



Trade-off Analysis for Ecosystem Services and Poverty Alleviation

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A political economy approach to ecosystem services



Measuring
Ecosystem
Services



Valuing
Ecosystem
Services



Negotiating
Ecosystem
Services



Winners and losers from ecosystem change – its not always ‘win-win’

- ▶ Many changes (improvements?) in ecosystem management have involved the exclusion of groups from what were formerly common pool resources, negatively impacting their livelihoods (e.g. Protected Areas & displacement)
- ▶ Improvements in ecosystem services (e.g. drinking water) may be captured disproportionately by the wealthy/powerful
- ▶ Costs and benefits associated with environmental change are for the most part distributed among actors unequally, and are in many cases hidden; we need to look for these!
- ▶ Some of the people directly affected by changes in flows of ecosystem services are highly vulnerable and lack adaptive capacity (especially women), so deserving of special focus



Trade-offs / synergies

- ▶ **Biophysical trade-offs between services**

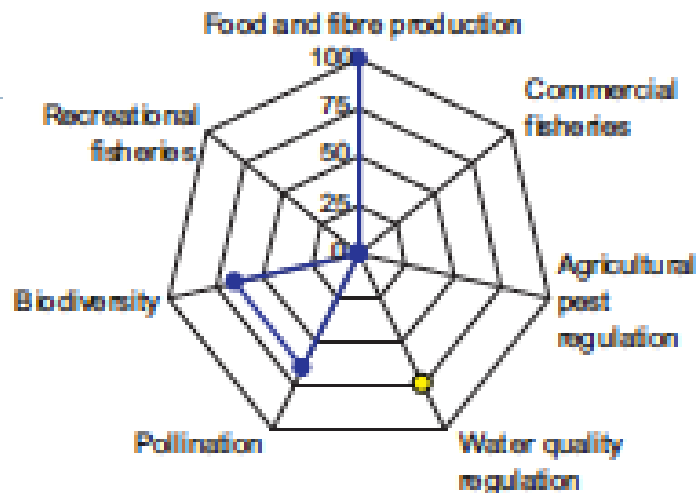
- ▶ Provisioning (harvesting flows, e.g. timber, NTFP) versus other services (*in situ* stocks, e.g. carbon)

- ▶ **Trade-offs between stakeholders**

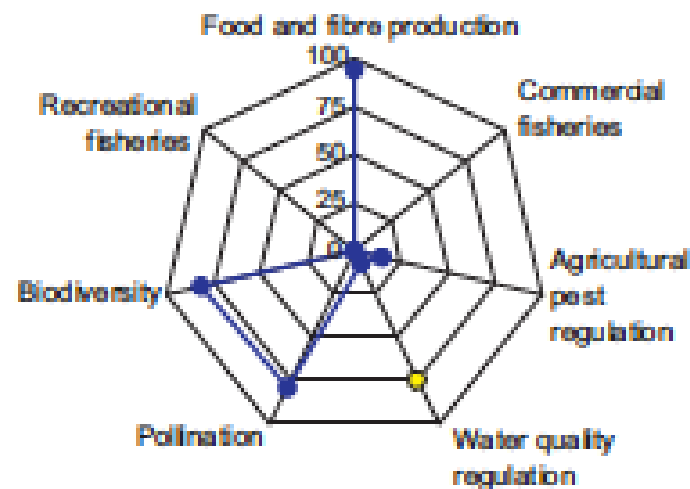
- ▶ Due to different resource interests, e.g. fuelwood users versus pulp and paper manufacturers
 - ▶ Due to differential rules of access, e.g. boundaries between villages in a Joint Forest Management context
 - ▶ Due to differences in power, e.g. groundwater pumping by large farmers impacting availability for other users



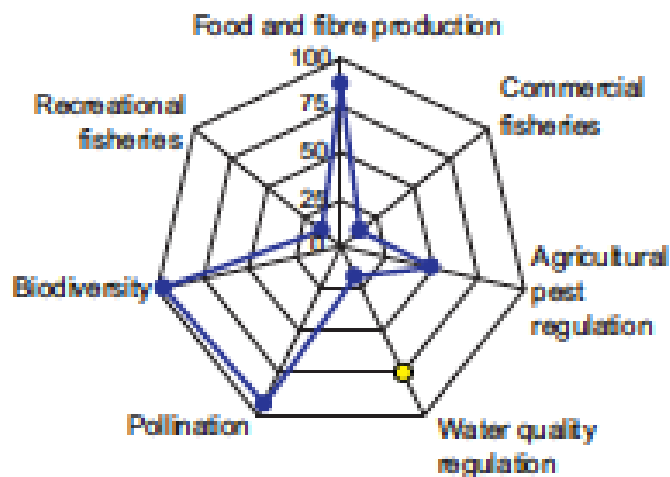
NO LEGISLATION



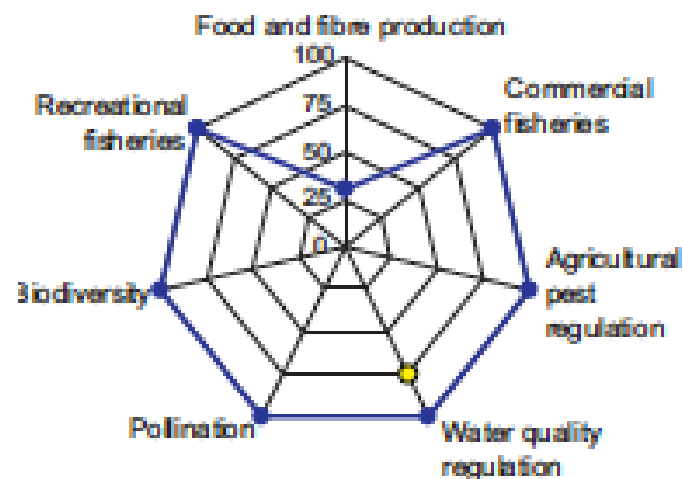
PRESENT DAY







DE-NITRIFICATION



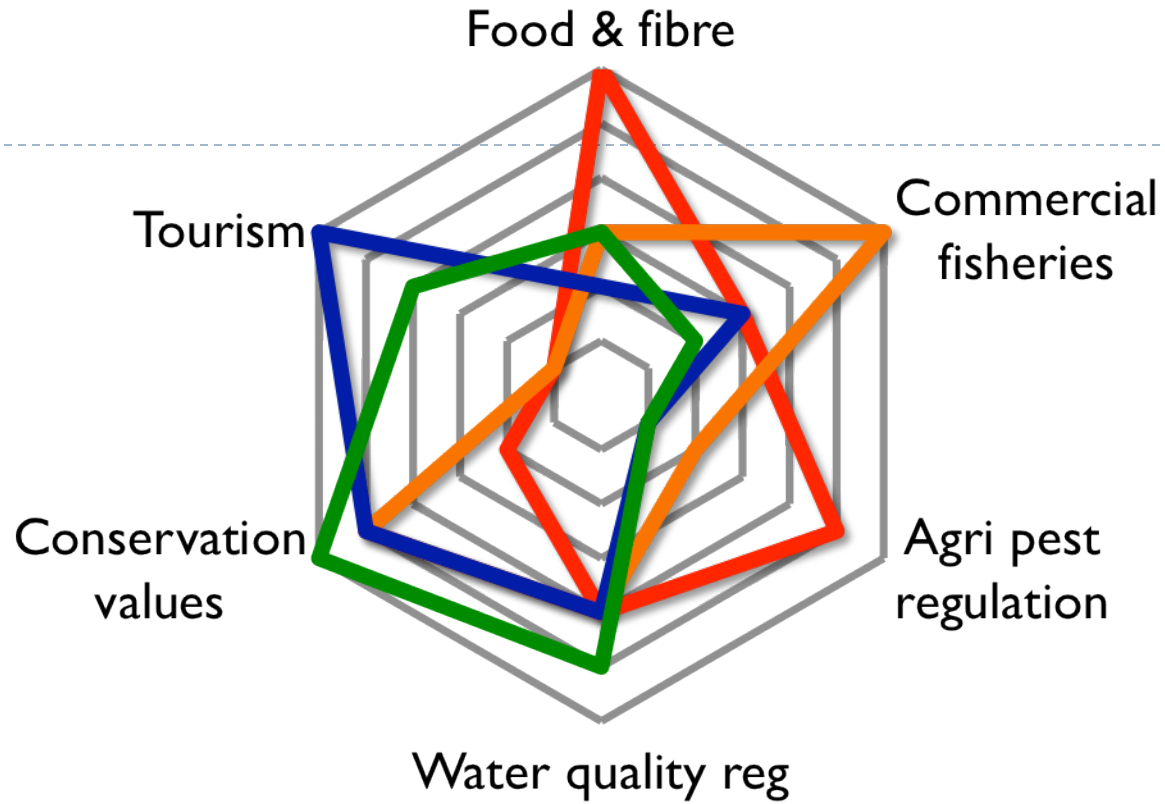
NATIVE FOREST



STAKEHOLDERS

-  COMMUNITY
-  TOUR OPERATORS
-  FISHERS
-  FARMERS

Resource interests



	COMMUNITY	TOUR OPERATORS	FISHERS	FARMERS
NO LEGISLATION	-	--	--	++
PRESENT DAY	+	-	-	+
DE-NITRIFICATION	+	+	+	--
NATIVE FOREST	++	++	++	-

Trade-offs and political choices in the Indian context

- ▶ ‘Indian political system must be ready to make tough choices and trade-offs’: Jairam Ramesh Jan 2011
- ▶ ‘Independent’ environmental assessment authority to be established: Prime Minister Manmohan Singh July 2011
- ▶ Tough choices – livelihoods, agriculture, mining, forests, biodiversity, carbon, urbanisation, water ...



Diversion of
forest land since
the 1980s

Source: Centre for
Science and
Environment