

Sustainability Assessment

An Approach and Method for Assessing Human and Environmental Conditions and Progress Toward Sustainability

Overview

IUCN–The World Conservation Union

<http://www.iucn.org/themes/eval/index.html>

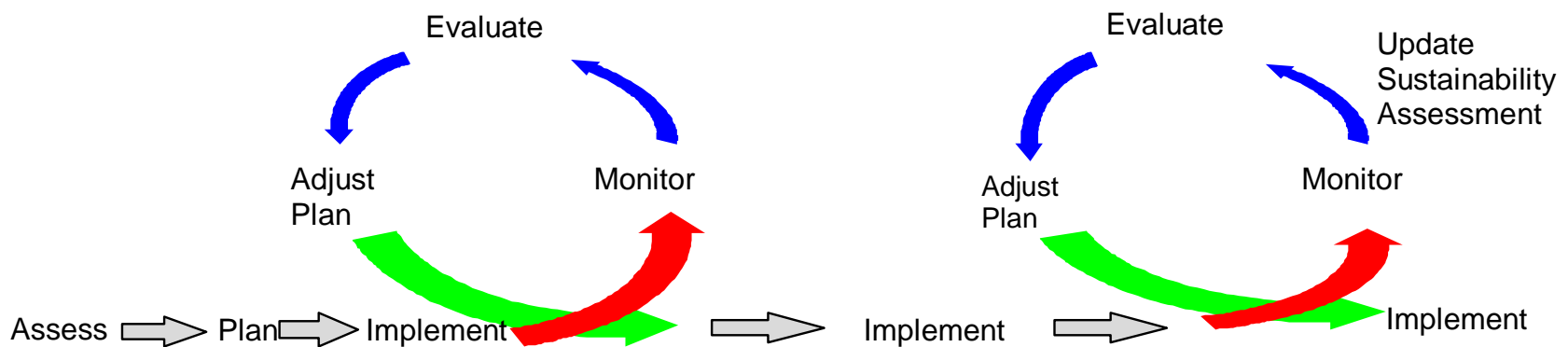
IDRC - International Development Research Centre

Sustainability Assessment

- Developed through practical assessments by the IUCN/IDRC international assessment team, IUCN Regional Offices, and national, provincial and local teams in Asia, Africa and the Americas.
- A need to measure progress towards more sustainable development
- Designed for use at any level: local, national, global, and in between.
- Aims to increase understanding by making hypotheses about sustainable development explicit and helping to test them.
- Aims to improve decisions, policies and actions by providing a picture of progress towards goals and objectives.

Reflection & Action

Assessments work best when they are part of a **ongoing cycle of reflection and action**, rather than an isolated activity.



To guide policies and actions, assessments need to be fully integrated into the regular processes of decision-making – not isolated events.

A culture of reflection, evaluation and organizational learning

Key Features of Sustainability Assessment

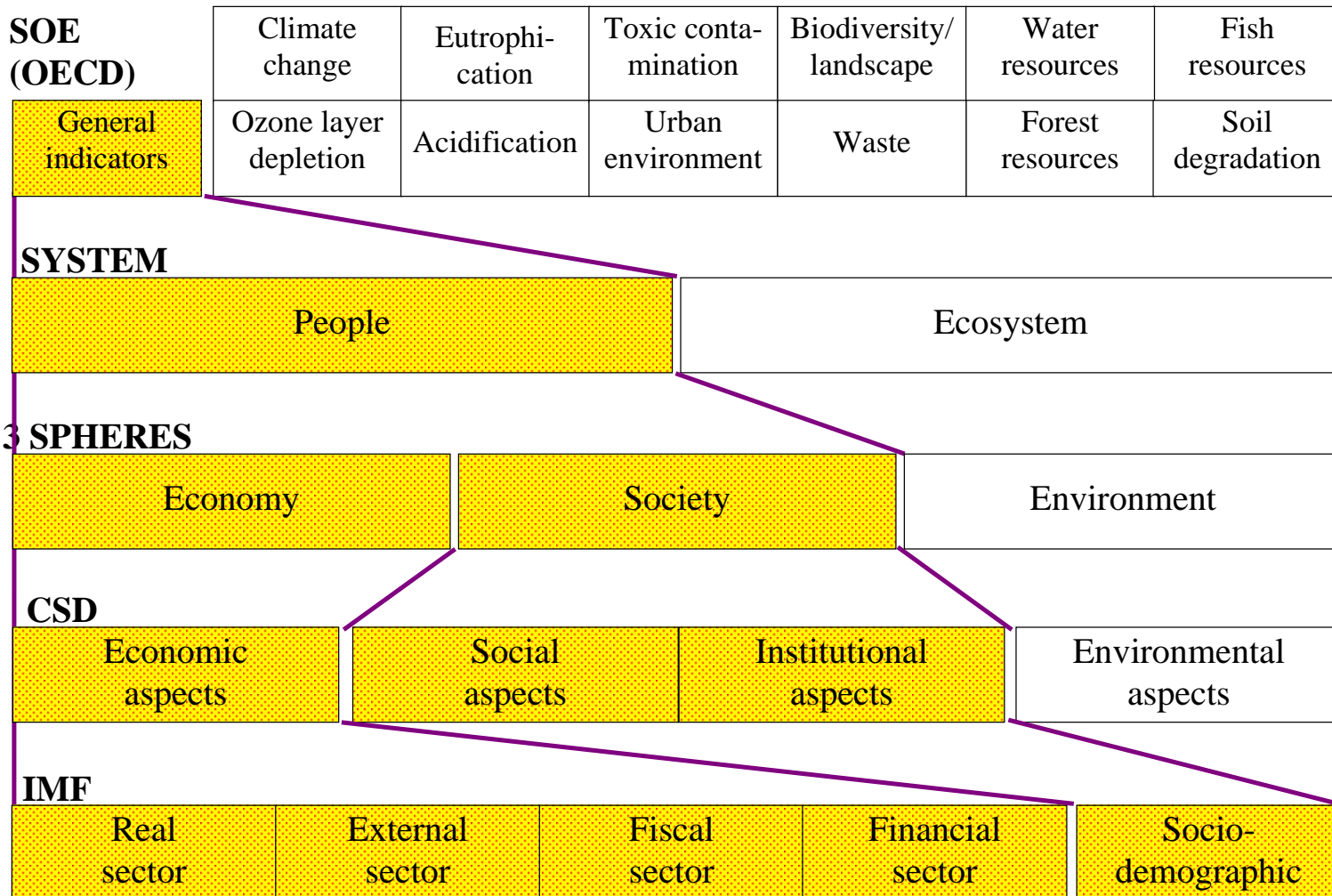
Technical Features

- Framework - equal treatment of people and the ecosystem
- Analytical hierarchy of elements and objectives
- Visual tools: Barometer of Sustainability, Egg of Wellbeing and maps
- Performance Indicators (compound indicators - indices)

Process Features

- Seven stage cycle
- Flexible user-focused process – multi-stakeholder
- Debate – dialogue – vision of sustainable development
- Narrative + measurement + mapping

The Importance of a Framework

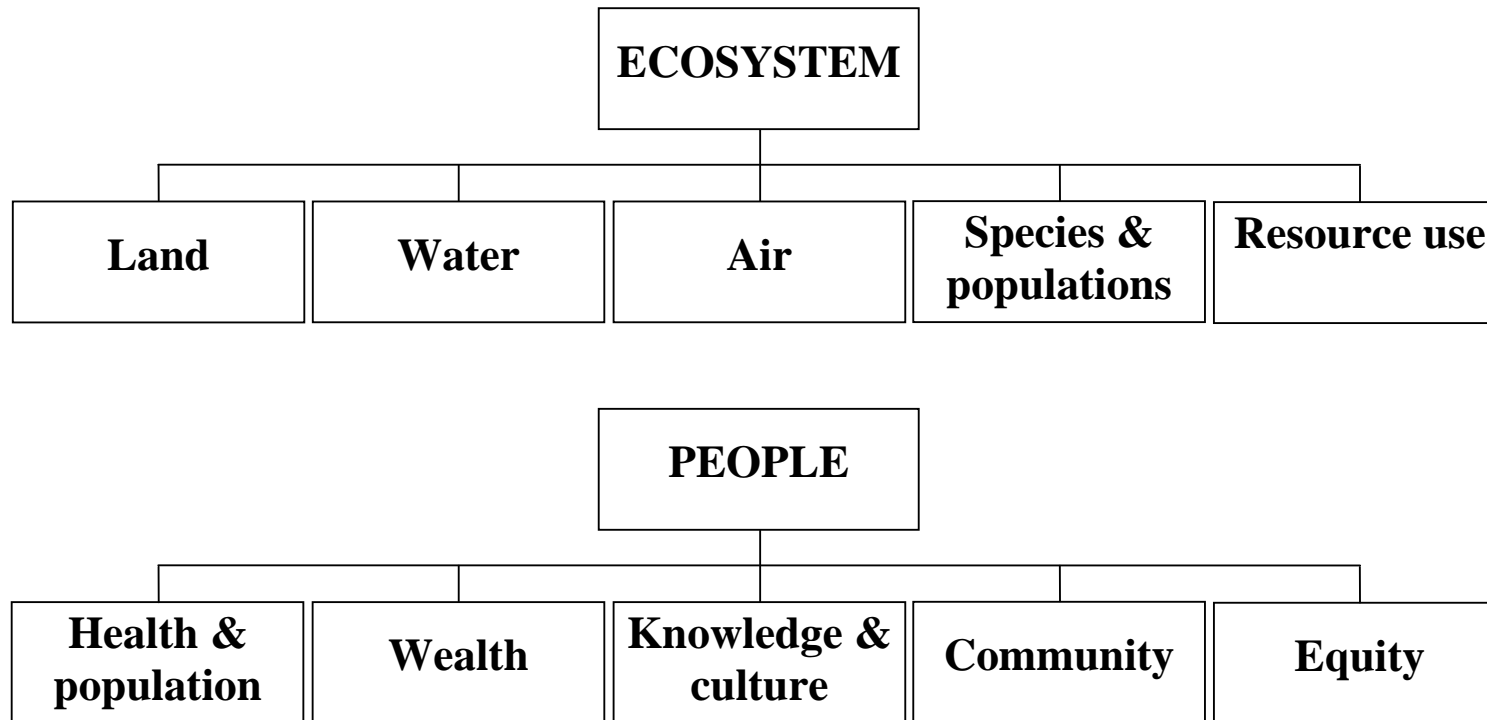


Without A Framework....

What's the message?

HUMAN INDICATORS		ECOSYSTEM INDICATORS	
Life expectancy at birth: years	54.7	Cultivated + built land: % of total land	22.3
Child deaths/1,000 live births	87	Natural land as % of total land	27.0
Total fertility rate: children/woman	3.3	Change in area of native forest: %/year	-0.2
Children with low weight for height: %	22.8	Protected area index: weighted %	8.1
Population with access to safe water: %	59	Degraded land index: weighted %	70.3
Real GDP/person: PPP\$	4,334	Total suspended solids in rivers: mg/l	1,111
Average annual inflation rate	8.9	Water withdrawal: % of supply	29.7
Average annual unemployment rate	4.7	Nitrogen dioxide in city air: $\mu\text{g}/\text{m}^3$	72
External debt service: % of exports	67	Particulates in city air: $\mu\text{g}/\text{m}^3$	106
Central government deficit: % of GDP	-5.9	Carbon dioxide emissions: T/person	2.01
Net primary school enrolment rate: %	94	Use of ozone depleters: g/person	18.8
Net secondary school enrolment rate: %	49	Threatened plant species: % of total	35.6
Adult literacy rate: %	81.8	Threatened animal species: % of total	7.9
Phone lines + cell phones/100 persons	12.3	Threatened animal breeds: % of total	6.8
Homicides/100,000 population	24.1	Energy requirement: gigajoules/person	73.8
Assaults/100,000 population	358	Food crop production: T/harvested ha	4.4
Military expenditure: % of GDP	1.8	Fertiliser consumption: T/100 ha	6.8
Richest 20%'s income: poorest 20%'s	19:1	Fishing capacity: T/ km^2 fishing area	0.3
Female share of earned income: %	30.9	Fish catch: T/T of fishing capacity	7.1
Decision-making posts: % females	16	Timber removals + imports: % of vol.	2.5

A Framework for Sustainable Development



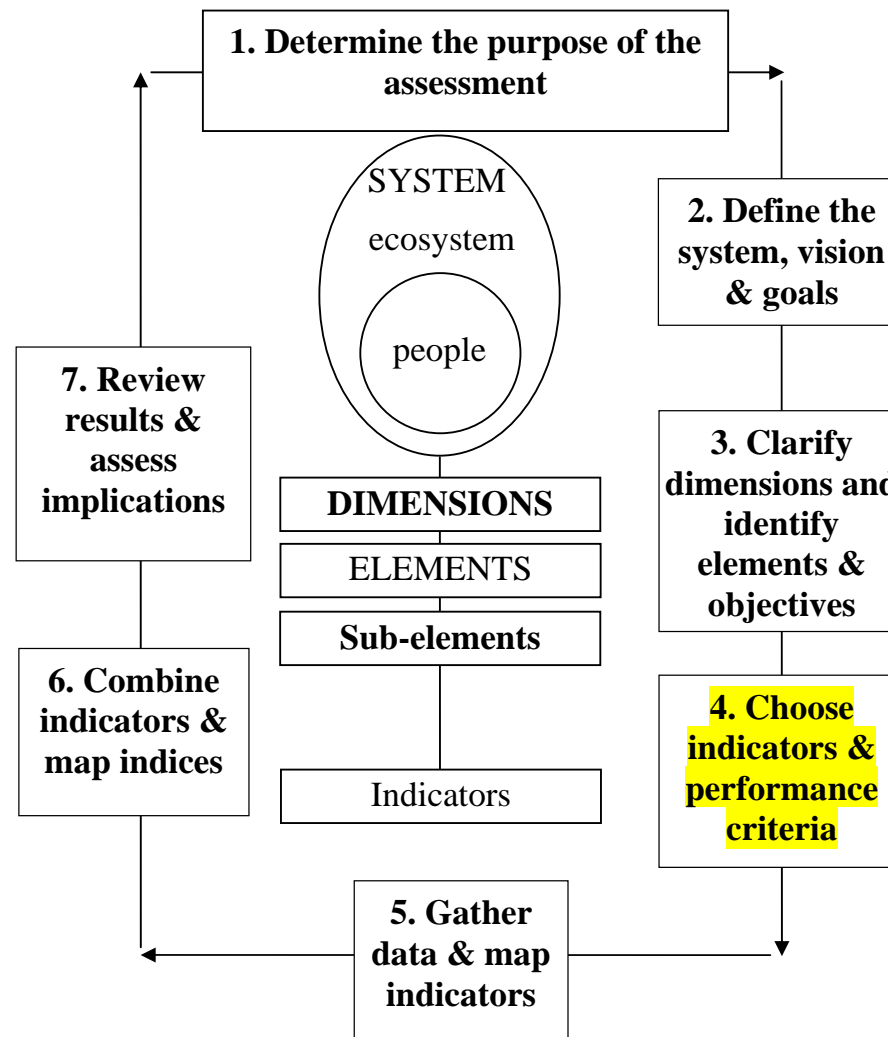
A Framework of Dimensions

The dimensions suggested are helpful for most assessments. Using this framework can help users think of including a **comprehensive**, yet **context-specific**, set of elements and indicators.

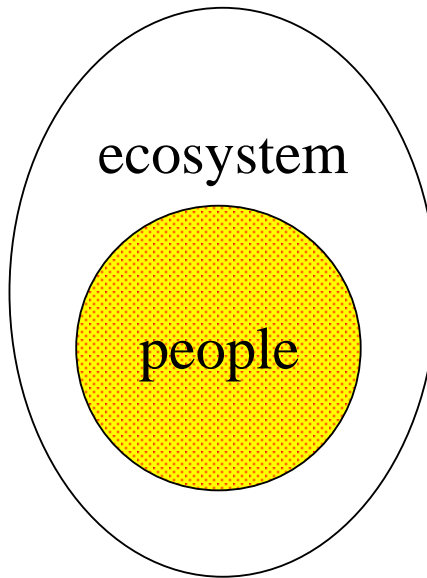
The suggested framework:

- allows assessments to be tailored to local conditions and needs and at the same time to be **comparable** with other assessments
- combines a wide range of elements into **a few major groups** of roughly equal importance

Sustainability Assessment: Seven Stage Cycle



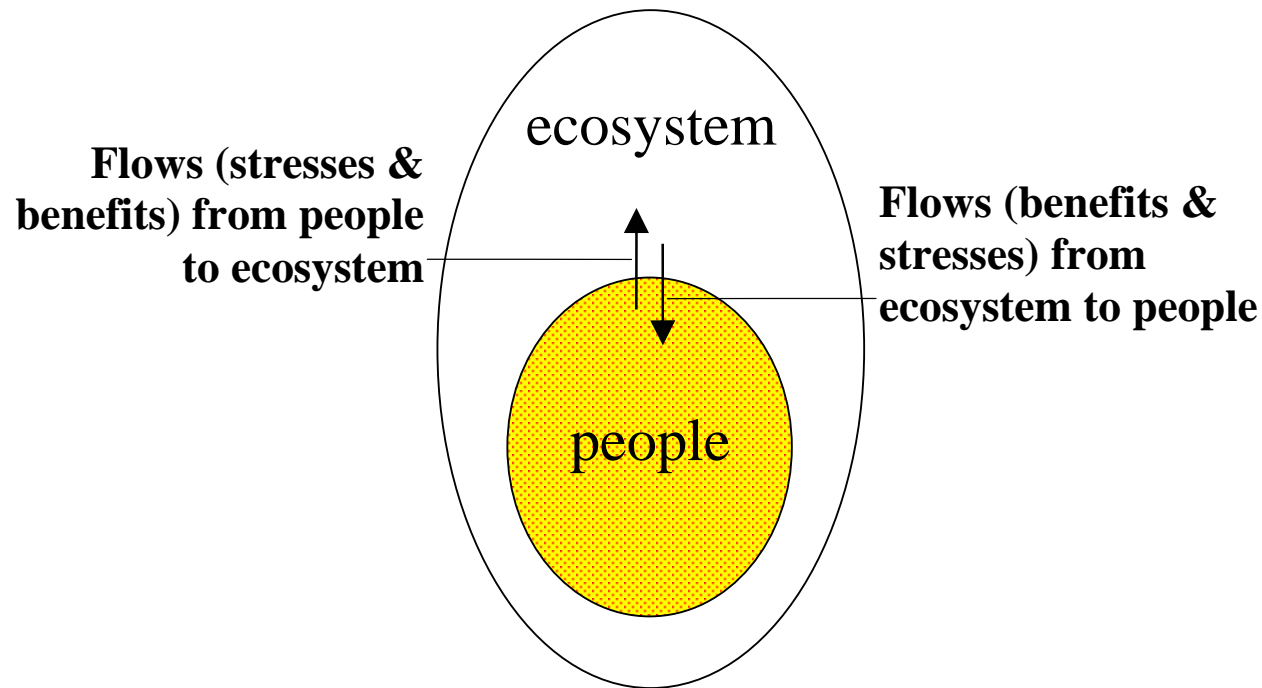
Equal Treatment of People and Ecosystem



The Egg of Wellbeing

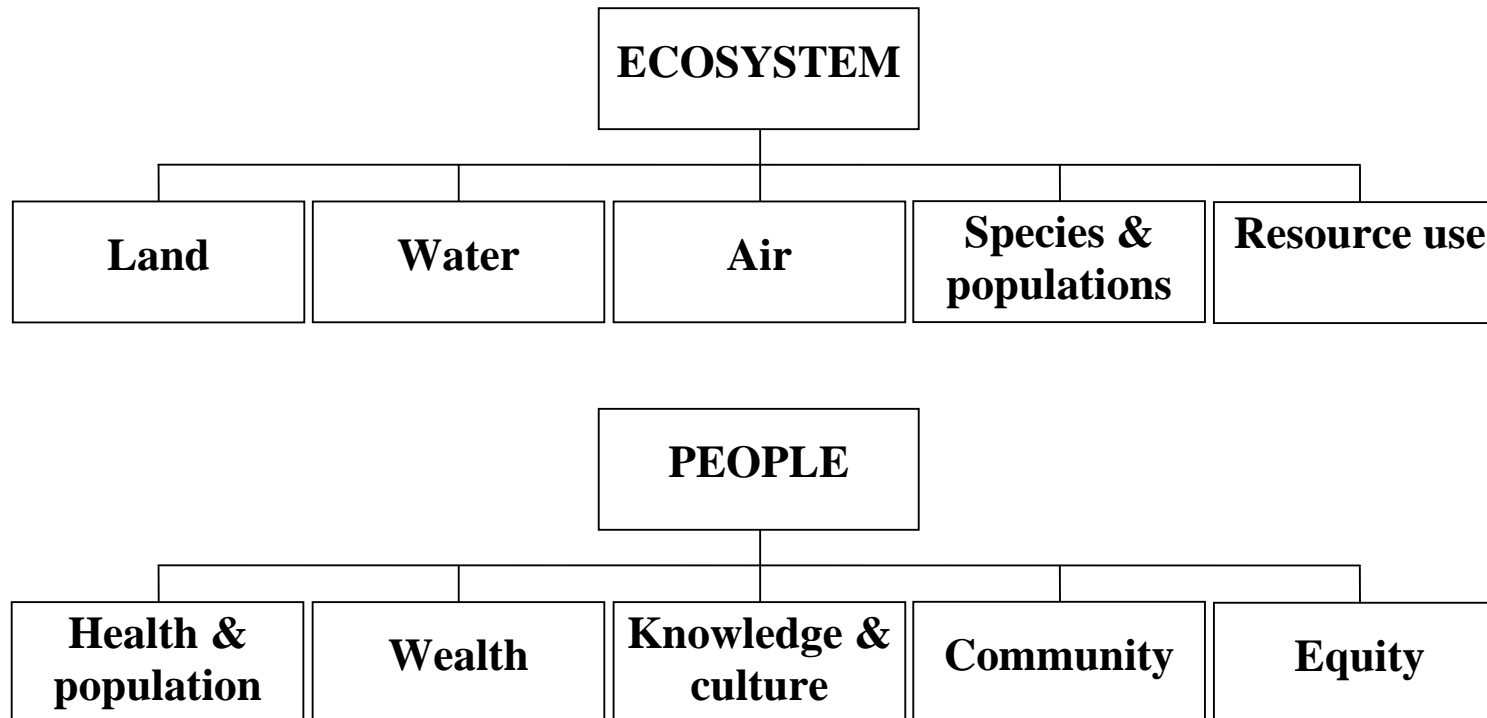
Hypothesis: sustainable development = human wellbeing + ecosystem wellbeing. Just as an egg is good only if both the white and yolk are good, so a society is well and sustainable only if both people and the ecosystem are well.

Equal Treatment of People and Ecosystem

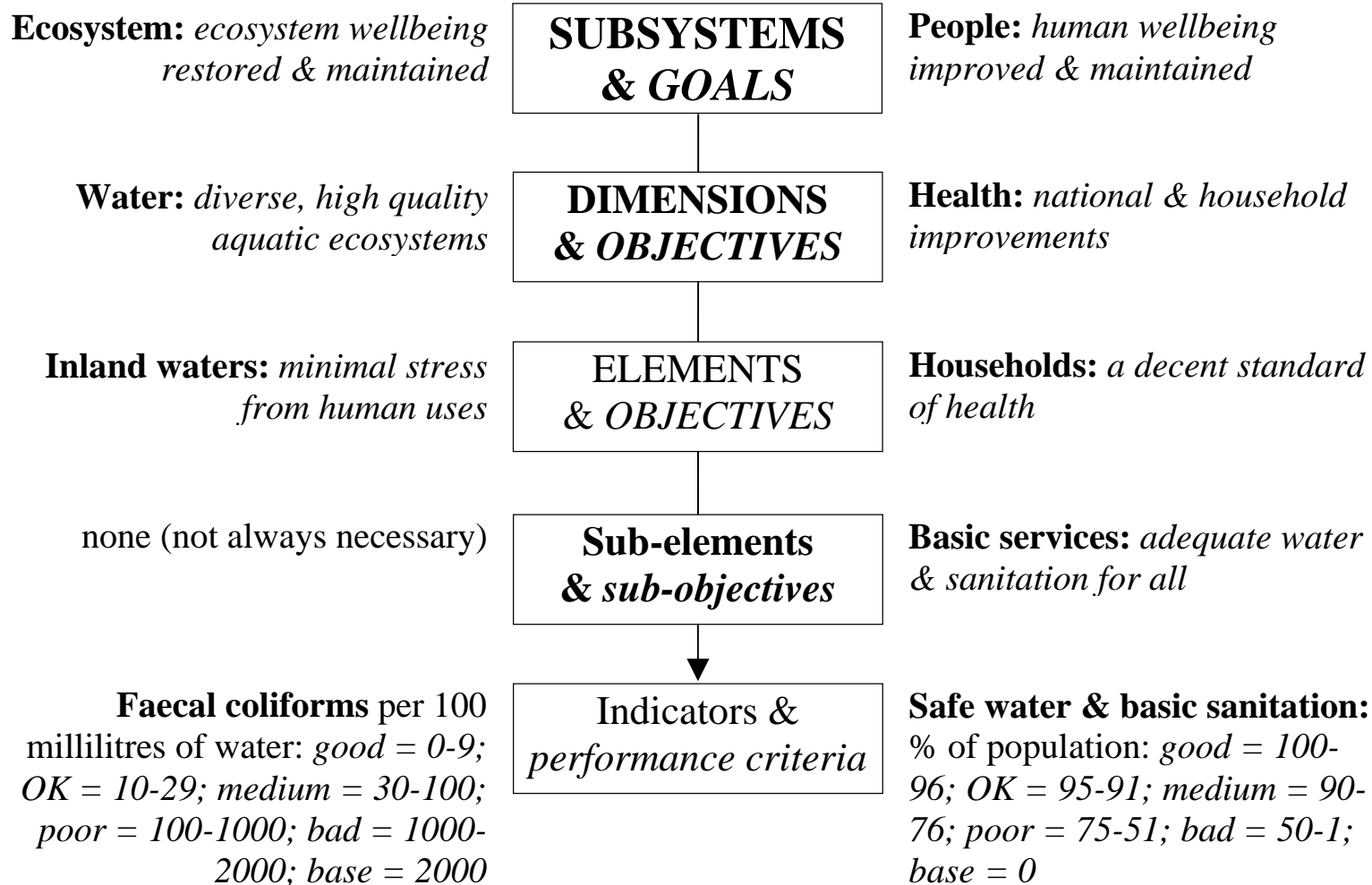


- Wellbeing of people and ecosystem considered together but measured separately.
- Interactions between people and ecosystem recorded under subsystem.
- Allows progress in human development and ecosystem conservation to be compared.

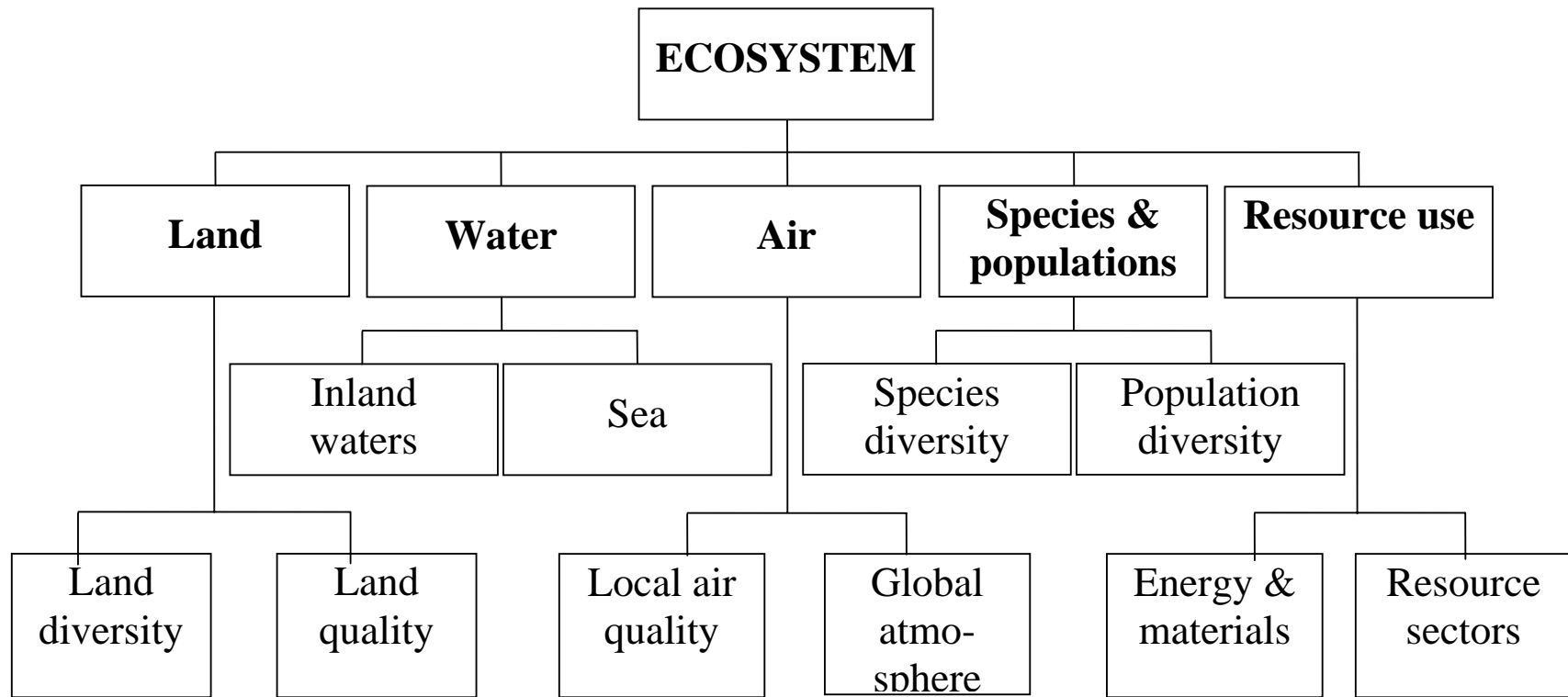
A Framework of Dimensions



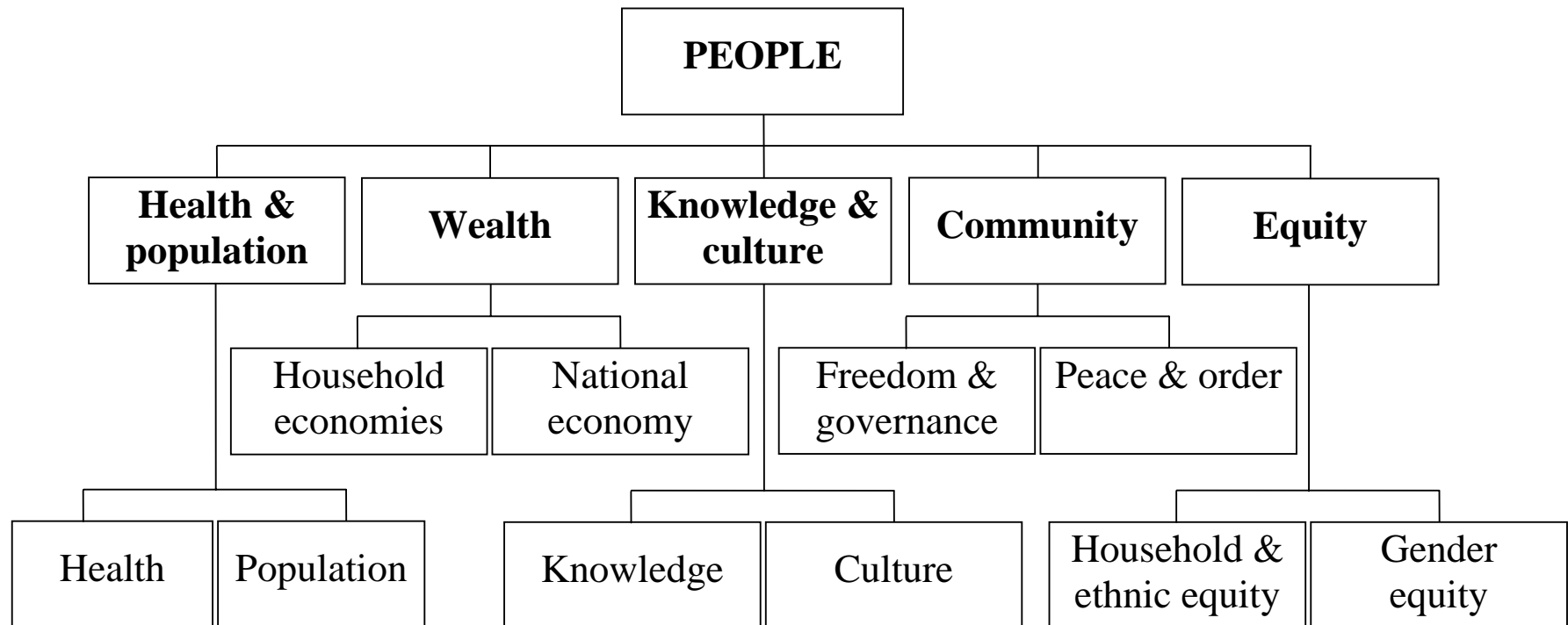
Hierarchy of Elements & Objectives



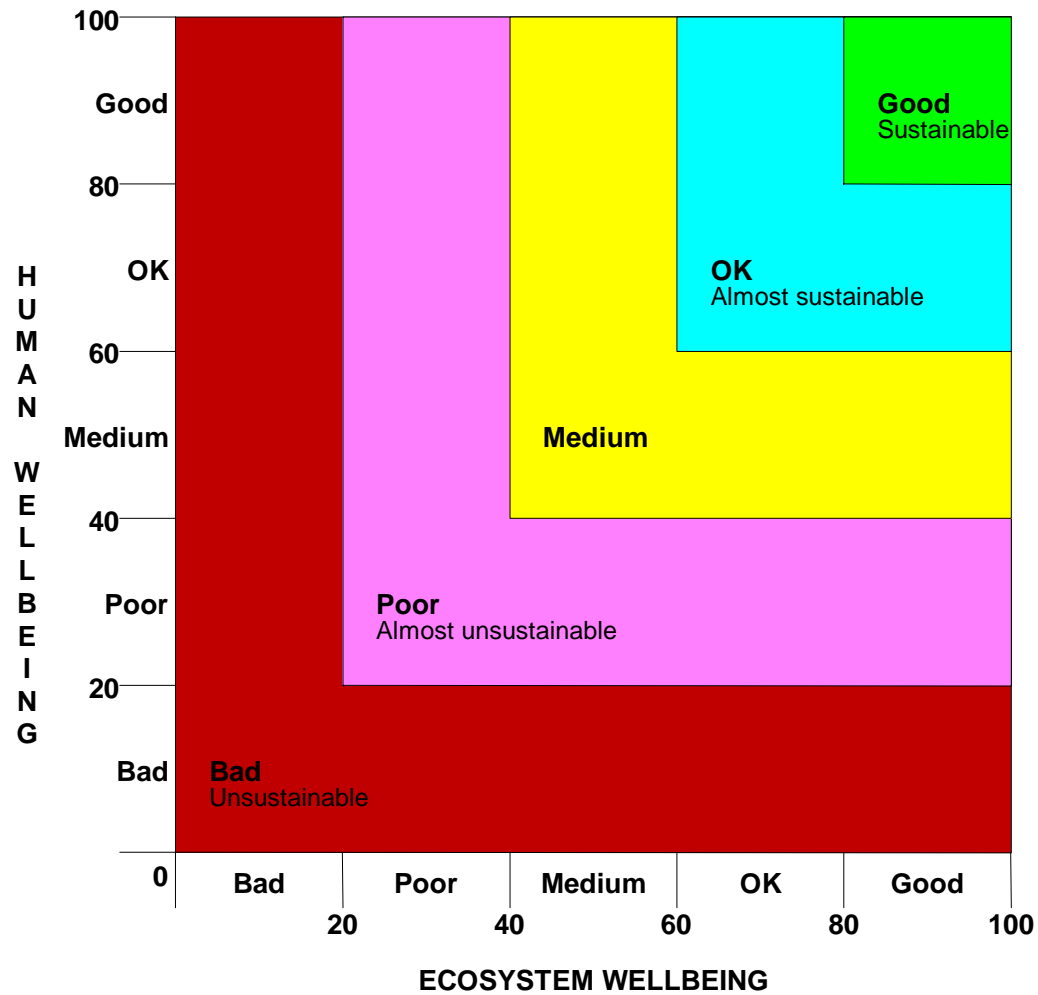
Ecosystem Elements & Objectives:



Human Elements & Objectives



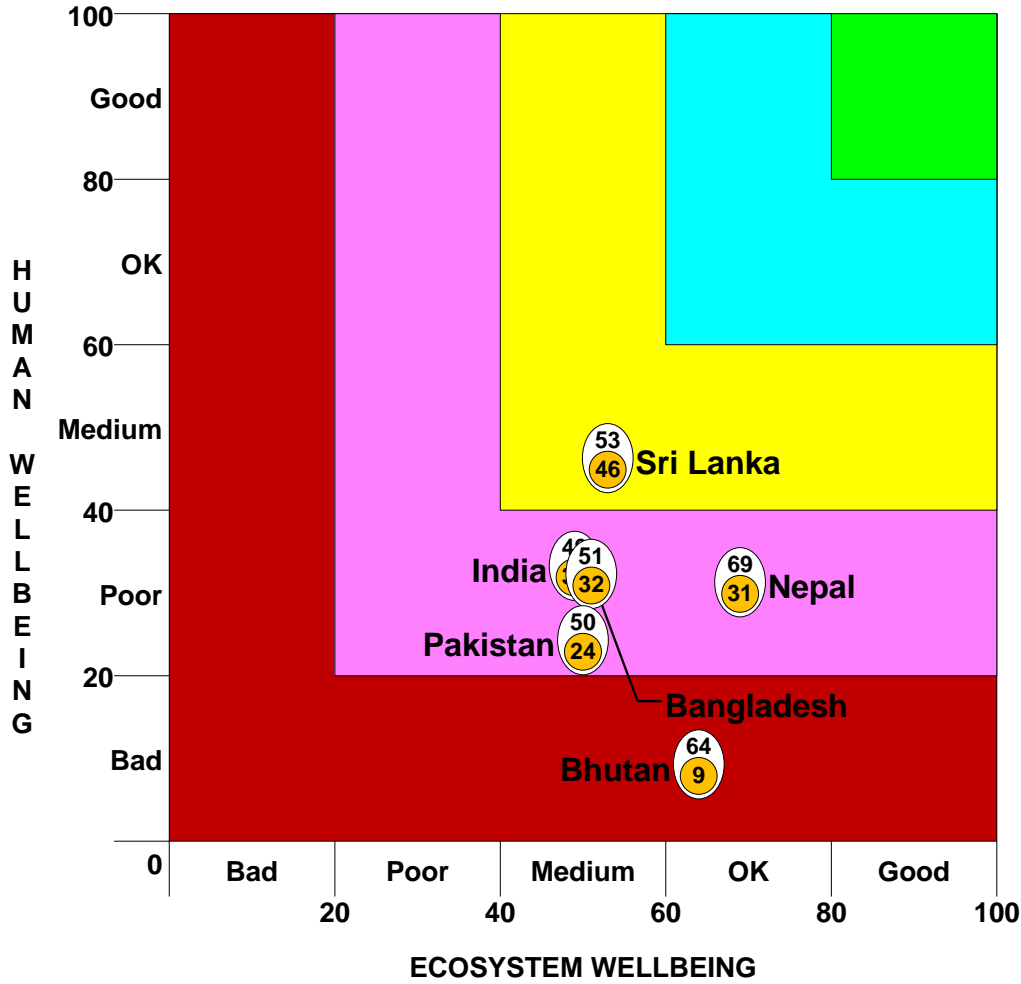
Barometer of Sustainability



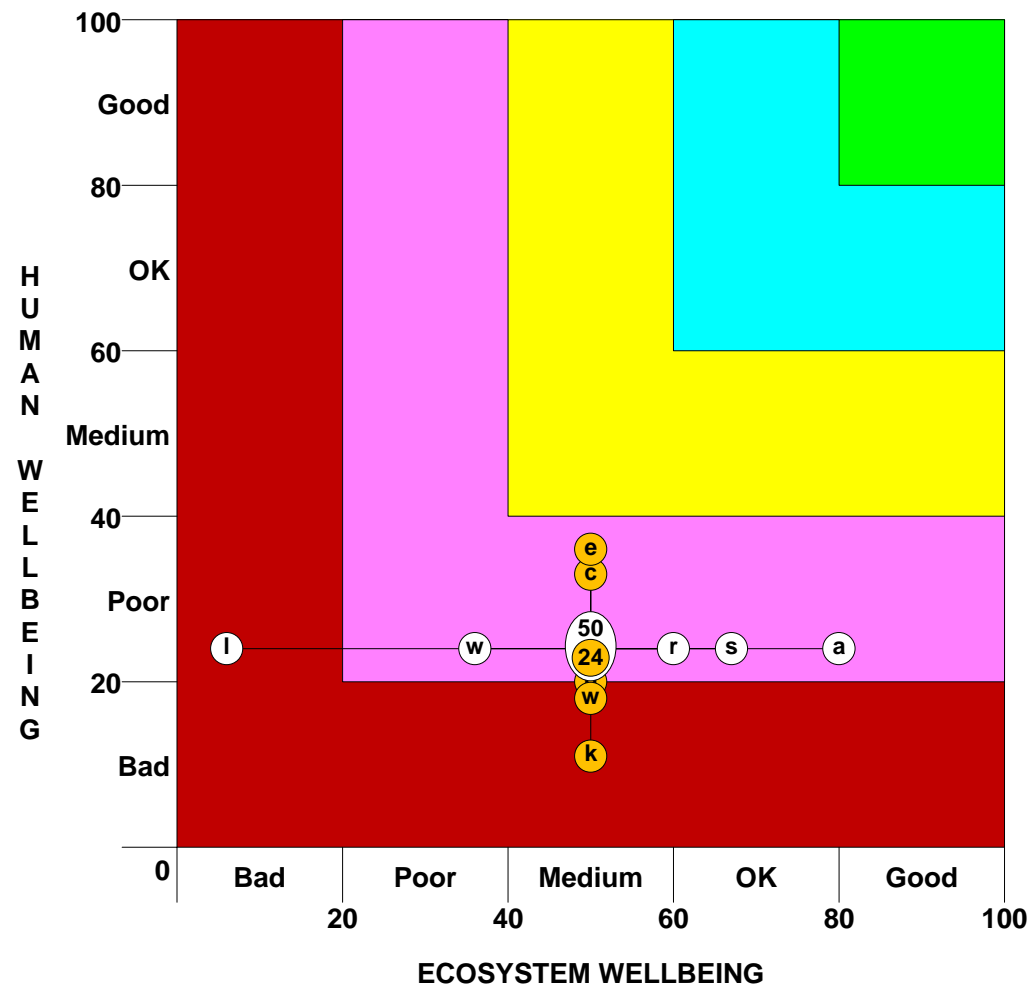
Barometer of Sustainability

- **Combining the indicators into indices (compound indicators)** enables users to obtain clear messages, gain an overview of wellbeing and sustainability, and show where performance is especially weak or strong.
- **The Barometer of Sustainability** is a tool for combining indicators and displaying the results. It is designed to measure human and ecosystem wellbeing together without submerging one in the other:
 - Two axes, one for human wellbeing, the other for ecosystem wellbeing.
 - Must improve on both axis in order to advance – the axis with the lower score overrides the other axis.

Human & Ecosystem Wellbeing: South Asia



Performance Pattern: *Pakistan*



Multi stakeholder user focus – expert inputs

- Users are decision-makers (at the level of the assessment) and people who influence them.
- Users identify elements and objectives, choose indicators, and decide performance criteria.
- Inclusive, open approach to participation.
- Experts participate to present and discuss expert data
- Data made available to all, and assumptions and judgements clearly stated, so that others may test alternative interpretations.
- Method as easy to use as possible, to make it accessible to potential users at all levels, and to ensure that users can manage their own assessment process.

Narrative + Measurement + Mapping

Narrative: Tells the story... Describes context and vision... Argues the choice of elements, objectives, indicators, performance criteria... Exposes assumptions... Analyses causes and implications... Draws conclusions.

Measurement: Involves choosing, organizing, recording and combining a set of indicators... Produces a core of systematic information... Provides a common and consistent language for defining performance.

Mapping: Records and communicates spatial indicators most effectively... Obliges view of the whole spatial area... Reveals gaps in coverage... Shows patterns of performance.