li></ul>
<b>Issue-specific ecosystem-related approaches</b>	<ul style="list-style-type: none"><li>• Ecosystem-based adaptation</li><li>• Ecosystem-based mitigation</li><li>• Climate adaptation services</li><li>• Ecosystem-based disaster risk reduction</li></ul>
<b>Infrastructure-related approaches</b>	<ul style="list-style-type: none"><li>• Natural infrastructure</li><li>• Green infrastructure</li></ul>
<b>Ecosystem-based management approaches</b>	<ul style="list-style-type: none"><li>• Integrated coastal zone management</li><li>• Integrated water resources management</li></ul>
<b>Ecosystem protection approaches</b>	<ul style="list-style-type: none"><li>• Area-based conservation approaches, including protected area management</li></ul>



# Socio ecological system that operate at different time and space scale (IPBES CF)







# Water and Soil Conservation Under MGNREGA

- **water conservation:**

- In situ water conservation - measures like bunding, bench terracing, contour trenches/ furrows, staggered trenches, box trenches, and vegetative barriers etc. Water conservation - by construction of small scale engineering structures like sunken ponds, gully plugs, check dams, percolation tanks etc.

- **Water Harvesting:**

- Water harvesting structures- including ponds, tanks, anicut, small dam, farm ponds, tank cum well, Artificial recharge of well through sand filter.