

**Global biodiversity mechanisms:
a thematic review of recent developments and future evidence needs**

Strand Palace Hotel, London 20th May 2009

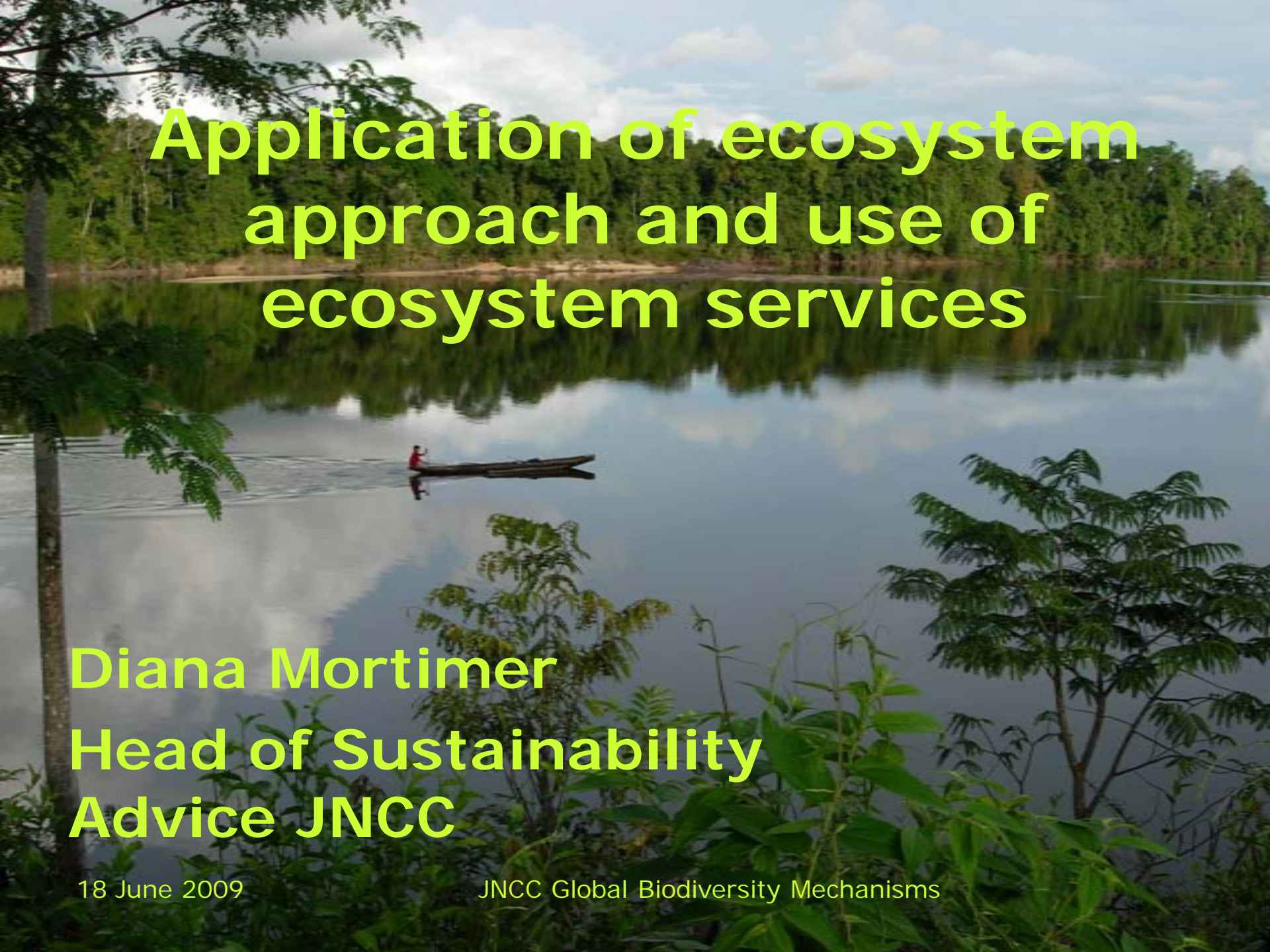
MEA Presentations

Ecosystem approach
Diana Mortimer, Head of Sustainability Advice, JNCC

May 2009

Visit: <http://www.jncc.gov.uk/MEA-event>



A scenic view of a river or lake with a person in a canoe, surrounded by lush greenery and a forested background. The water is calm, reflecting the sky and the surrounding trees. The text is overlaid on the image in a bright yellow-green color.

Application of ecosystem approach and use of ecosystem services

Diana Mortimer
Head of Sustainability
Advice JNCC

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A tropical landscape featuring a pond in the foreground with lily pads and a bird. The background is filled with dense green vegetation, including palm trees and various shrubs, with mountains visible in the distance under a clear sky.

What is the Ecosystem Approach?

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What is the ecosystem approach?

The Ecosystem Approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way

It's the CBD's primary implementation framework

CBD objectives

Three objectives of the CBD

- the conservation of biodiversity
- sustainable use of its components
- the fair and equitable sharing of benefits from the use of genetic resources

Ecosystem Approach and SD

Sustainable Development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs

Sustainable development	=	Environmental sustainability	+	Economic sustainability	+	Social sustainability
CBD Objective	=	Conservation of biological diversity	+	Sustainable use of it components	+	Fair & equitable sharing of benefits
Ecosystem approach	Provides the mechanism for meeting the needs of sustainable development and the CBD's objectives					



Ecosystem approach aims

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Ecosystem approach aims

The Ecosystem Approach provides a set of principles for working towards sustainable development where this is based on the maintenance of fully functioning ecosystems

People are central

- Its application seeks to ensure natural resources and human well-being are both fully taken into account
- Adopting this balanced approach enables people and their natural resource use to be placed squarely in the centre of decision making
- It recognizes that humans, with their cultural diversity are an integral component of ecosystems
- Where this takes place a more equitable and long-term future can be secured for all



Important stuff to remember
about the ecosystem approach

Things to remember

The Ecosystem Approach should not be regarded as an extra hoop to jump through

It seeks to provide sound underpinning of projects and programmes by testing actions against its principles

For example

- Societal choice
- Economic valuation
- Ecosystem functions and thresholds

Links to other ideas

The CBD's Ecosystem Approach is promoted as a framework, not a method

- The principles act as a guide which when used together ensure holistic sustainability
- Consequently other approaches often meet or fulfil all the ecosystem approaches principles and so conform to its values



Putting the ecosystem
approach into action

Putting the ecosystem approach into action

No single way to implement the EA, depends on local, regional, national and global conditions

It links to other approaches such as biosphere reserves and ICZM

It links to policies such as the WFD and European Fisheries Fund

Action in to implement the ecosystem approach

Various projects in England / UK

- Defra's Ecosystem Approach Project
- Defra's EA action plan
- The National Ecosystem Assessment

The National Ecosystem Assessment

- Draws on the Millennium Ecosystem Assessment (MA)
- Acknowledges the MA as an evidence base for policy making, but also a new conceptual framework for decision making across sectors



Millennium Ecosystem Assessment

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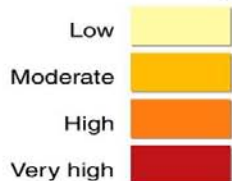
Millennium Ecosystem Assessment – or MA

assessment of the health of Earth's ecosystems

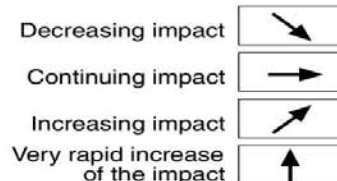
- Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history
- This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth

		Habitat change	Climate change	Invasive species	Over-exploitation	Pollution (nitrogen, phosphorus)
Forest	Boreal	↗	↑	↗	→	↑
	Temperate	↘	↑	↑	→	↑
	Tropical	↑	↑	↑	↗	↑
Dryland	Temperate grassland	↗	↑	→	→	↑
	Mediterranean	↗	↑	↑	→	↑
	Tropical grassland and savanna	↗	↑	↑	→	↑
	Desert	→	↑	→	→	↑
Inland water		↑	↑	↑	→	↑
Coastal		↗	↑	↗	↗	↑
Marine		↑	↑	→	↗	↑
Island		→	↑	→	→	↑
Mountain		→	↑	→	→	↑
Polar		↗	↑	→	↗	↑

Driver's impact on biodiversity over the last century



Driver's current trends



Source: Millennium Ecosystem Assessment

MA findings

Changes to ecosystems have contributed substantial net gains in human well-being and economic development

- Since 1960, while population doubled and economic activity increased 6-fold, food production increased 2 ½ times, food price has declined, water use doubled, wood harvest for pulp tripled, hydropower doubled.

The degradation of ecosystem services often causes significant harm to human well-being and represents a loss of a natural asset or wealth of a country

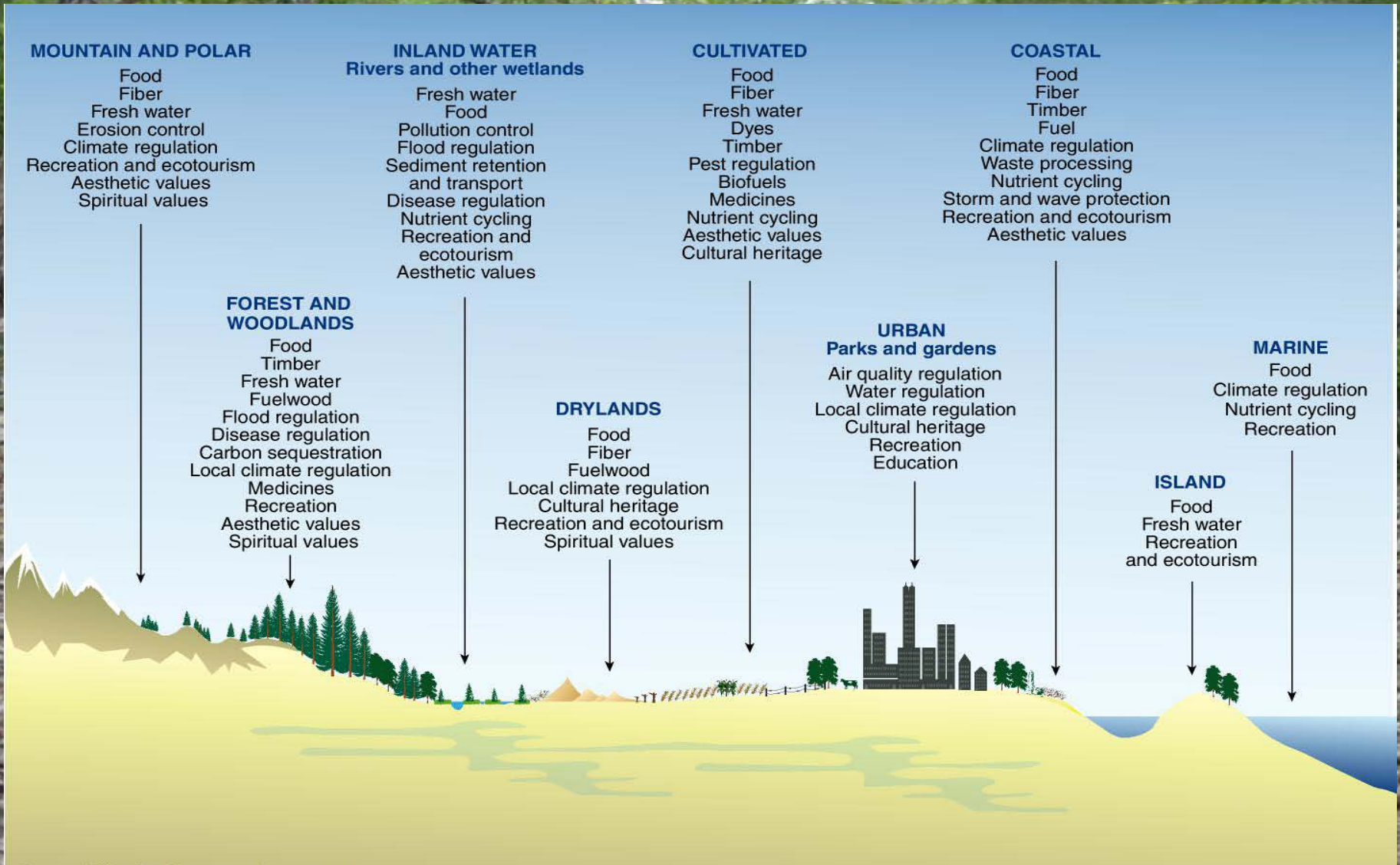
A photograph of a rocky path in a forest. The path is made of large, flat stones and is flanked by low stone walls. The trees are green and leafy, and the ground is covered with fallen leaves and small plants. The text "What do we know about ecosystem goods and services?" is overlaid in the center in a bright green font.

What do we know about ecosystem goods and services?

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Ecosystem services



Benefits people obtain from ecosystems

ECOSYSTEM SERVICES

Supporting

- NUTRIENT CYCLING
- SOIL FORMATION
- PRIMARY PRODUCTION
- ...

Provisioning

- FOOD
- FRESHWATER
- WOOD AND FIBER
- FUEL
- ...

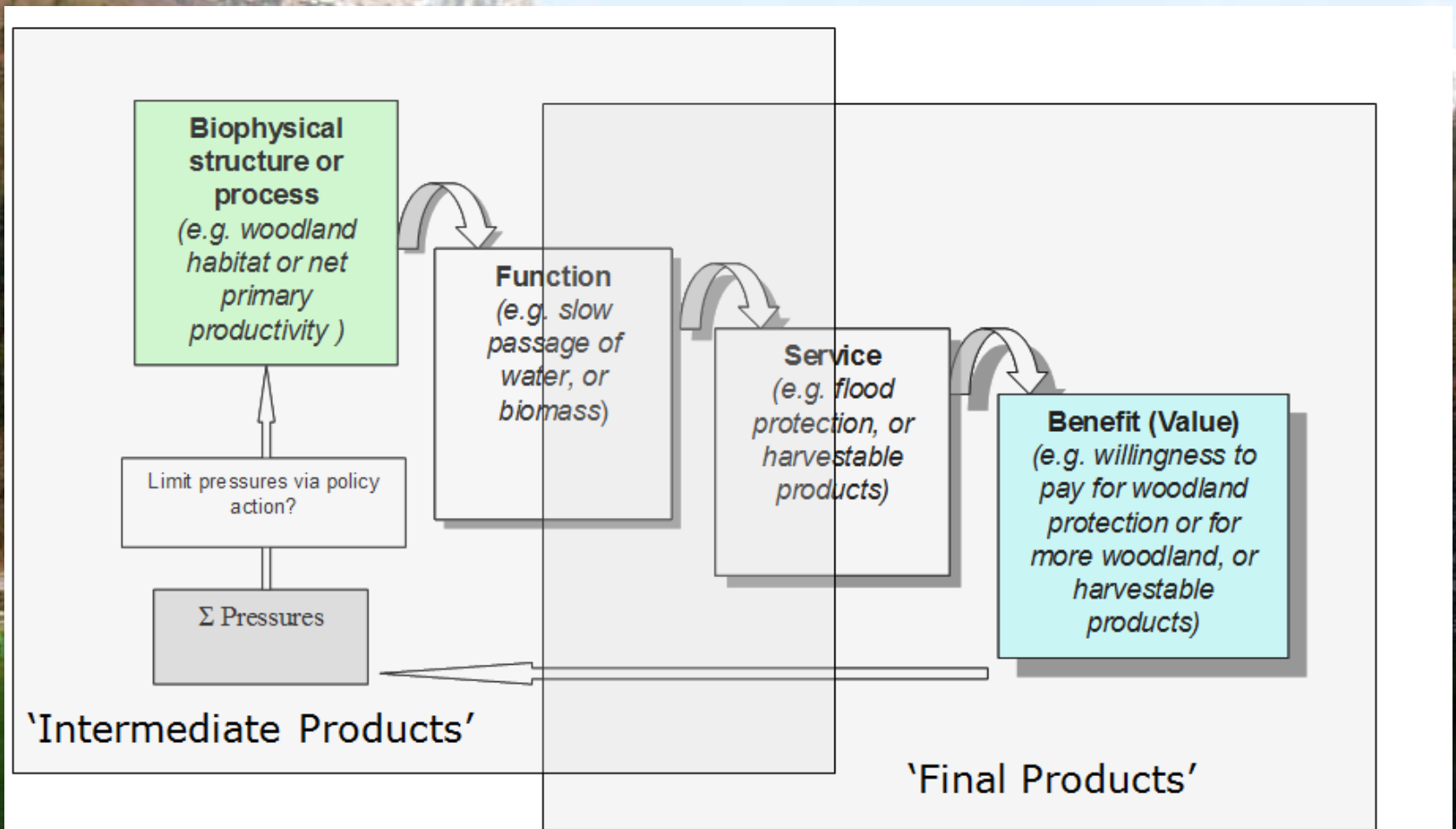
Regulating

- CLIMATE REGULATION
- FLOOD REGULATION
- DISEASE REGULATION
- WATER PURIFICATION
- ...

Cultural

- AESTHETIC
- SPIRITUAL
- EDUCATIONAL
- RECREATIONAL
- ...

Another look at ecosystem services





Thank You

Diana Mortimer
JNCC

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