



**Nature for  
People's Sake**  
*Integrating  
ecosystem  
services in public  
decision making*

**The Ecosystem  
Services Approach**



WRI

# Presentation outline

3 cases from the field

Introducing ecosystem services

The Ecosystem Services Approach



# What is the Ecosystem Services Approach?

- A **framework** for integrating ecosystem services into decision making
- Incorporates a variety of methods, including ecosystem service **dependency** and **impact assessment**, **valuations**, **scenarios**, and **policies**
- Often applied at a **watershed** or **landscape level**

# What types of decision processes can the Ecosystem Services Approach inform?

## National and sub-national policies and plans

- National budgets
- National development policies
- Climate adaptation

## Economic and fiscal incentives

- Subsidies
- Tax policies to promote sustainable technology
- Payments for ecosystem services

## Sector policies and plans

- State of the environment reports
- Land use zoning
- Technology transfer

## Governance

- Freedom of information
- Participatory decision making

# Key elements in the Ecosystem Services Approach to making a decision

Understand the link between ecosystems and development

What is the relationship between ecosystems and human well-being? How can an ecosystem services framework help organize decision-making?

Assess risks and opportunities

What are the ecosystem service dependencies and impacts? When and how can ecosystem services be valued?

Explore the future

How can future changes be taken into account?

Select policies to sustain ecosystem services

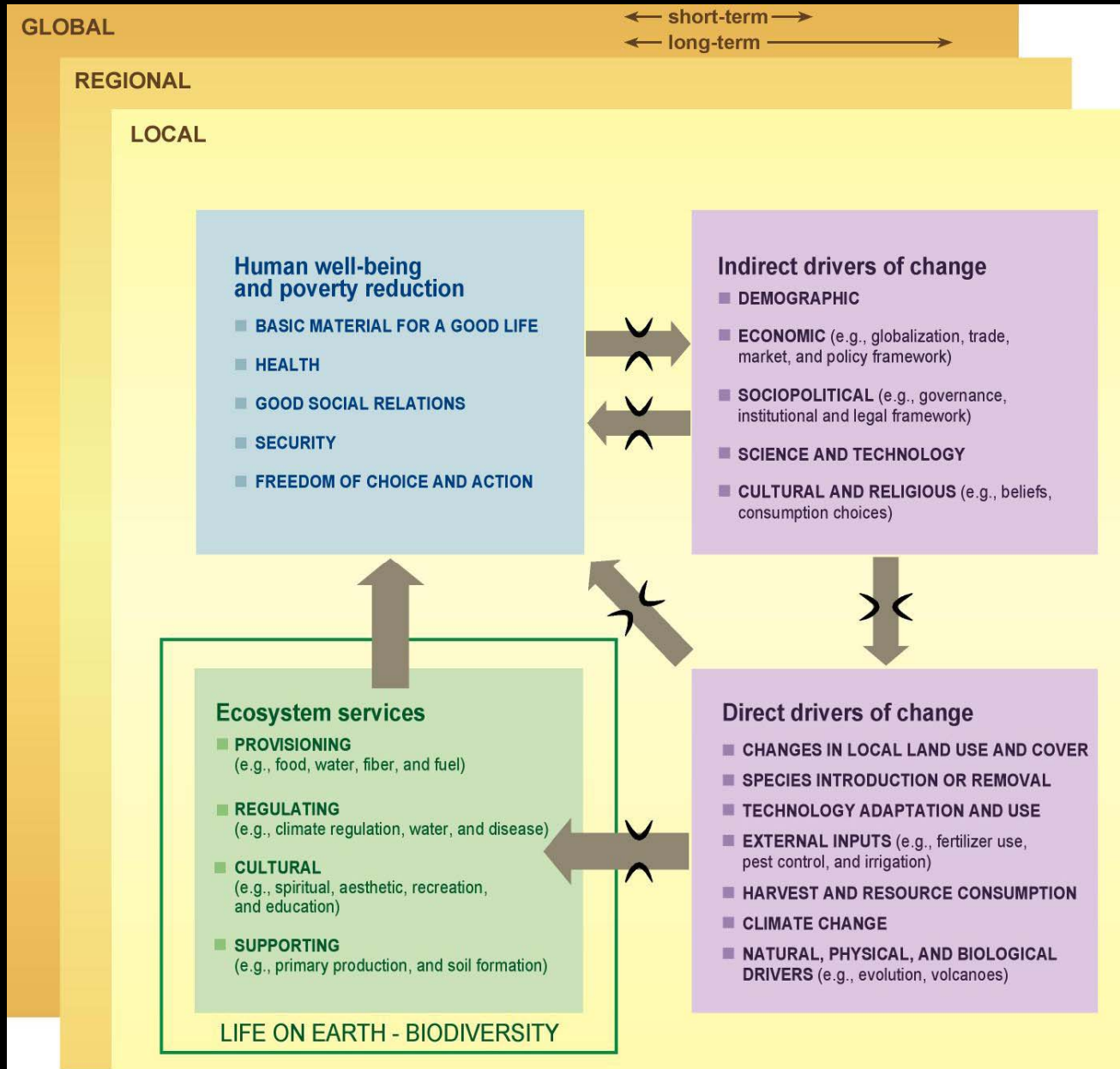
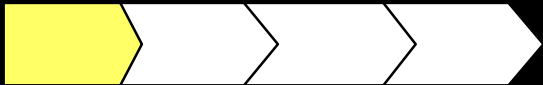
How can ecosystem service risks and opportunities be incorporated into the decision? What policies can help sustain ecosystem services?

# Understand the link between ecosystems and development

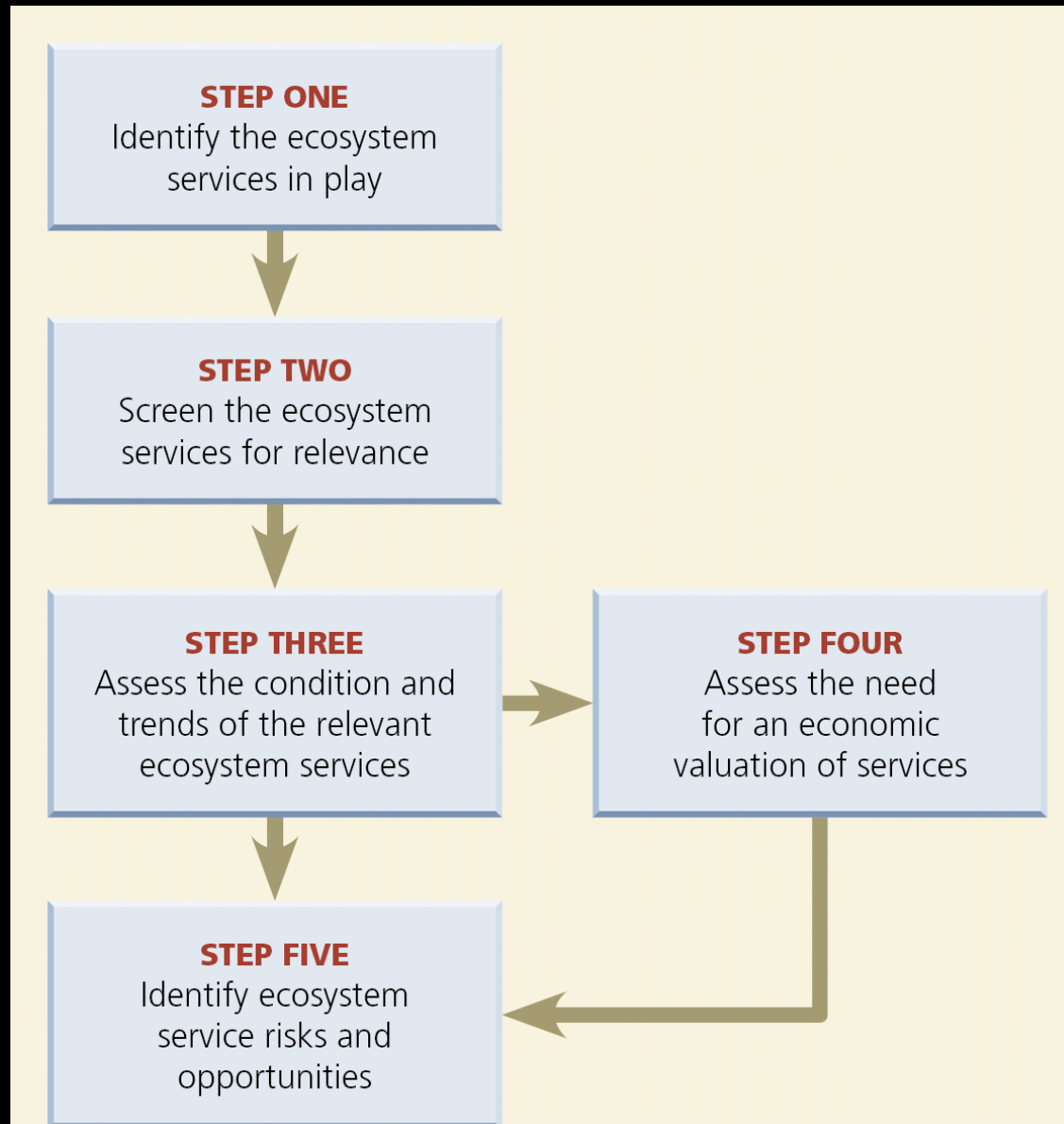
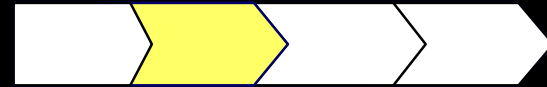
People impact nature



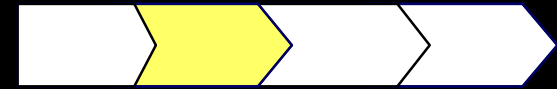
Nature provides people benefits



# Assess risks and opportunities

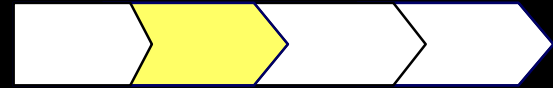






# Identify the ecosystem services in play

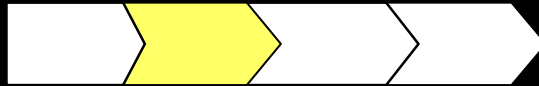
- Identify which ecosystem services a landscape provides
- Determine whether or not the decision depends on or impacts each service



# Screen the services for relevance

- **Dependence** – relevant if no cost-effective substitute exists
- **Impact** – relevant if the impact limits or enhances others' use of the service

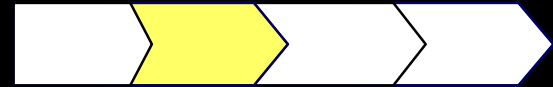




# Assess the conditions and trends

- What are the **conditions** and **trends** of the relevant ecosystem services?
- What are the major **drivers** affecting the services?
- What **thresholds** or **irreversible changes** have been observed in the ecosystem services?

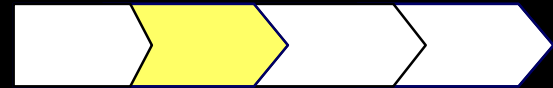




# Assess the need for an economic valuation

- To **communicate** the value of ecosystem services by highlighting their **economic** contribution to societal goals
- To compare the **cost-effectiveness** of investments
- To **evaluate** the **impacts** of development policies
- To **build markets** for ecosystem services





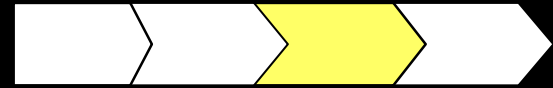
# Identify risks and opportunities

- Are there ecosystem services that were **unrecognized** or in **poorer condition** than previously known?
- Are **users competing** for a service in limited supply? If so, are cost-effective substitutes available?
- Are there **unforeseen impacts** on services that **others depend on** for their well-being?



# Enhancement of some services often leads to degradation of others creating new winners and losers

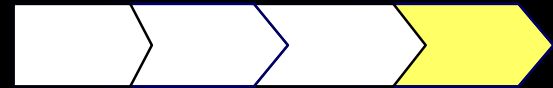




# Explore the future

- Exploring the future helps decision makers **anticipate and avoid unintended consequences** from development projects
- **Scenario planning** is a useful tool for exploring future changes to ecosystem services
- Scenarios are **stories** about the future



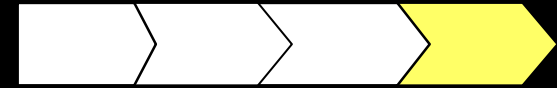


# Select policies to sustain ecosystem services

1. **Review and revise the development strategy** based on ecosystem service risks and opportunities
2. **Explore the range of policy options** available to influence the drivers of change in ecosystem services
3. **Choose policies** based on their effectiveness in influencing the drivers of ecosystem change
4. **Adopt a learning approach** to implementing policies

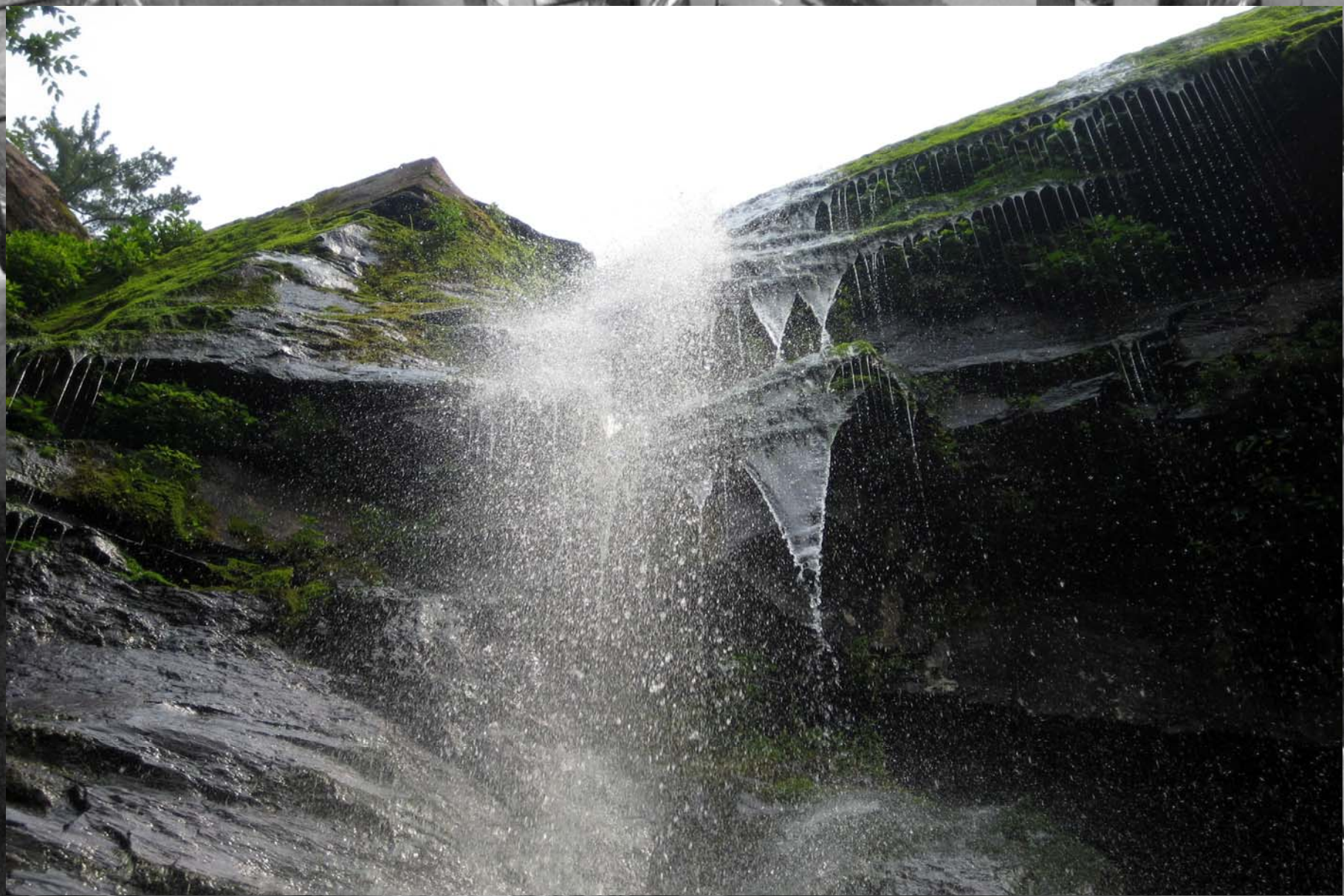




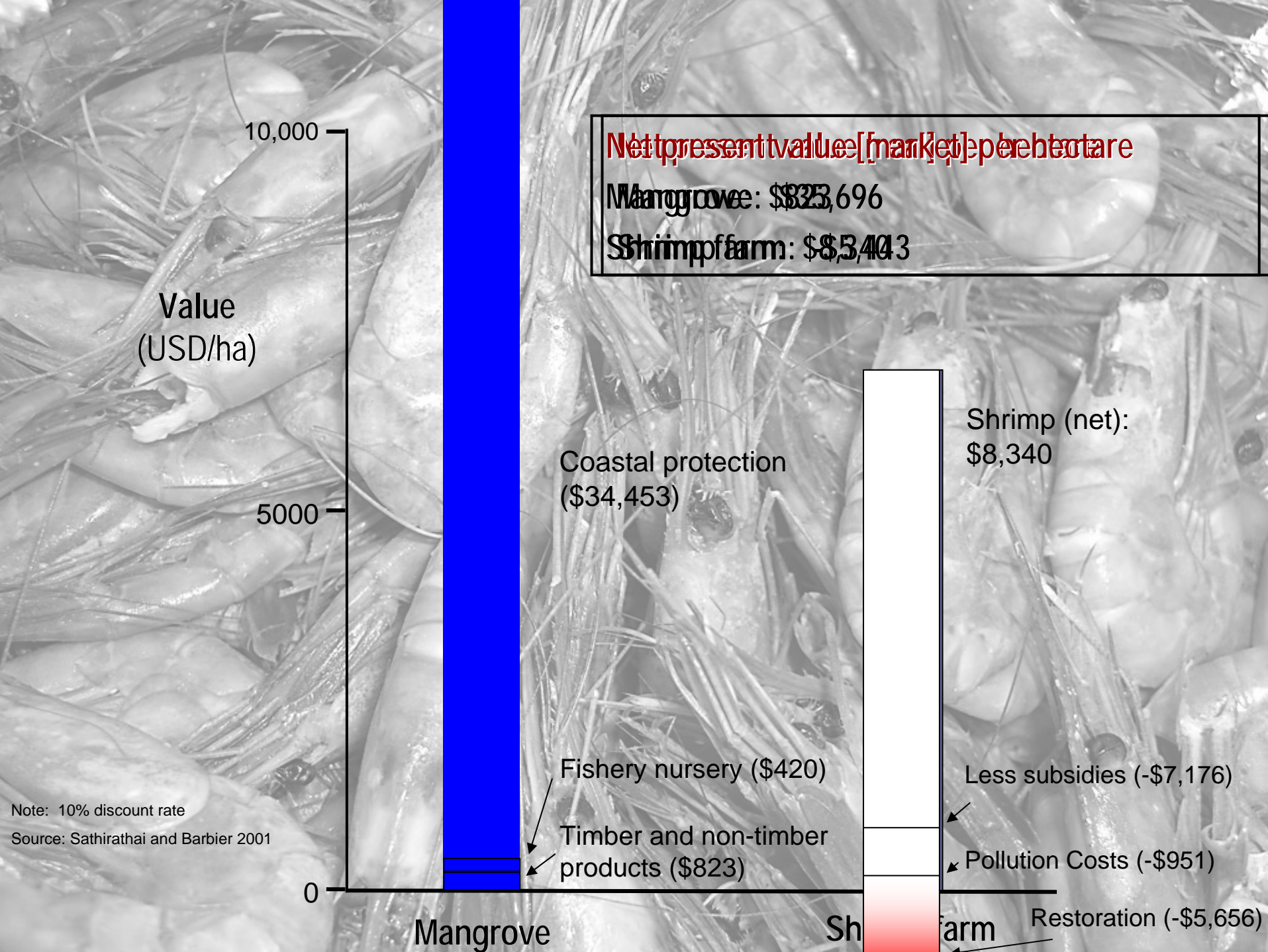


# Adopt a learning approach

- Strengthen **existing monitoring** systems
- Use monitoring data in making **course corrections**







Value  
(USD/ha)

10,000

5000

0

**Net present value [market] per hectare**

**Mangrove: \$25,696**

**Shrimp farm: \$5,443**

Coastal protection  
(\$34,453)

Fishery nursery (\$420)

Timber and non-timber  
products (\$823)

Shrimp (net):  
\$8,340

Less subsidies (-\$7,176)

Pollution Costs (-\$951)

Restoration (-\$5,656)

Mangrove

Shrimp farm

# Countries starting to utilize the Ecosystem Services Approach

## China

Proposing national ecosystem assessments and exploring how to incorporate into policy

## Costa Rica, South Africa, & others

Have established or are exploring markets for ecosystem services

## European Union

European Environment Agency is developing an ecosystem service assessment process

## Tanzania

Government paper identifying concrete ways in which sound ecosystem management can contribute to poverty reduction goals

## U.K.

DFID/NERC have established an Ecosystem Services for Poverty Alleviation Programme

## United States

E.P.A. Office of Research and development has an ecosystem service research program

Water quality trading programs emerging in a few states