



Natural Capital Summit

Future directions: conservation

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7 November 2014

The Living Planet Report 2014

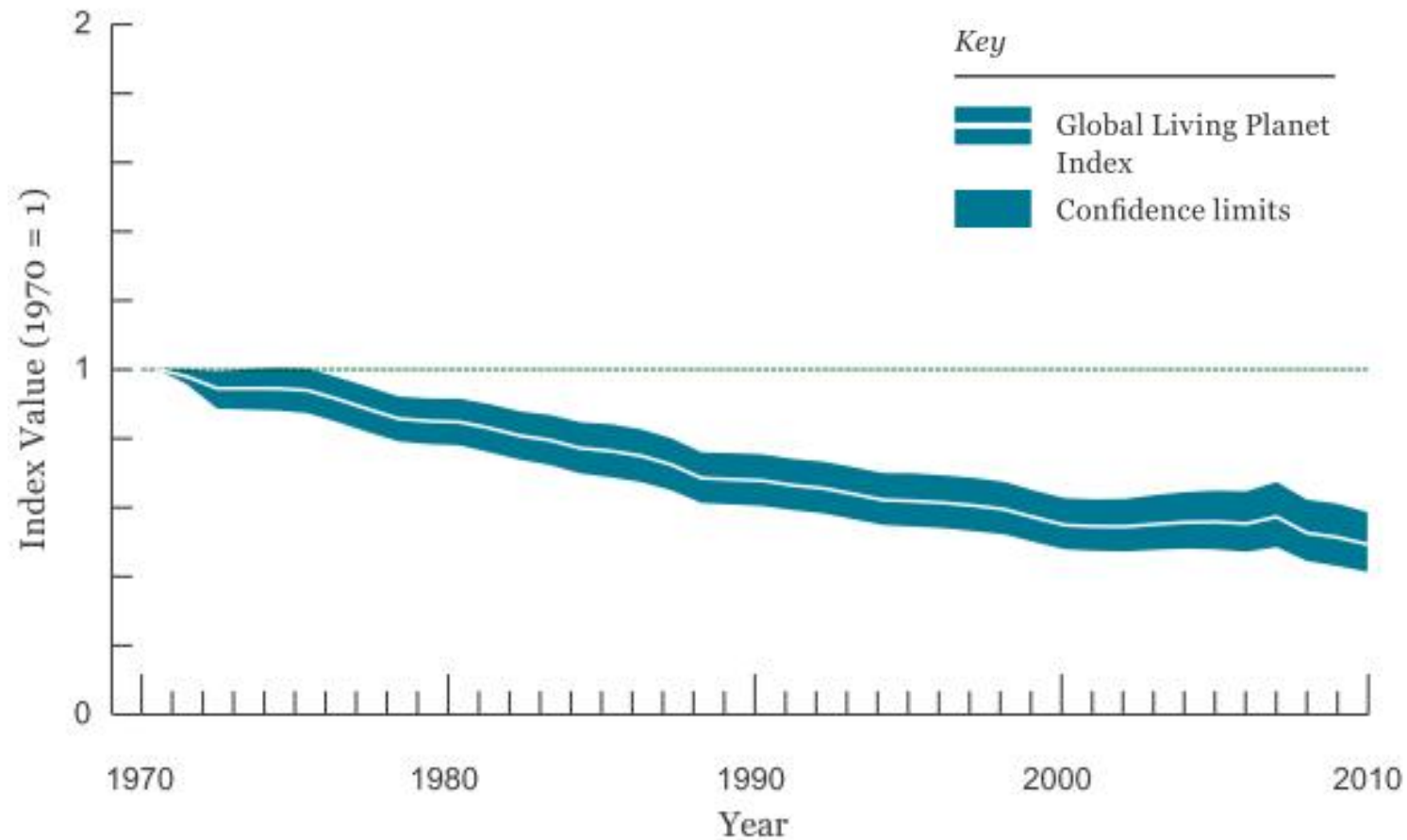


- Living Planet Index (LPI) – 52% decline since 1970 driven by human consumption
- Greatest declines in tropical countries
- Human consumption -we are living beyond the means of one planet
- Better choices – “Business as usual” will not stop the decline.

Global Living Planet Index

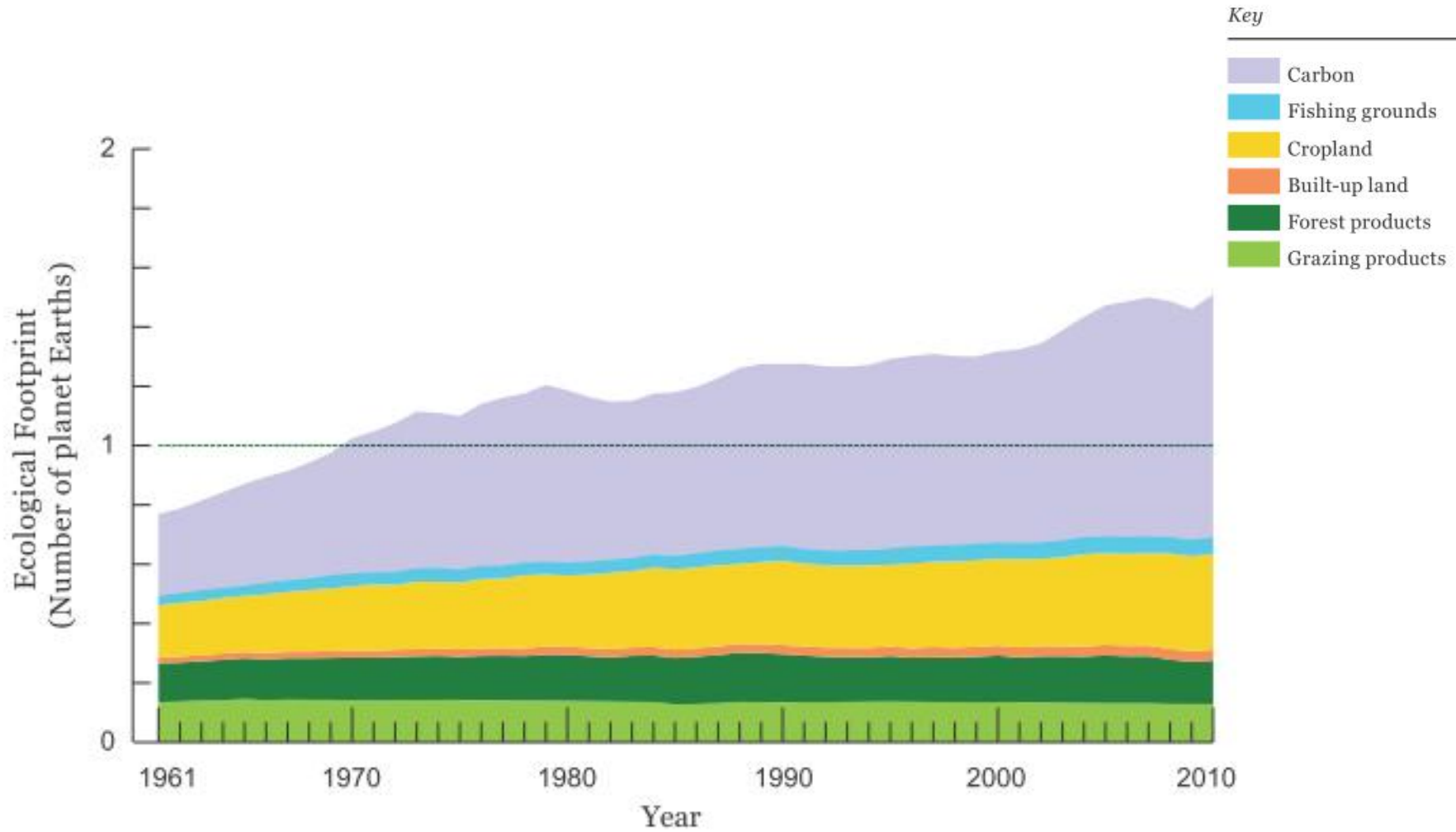


The global LPI shows a decline of 52% between 1970 and 2010



Source: WWF, ZSL, 2014

Global Ecological footprint

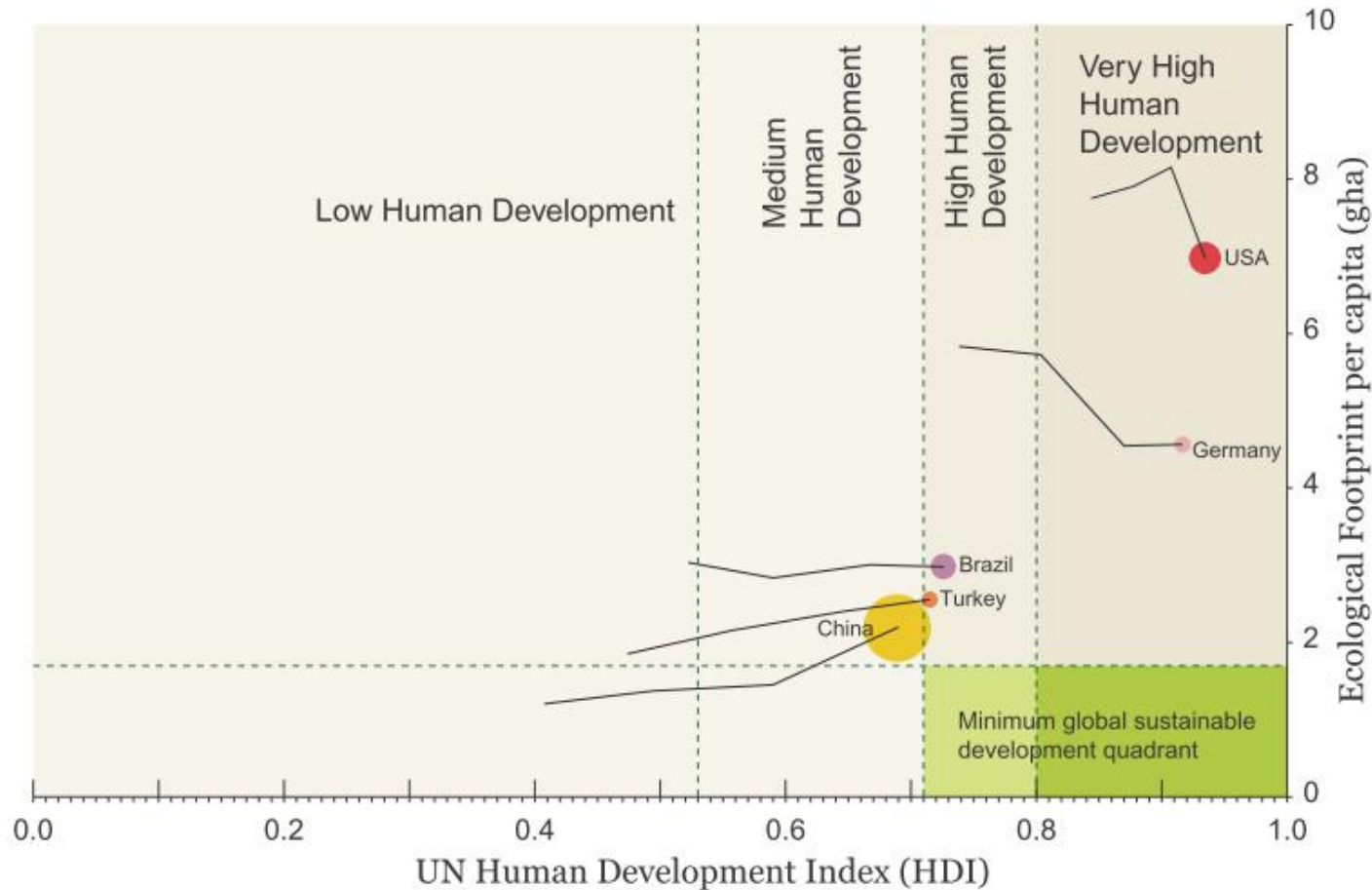


Source: WWF, ZSL, 2014

Ecological footprint and human development



The Ecological Footprint in relation to Human Development Index (HDI)



Source: WWF, ZSL, 2014

Natural Capital: one definition

“Natural capital is the stock of natural assets (oceans, forests, seas, geology, atmosphere etc.) that yields a flow of valuable ‘ecosystem services’ into the future and which generate benefits to humans. Ecosystem services are the benefits to humans arising from ecosystems, such as the provision of clean water and decomposition of waste”.





Ecosystem services (Millennium Ecosystem Assessment)

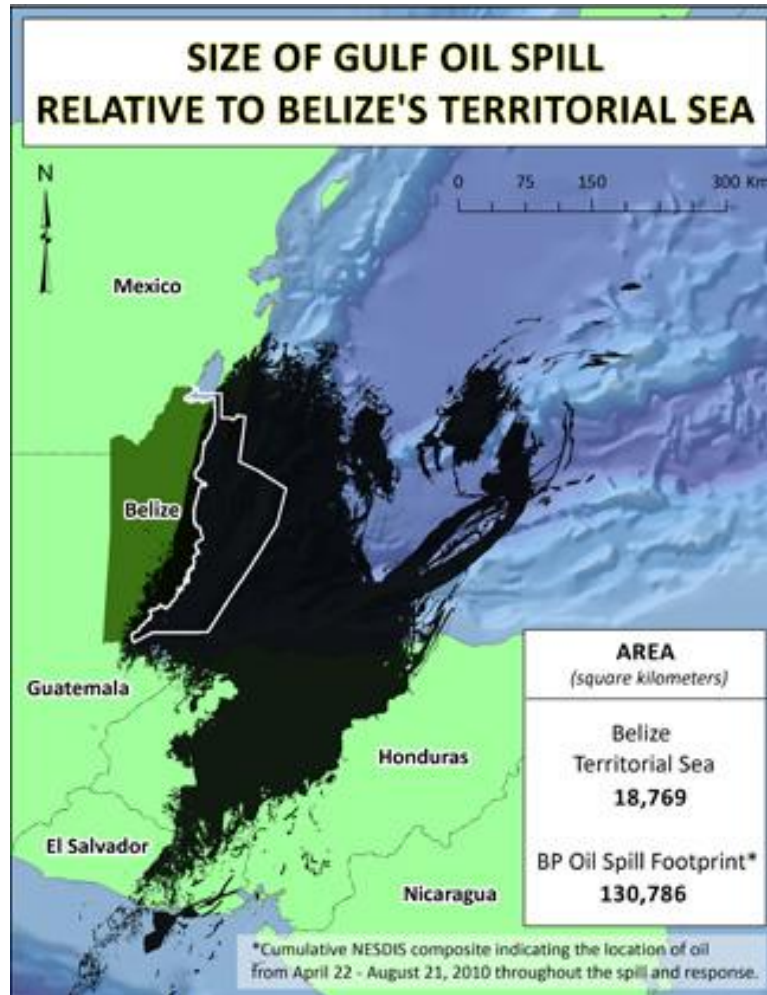
Provisioning services: <i>Products obtained from ecosystems</i>	Regulating services: <i>Benefits from regulation of ecosystem processes</i>	Cultural services: <i>Nonmaterial benefits obtained from ecosystems</i>
<ul style="list-style-type: none">• Food• Freshwater• Fuel wood• Fibre• Biochemicals• Genetic resources	<ul style="list-style-type: none">• Climate regulation• Disease regulation• Water regulation• Water purification• Pollination	<ul style="list-style-type: none">• Spiritual and religious• Recreation and ecotourism• Aesthetic• Inspirational• Educational• Sense of place• Cultural heritage
Supporting services: <i>Services necessary for the production of all other ecosystem services</i>		
<ul style="list-style-type: none">• Soil formation	<ul style="list-style-type: none">• Nutrient cycling	<ul style="list-style-type: none">• Primary production

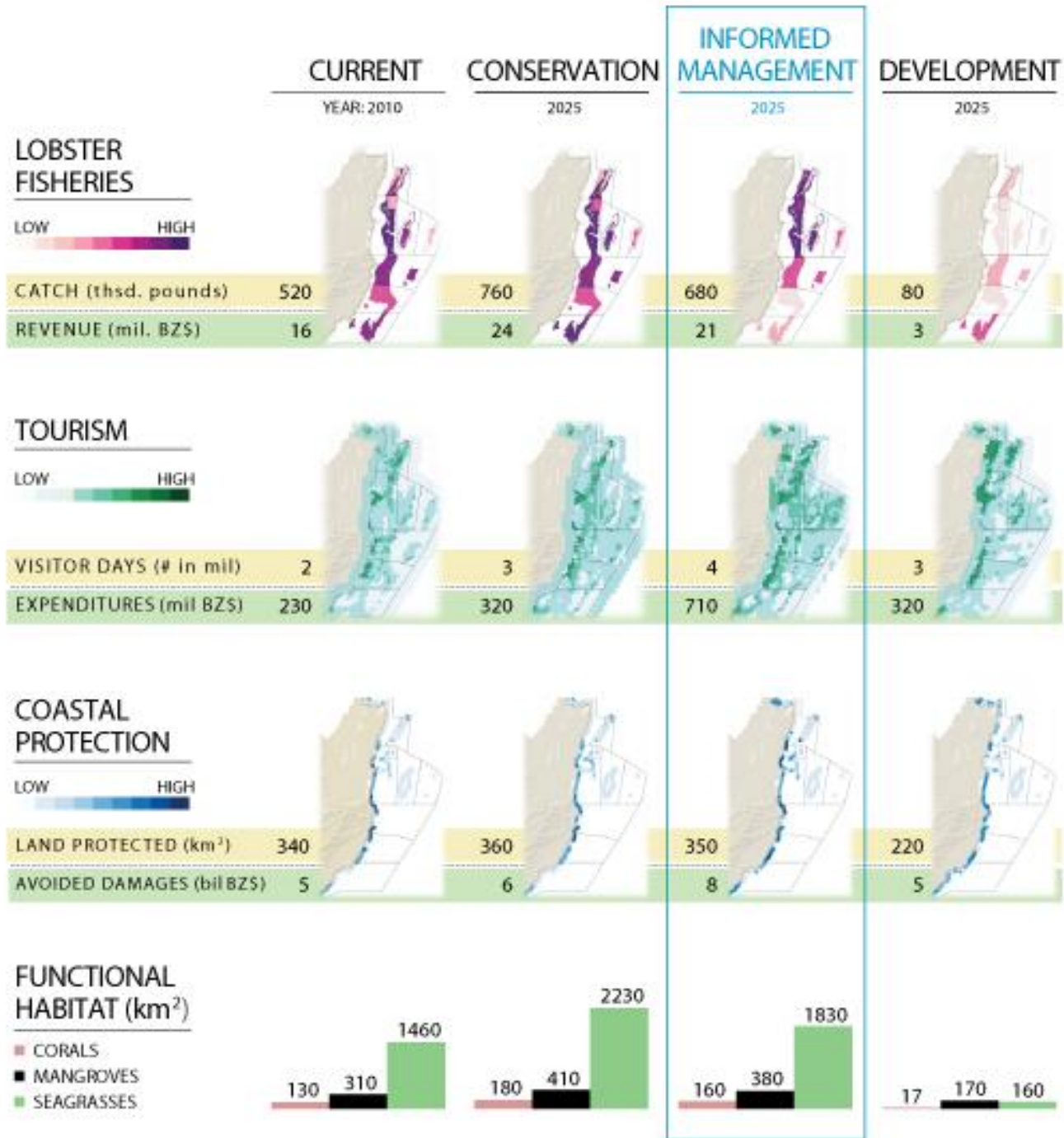
UK National Ecosystem Assessment



Service Group	Final Ecosystem Service	Mountains, Moorlands & Heaths	Semi-natural Grasslands	Enclosed Farmland	Woodlands	Freshwaters – Openwaters, Wetlands & Floodplains	Urban	Coastal Margins	Marine	
Provisioning	Crops		↔	↑		↓	↗	↓		
	Livestock/Aquaculture	↓	↗	↔	↔	↓	↔	↓	↗	
	Fish					↓	↔	↓	+	
	Trees, standing vegetation, peat	↓	↔	↗	↗	↓	↔	↓		
	Water supply	↔	↓	↓	↔	↓	↔	?		
	Wild species diversity	↔	↓	↓	↗	↓	↔	↓	↓	
Cultural	Environmental settings: Local places	↔	↔	?	↗	↗	↔	↔	?	
	Environmental settings: Landscapes/seascapes	↔	↔	↔	↗	↔	↔	↗	?	
Regulating	Climate	↔	↔	↗	↗	↔	↓	↗	↓	
	Hazard	↓	↔	↓	↗	↓	↓	↔	←	
	Disease and pests	↔	↔	+	↓	↓	?	+	↓	
	Pollination	↓	↓	↓	↔		↔	↔		
	Noise	↔	↔	?	↗	↔	←	↔		
	Detoxification & purification	Water quality	↔	↗	+	↔	+	+	?	↔
		Soil quality	↔	↓	↓	↔	↓	←	↓	
Air quality		↔	↔	↗	↗	↔	↔	↔	?	

Valuing nature in policy decisions: Belize case study





Valuing nature in policy decisions: Belize case study

Arkema et al. In review. PNAS.



Future directions: conservation

Sustainable production





Valuing nature also helps us make important decisions about conservation priorities

Crucial input for biodiversity offsetting, in order to achieve a net gain for biodiversity from development

Defining at risk ecosystems to inform priorities for investment and conservation



How to incorporate natural capital considerations into policy

Needs to be institutionalised:

- Natural capital accounting / wealth accounting
- Incorporation into appraisal processes and cost/benefit analysis of policy proposals
- Incorporating into economic modelling
- Infrastructure development, offsetting policies
- Urban planning processes





Actors:

Whose job it is to protect, manage and pay for natural capital

- **Government?**
- **Business?**
- **Investors?**
- **Communities?**

What mechanisms and partnerships can be developed to invest in and manage natural capital?



Thank you

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