Pathways linking ecosystem services to poverty alleviation

An Asset Function Framework

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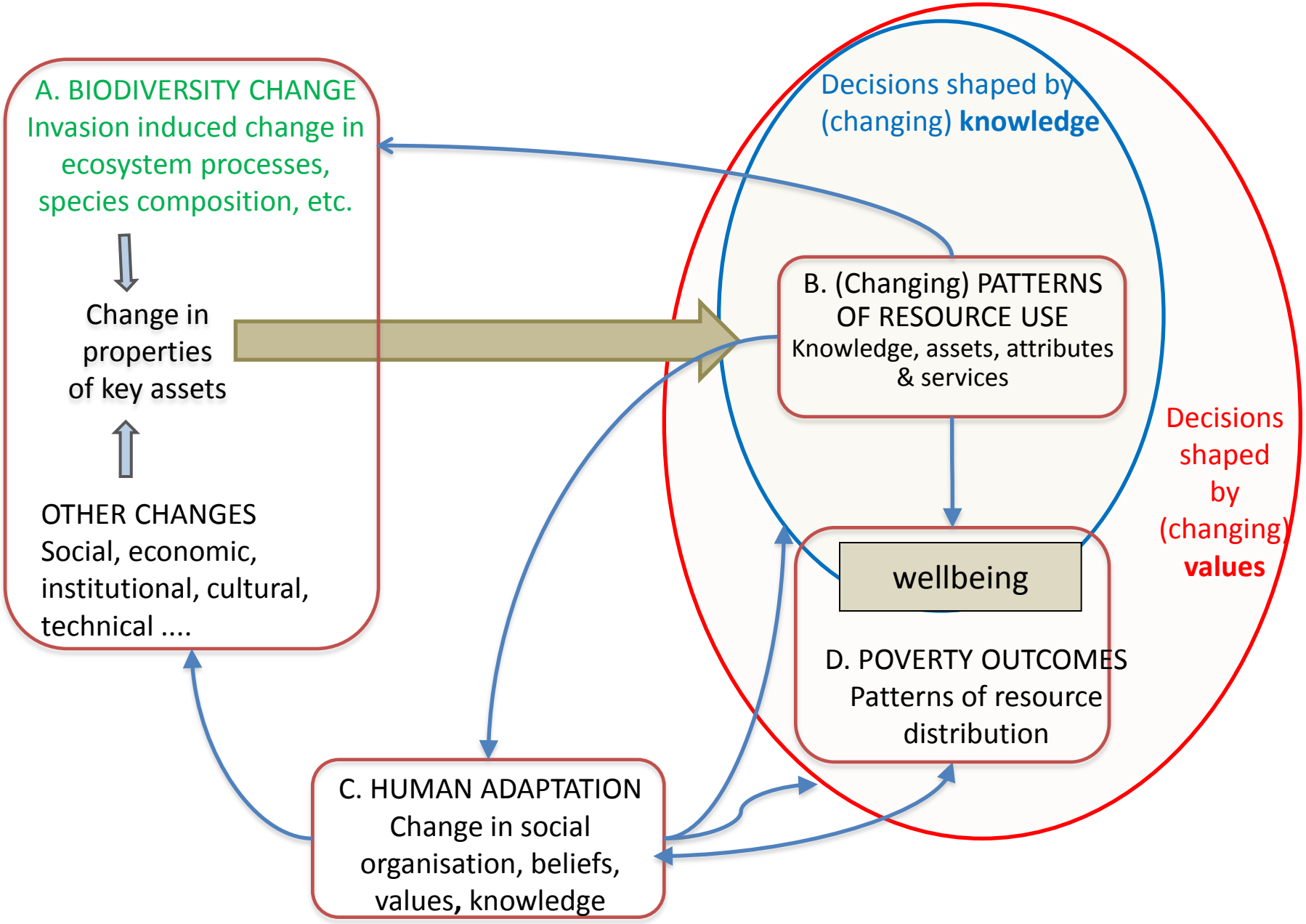
Human Adaptation to Biodiversity Change

In building the conceptual framework for the HABC project we have considered the relationships between four domains of interest:

- Human Adaptation
- Biodiversity Change
- Ecosystem Services – patterns of resource use
- Poverty/Wellbeing Outcomes

Framework for understanding human adaptation to biodiversity change



Pathways linking Ecosystem Services to Poverty Alleviation

- Role of assets in poverty reduction
- Assets as ecosystem services
- Conceptualising assets

Assets and poverty

Poverty dynamics and role of assets

- interventions to help hh retain assets when the experience shocks
- how to promote acquisition of assets – asset poverty traps
- asset portfolios and adaptation/resilience

Assets and Livelihoods

- SLA analyses often focused on how status of different assets/capitals and how these have changed.
- Does not always tell us how assets support people's livelihoods (fails to capture the range of benefits)
- Does not tell us much about dynamics and pathways of livelihood change
- Assets critical to processes of accumulation through roles such as: production, savings, buffering, insurance, consumption smoothing.
- the portfolio of assets held by a household (and therefore the mix of functions available) shape the livelihood pathway followed
- A review of early experiences with the sustainable livelihoods framework noted that definitions of natural capital needed reorienting to consider services derived rather than just natural resources themselves (Carney 2003).

What range of asset functions need to be considered in an analysis of people's changing livelihoods?

Drawing on work on the functions/roles of assets in livelihood trajectories (Swift, Dorward) and on the classifications of the MA we arrive at 8 asset functions:

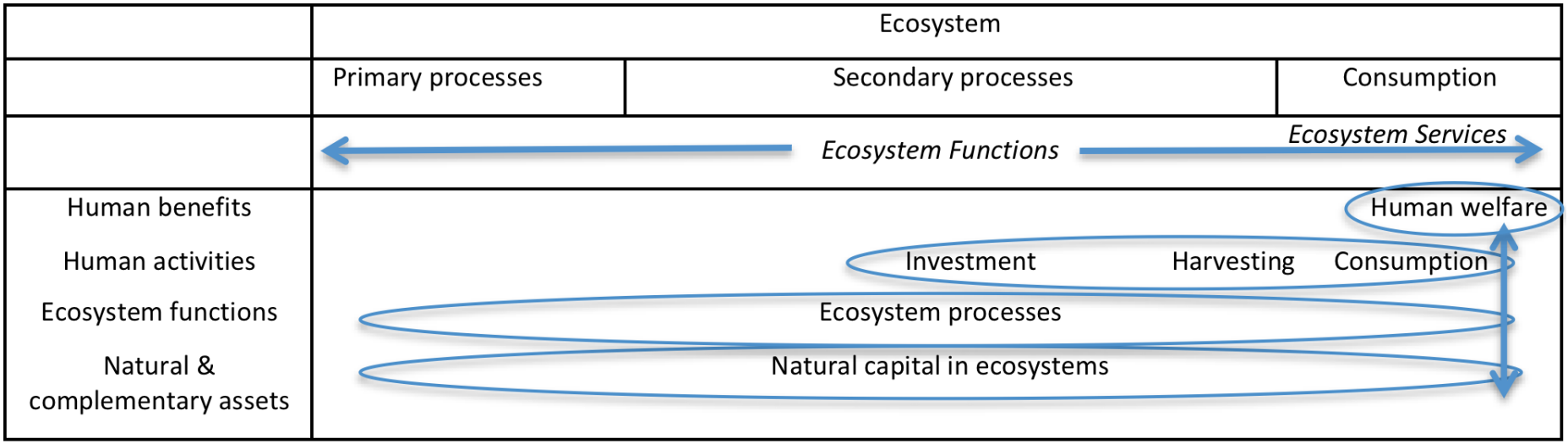
- Consumable assets / function
- Social/cultural assets / functions
- Productive assets / functions
- Exchange assets / functions
- Savings assets / functions
- Protective assets / functions
- Regulating assets / functions
- Supporting assets / functions

An ecosystem asset function framework

- Assets as ‘ecosystem services’ – defined as end product/ consumed outcomes of ecological processes

1. Putting together in the same framework ecosystem services, complementary assets and asset functions it encourages more holistic thinking about asset functions
2. In defining ecosystem services narrowly as end use functions, but focussing also on wider and deeper functions across natural and human activity it recognises the complex dependence of services on deeper functions
3. Unlike other frameworks linking ecosystem services to human needs, it encourages us to see these relationships not as static end points but as links into a process of change.

An ecosystem asset function framework



An ecosystem asset function framework

	Ecosystem			
	Primary processes	Secondary processes		Consumption
	Ecosystem Functions ←			→ *Ecosystem Services*
Human benefits Human activities Ecosystem functions Natural & complementary assets	Human welfare Investment Harvesting Consumption Ecosystem processes Natural capital in ecosystems			
Goat example				
Human benefits				Meat/ milk income & consumption, saving, insurance, various social benefits
Human activities		Grazing land management / protection / cultivation	Goat keeping (buying, borrowing, breeding, herding, veterinary care, etc)	Slaughtering, milking, cooking, marketing, giving, lending, etc
Ecosystem functions	Primary productivity Soil formation Water regulation	Forage Water provision	Goat (re)production	Income Saving Consumption Social Insurance
Natural and complementary assets	Solar energy, land, soil, hydrological systems	Forage plants, streams, groundwater, human knowledge and skills, household & community institutions	Goats, human knowledge and skills, goat housing, equipment, household & community institutions, finance	Household & community institutions, equipment, finance

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Application

We have applied the asset function framework to consider local responses to changes brought by the invasion of the weed *Lantana camara* in forests in south India.

Steps:

1. Consider the functions of key assets – for different groups
2. What are the attributes of these assets that enable them to perform these function?
3. How has the lantana invasion impacted on these attributes – how does this differ between users?

How has our understanding changed?

Processes commonly associated with moving households out of poverty are the accumulation of assets – reducing vulnerability and increasing income.

A comparison of two communities in our case study highlights the role of culture – values, social organisation – that shape how assets are used.

More evidence is needed on the relationship between ‘asset function mix’ and livelihood pathways.