

# Ecosystem Management: An Ecosystem Services-Human Well-being approach

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Conventions and Action Plans

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# Ecosystem Services

## Ecosystem Services

The benefits ecosystems provide for  
Human well-being



# Typology of Ecosystem Services

<p><b>Provisioning</b></p> <p>Goods produced or provided by ecosystems</p> <ul style="list-style-type: none"><li>• food</li><li>• fresh water</li><li>• fuel wood</li><li>• genetic resources</li></ul>	<p><b>Regulating</b></p> <p>Benefits obtained from regulation of ecosystem processes</p> <ul style="list-style-type: none"><li>• climate regulation</li><li>• disease regulation</li><li>• flood regulation</li></ul>	<p><b>Cultural</b></p> <p>Non-material benefits from ecosystems</p> <ul style="list-style-type: none"><li>• spiritual</li><li>• recreational</li><li>• aesthetic</li><li>• inspirational</li></ul>
<p><b>Supporting</b></p> <p>Services necessary for production of other ecosystem services</p> <ul style="list-style-type: none"><li>• Soil formation</li><li>• Nutrient cycling</li><li>• Primary production</li></ul>		

# Human Well-being

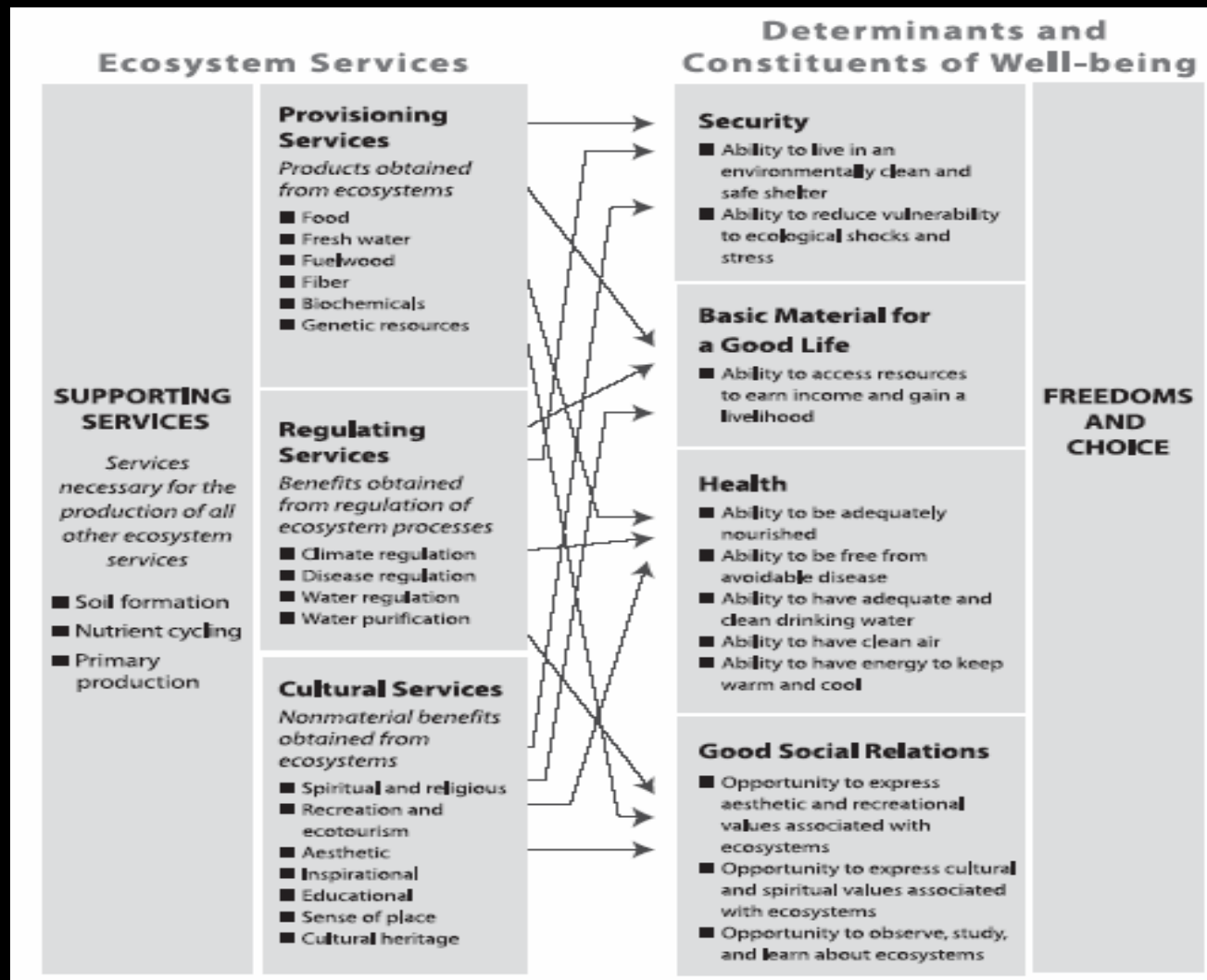
Human Well-being has several key components:

- Material wealth and livelihoods
- Health
- good social relations
- personal security
- Freedom of choice and action which cut across all components

How well-being is expressed and experienced is context- and situation-dependent, reflecting local social and personal factors such as geography, ecology, age, gender, and culture.



# Links across ES and HWB



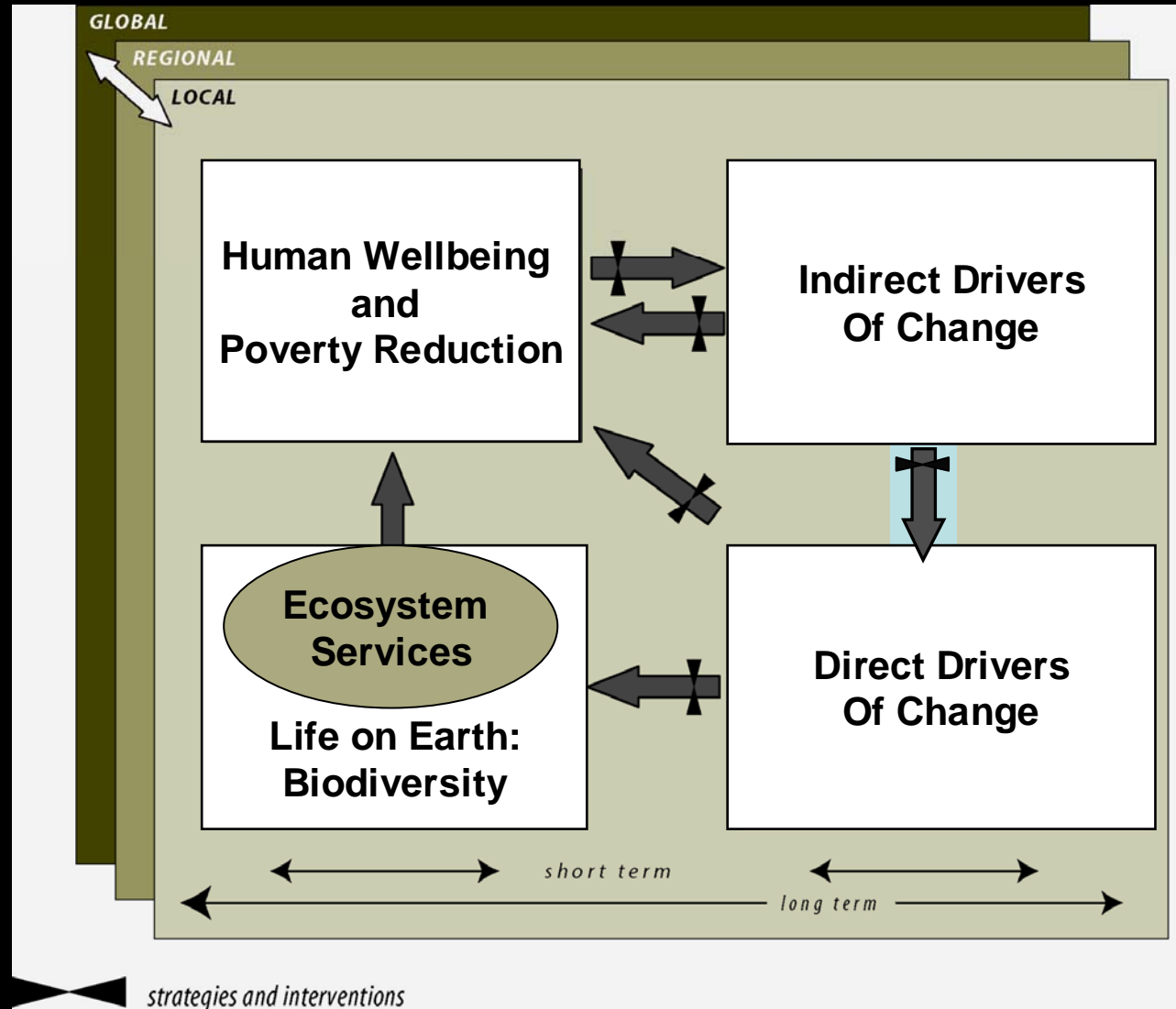
# Key points to Consider of Linkages

- Relationship between services and well-being differs across different individuals and social groups.
- Cause and effects can take place across space
- Cause and effects can take place across time

# Inter-dependencies and trade-offs

- Inter-dependency across ecosystem services
- Inter-dependency across well-being constituents and determinants
- Trade-offs among ecosystem services
- Trade-offs among well-being constituents and determinants

# MA Framework





# MA Framework

## Human Wellbeing and Poverty Reduction

- Material minimum for a good life
- Health
- Good Social Relations
- Security
- Freedom and Choice

## Indirect Drivers of Change

- Demographic
- Economic (globalization, trade, market and policy framework)
- Sociopolitical (governance and institutional framework)
- Science and Technology
- Cultural and Religious

## Direct Drivers of Change

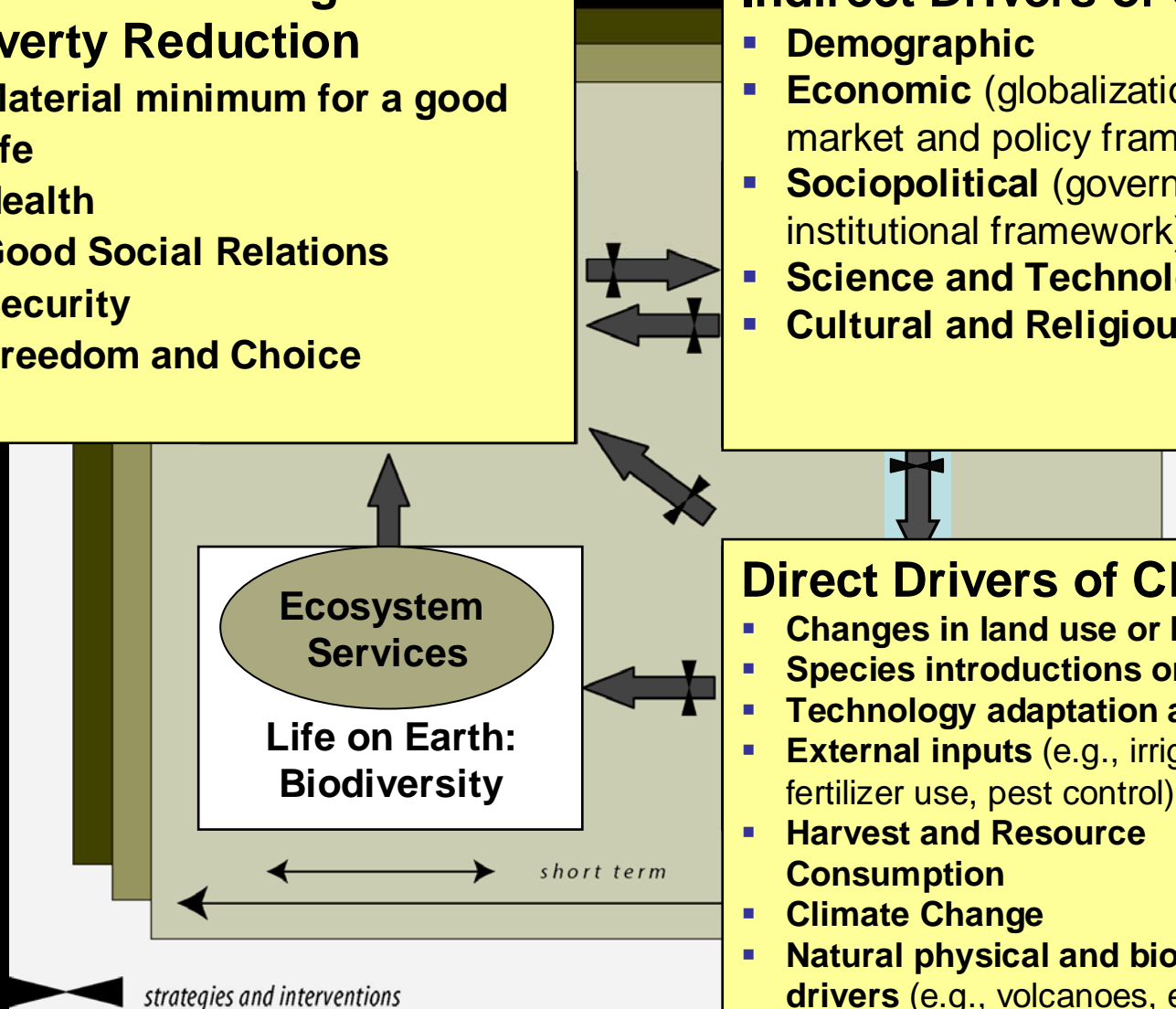
- Changes in land use or land cover
- Species introductions or removals
- Technology adaptation and use
- External inputs (e.g., irrigation, fertilizer use, pest control)
- Harvest and Resource Consumption
- Climate Change
- Natural physical and biological drivers (e.g., volcanoes, evolution)

Ecosystem Services

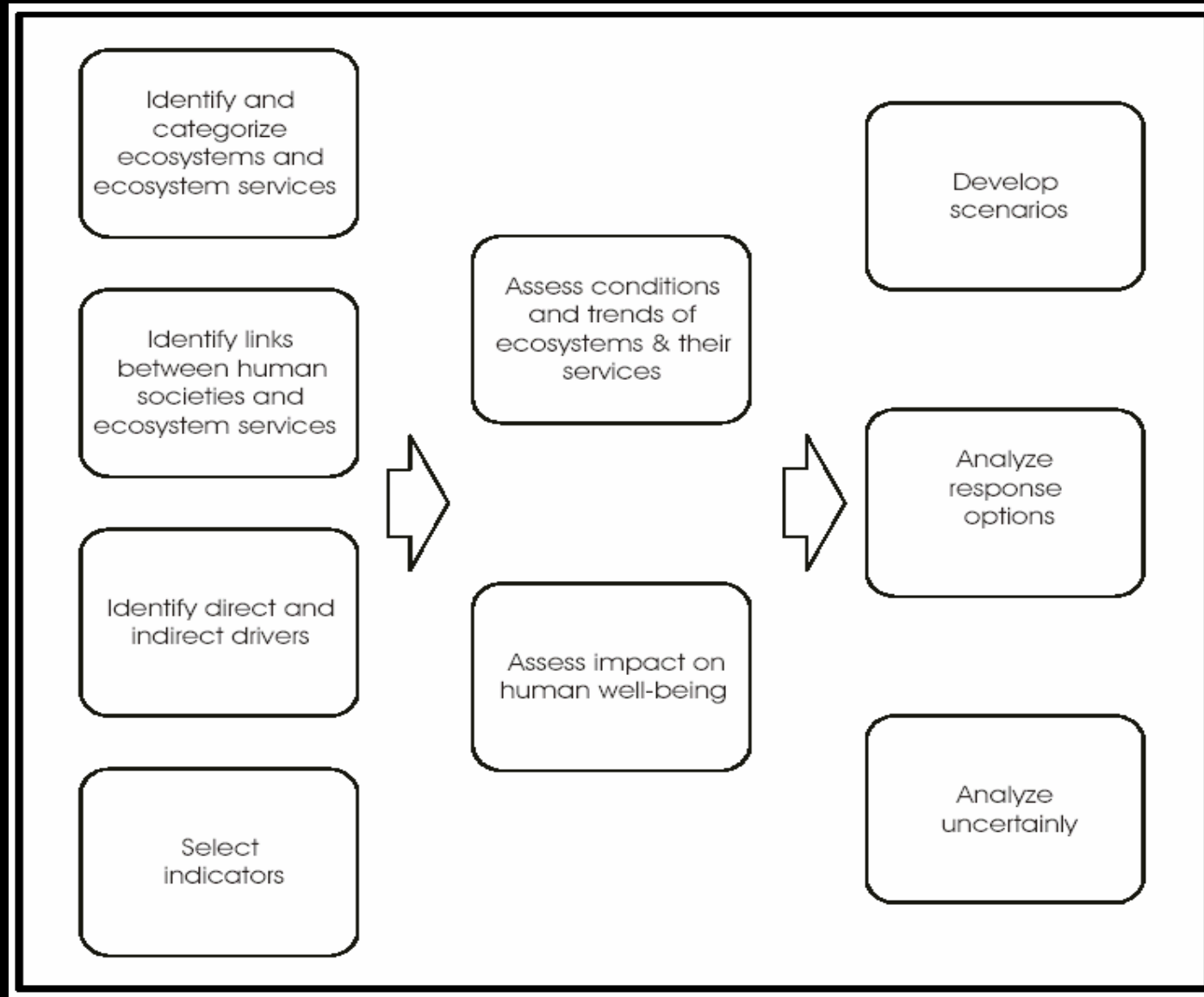
Life on Earth:  
Biodiversity

*short term*

*strategies and interventions*



# Undertaking an assessment



# Interdependency and Complexity

The ecosystem approach does not focus merely on the optimal allocation of provisioning services. Instead, it focuses on identifying the appropriate use level of the provisioning services in a manner that does not degrade or hinder the regulating, supporting and cultural services. In other words, it respects interdependency, complexity and acknowledges trade-offs.



# Core principles for using the Ecosystem Services Human Well-being approach

- Treat the various resources as interrelating parts of living and dynamic systems rather than as individual components to be managed separately
- Be place based and may go beyond political boundaries
- addressing the long-term consequences of today's decisions
- awareness of many scales of effect, from local and national to international and even global
- Be adaptive (learning and flexibility)
- Maintain ecosystems in the appropriate condition to supply ecosystem services
- Bottom Up and Participatory
- Use the best science and have clear trade-off options presented for decision making



# Ecosystem Management

Wider Caribbean Region (WCR) – Priority Areas

- Land-based sources of municipal, industrial and agricultural wastes and run-off
- Over-exploitation of resources such as fish, molluscs and crustaceans
- Increasing urbanisation and coastal development as populations and
- Economies expand and unsustainable agricultural forestry practices.

