

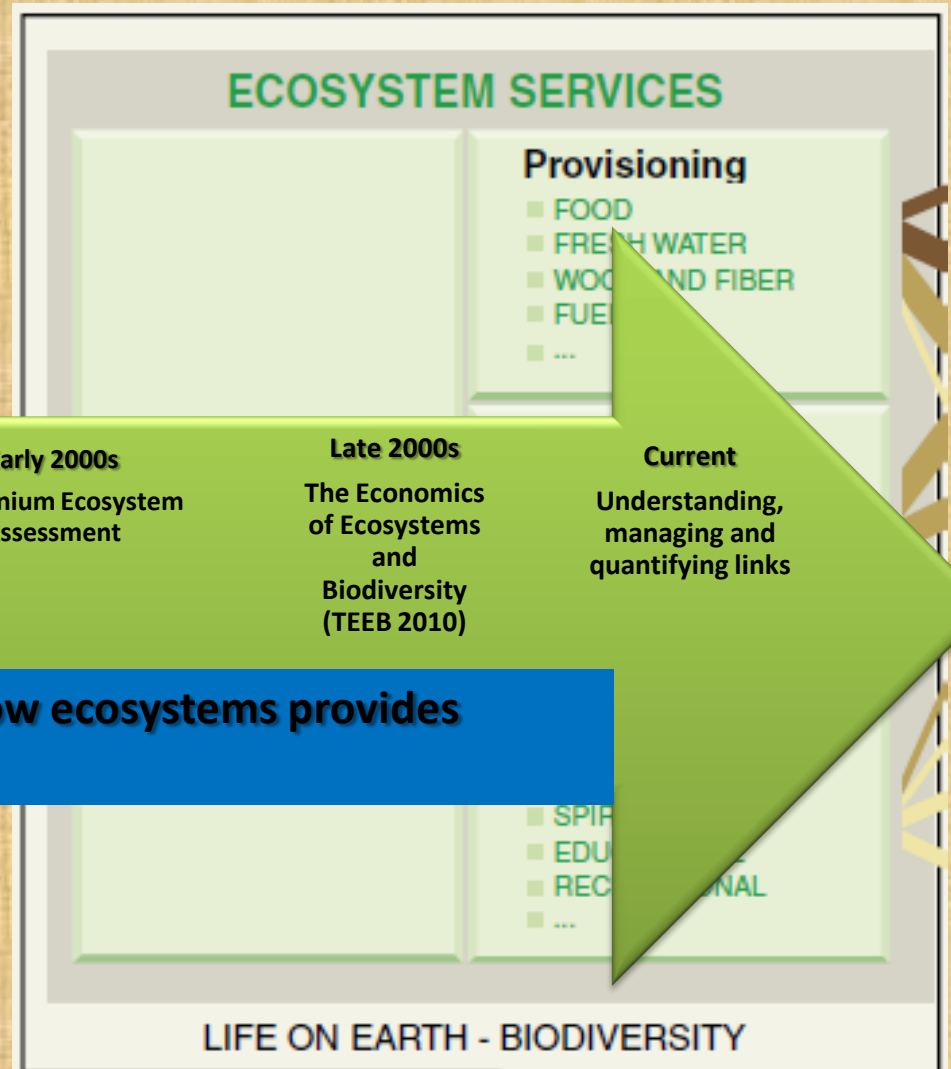
Ecosystem Services and Human Wellbeing: Are we measuring the right things?



Thicket Forum 2013

What are ecosystem services?

Ecosystem services are benefits we derive from nature

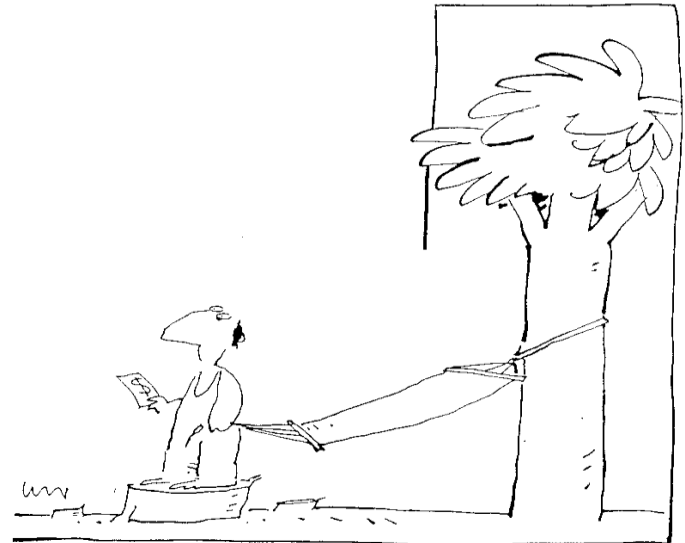


What is human wellbeing?

Human wellbeing is the state of being comfortable, prosperous, healthy, or happy. **Objective and subjective**

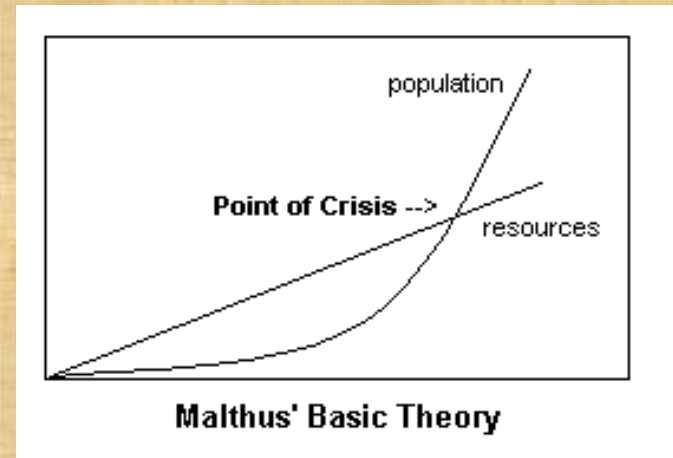
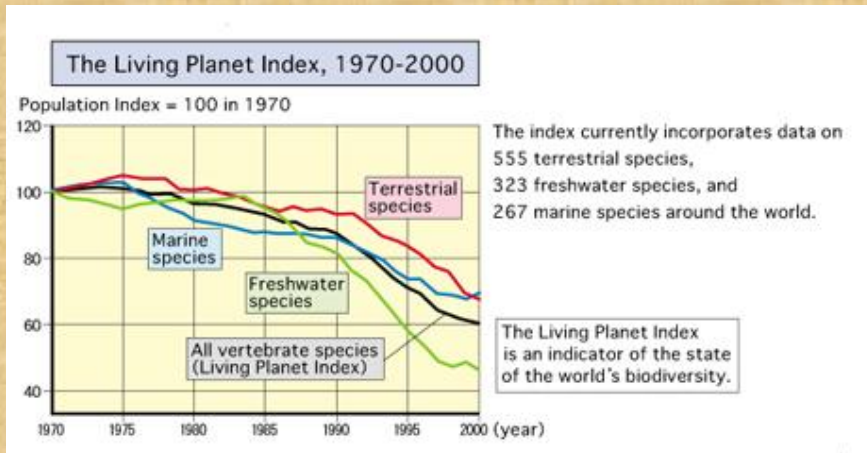
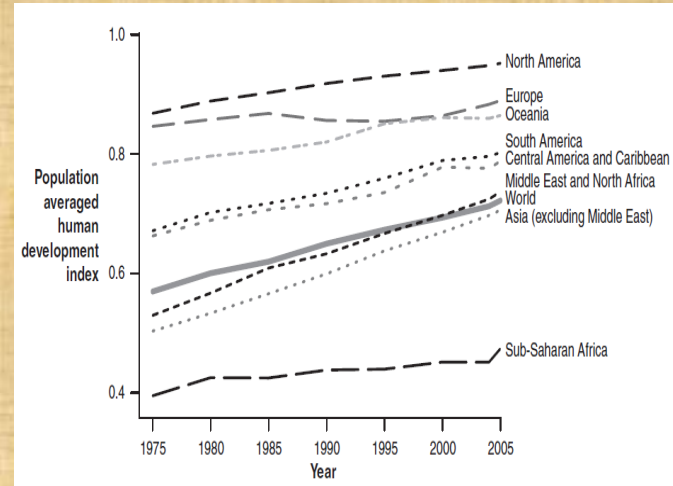
Common measures of human wellbeing

- Gross domestic product (GDP)
- Human Development Index (Life expectancy, Education, GDP)
- Equity (e.g. Gini coefficient)



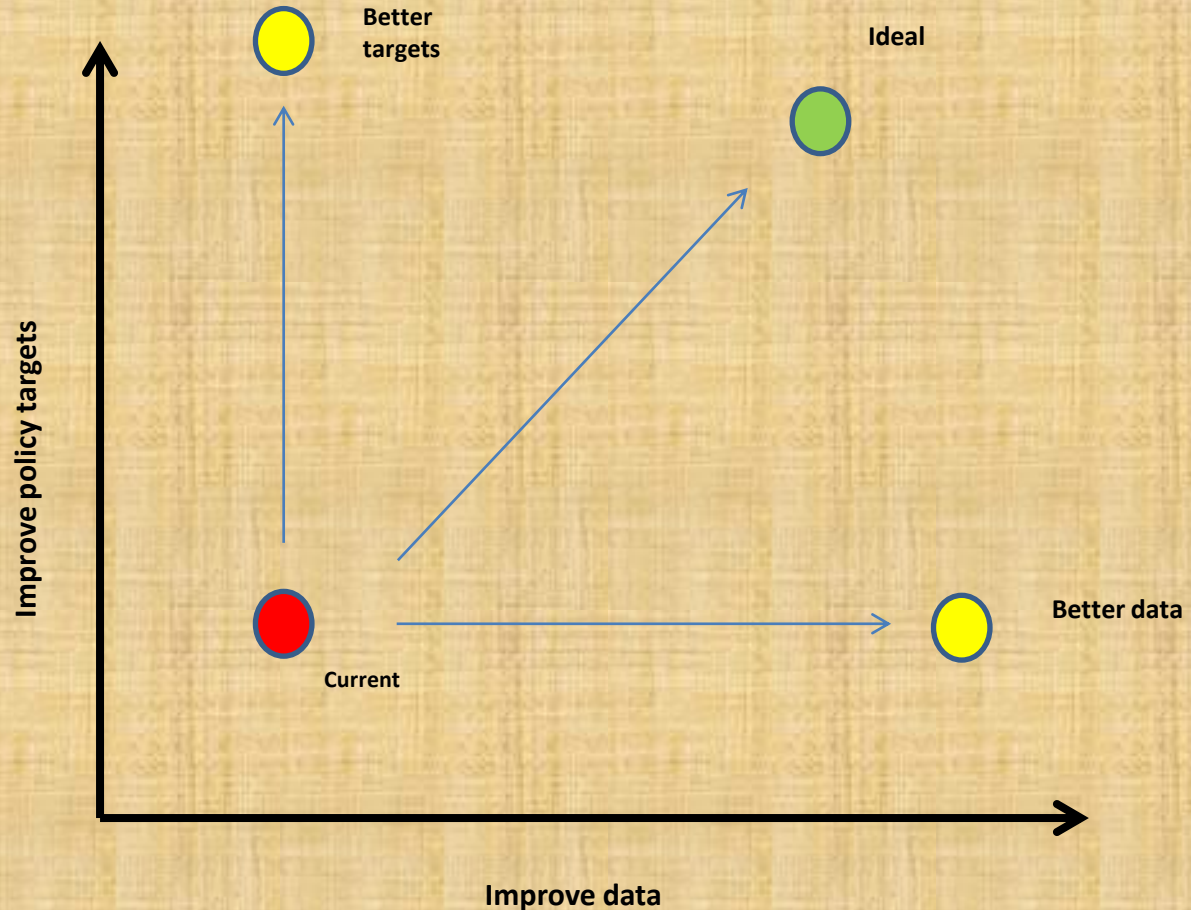
The paradox

Why is human well-being increasing while ecosystem services degrade?



What we think to be the problem

- Current measures of human wellbeing not sensitive to ecosystem decline
- Policy targets either environmental or developmental
- Existing data are not fit for purpose



Our objective

Transform existing data to develop indicators which reflect a better connection between ecosystem services and human wellbeing



We use two Millennium Development Goals targets:

- halve the proportion of people living below the poverty line of \$1.25 and;
- increase employment in ecosystem based sectors to population ratio

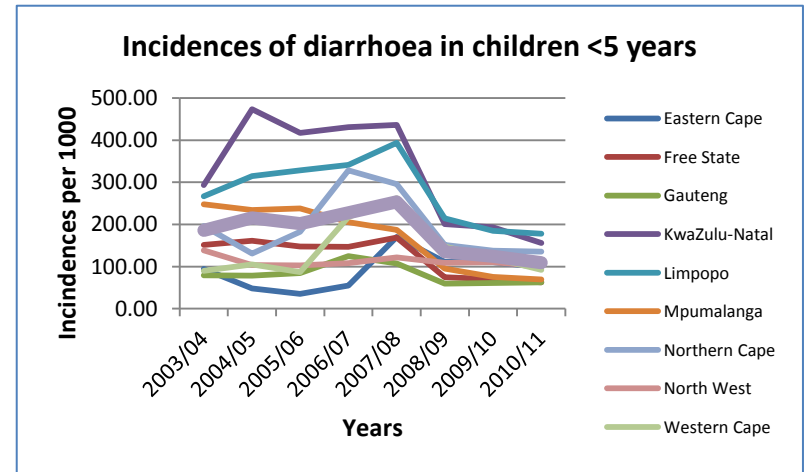
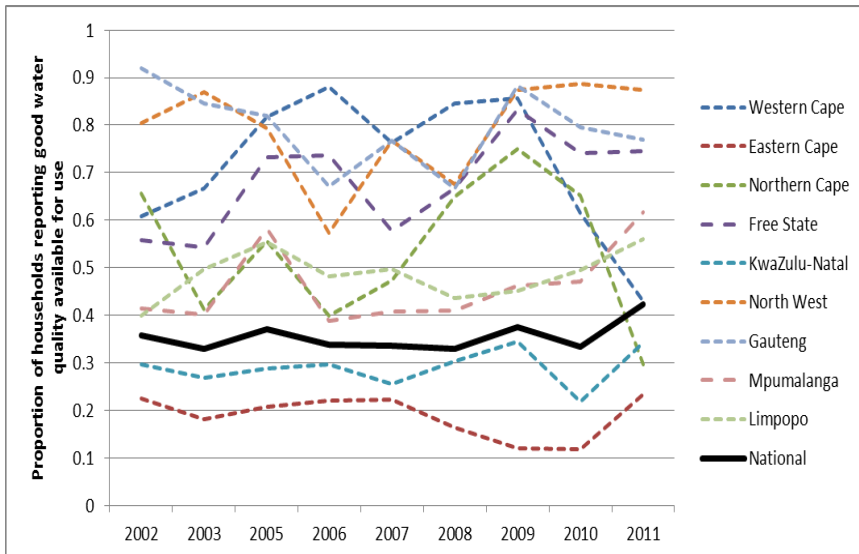
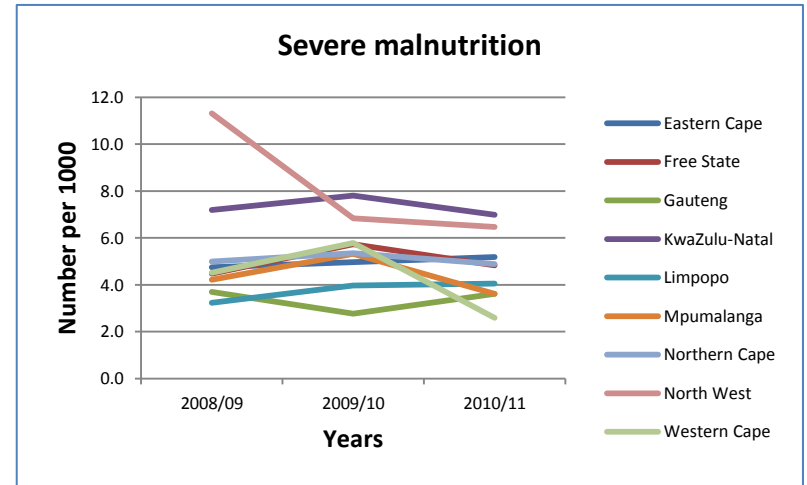
Indicators we propose;

$$\text{Eco based out poverty} = \Delta \text{poverty level} * \frac{\Delta \text{Ecosystem based income}}{\Delta \text{Total national income}}$$

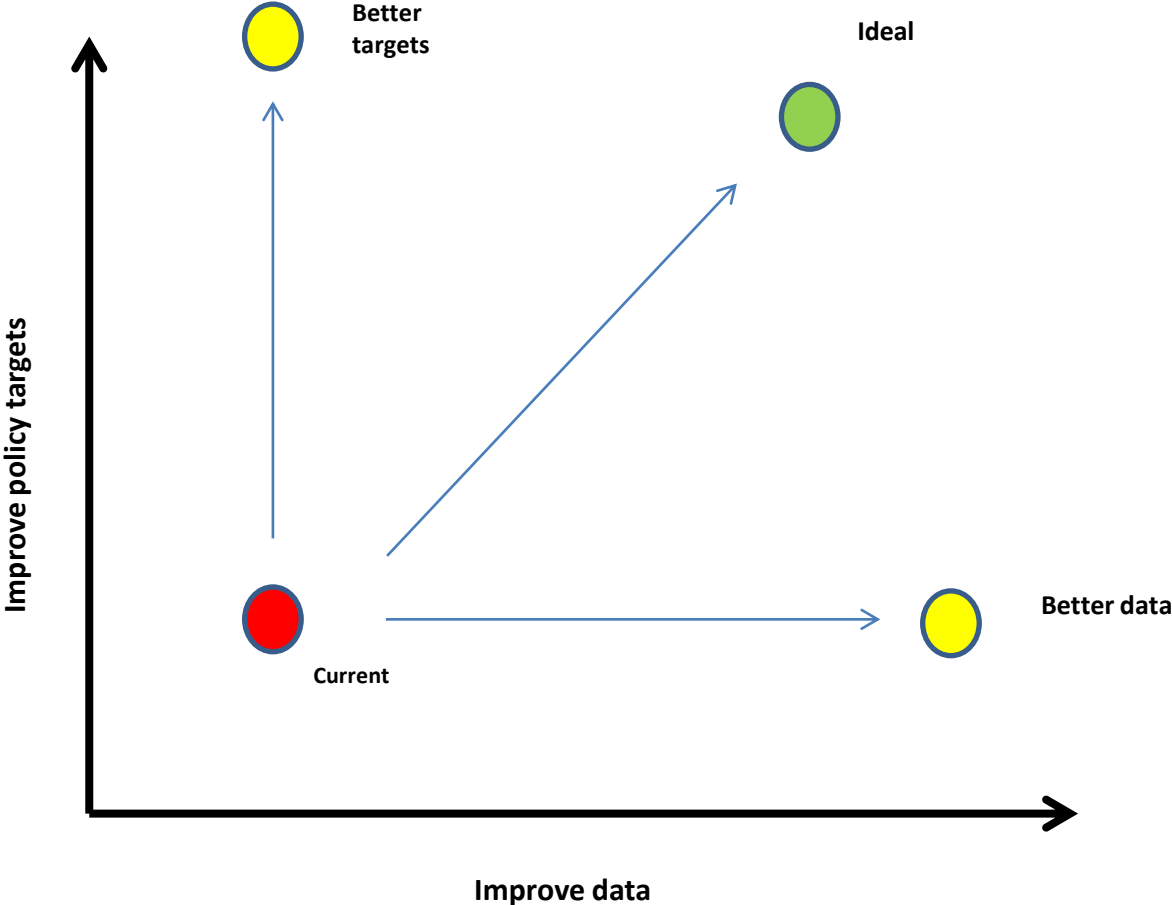
$$\text{Eco based employ to pop ratio} = \frac{\text{Ecosystem employ}}{\text{Total population}}$$

Other indicators

- Water quality to water borne diseases
- Nutrition
- Alternative wellbeing measures: GPI, Happiness Index



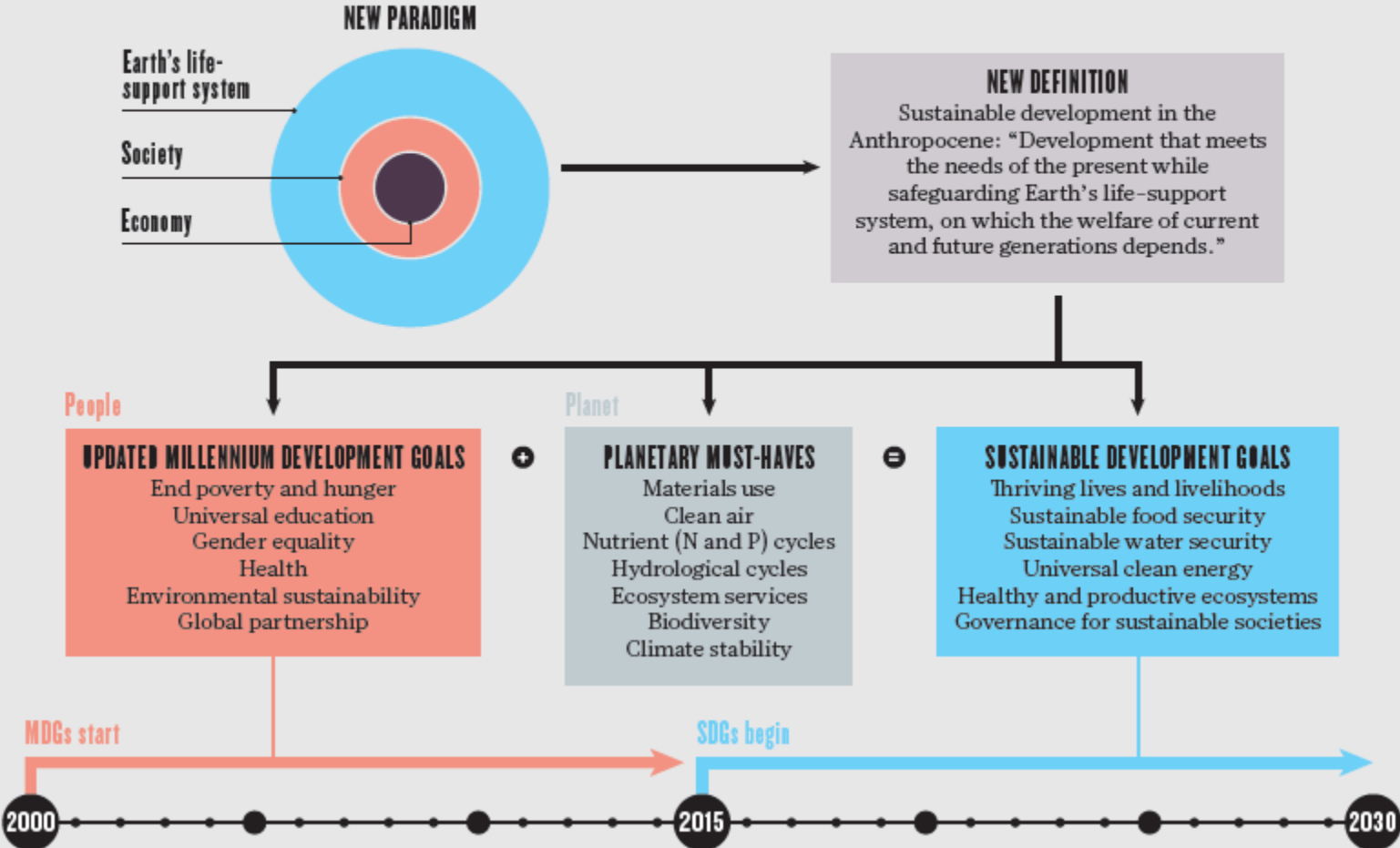
Opportunities to move up the y-axis



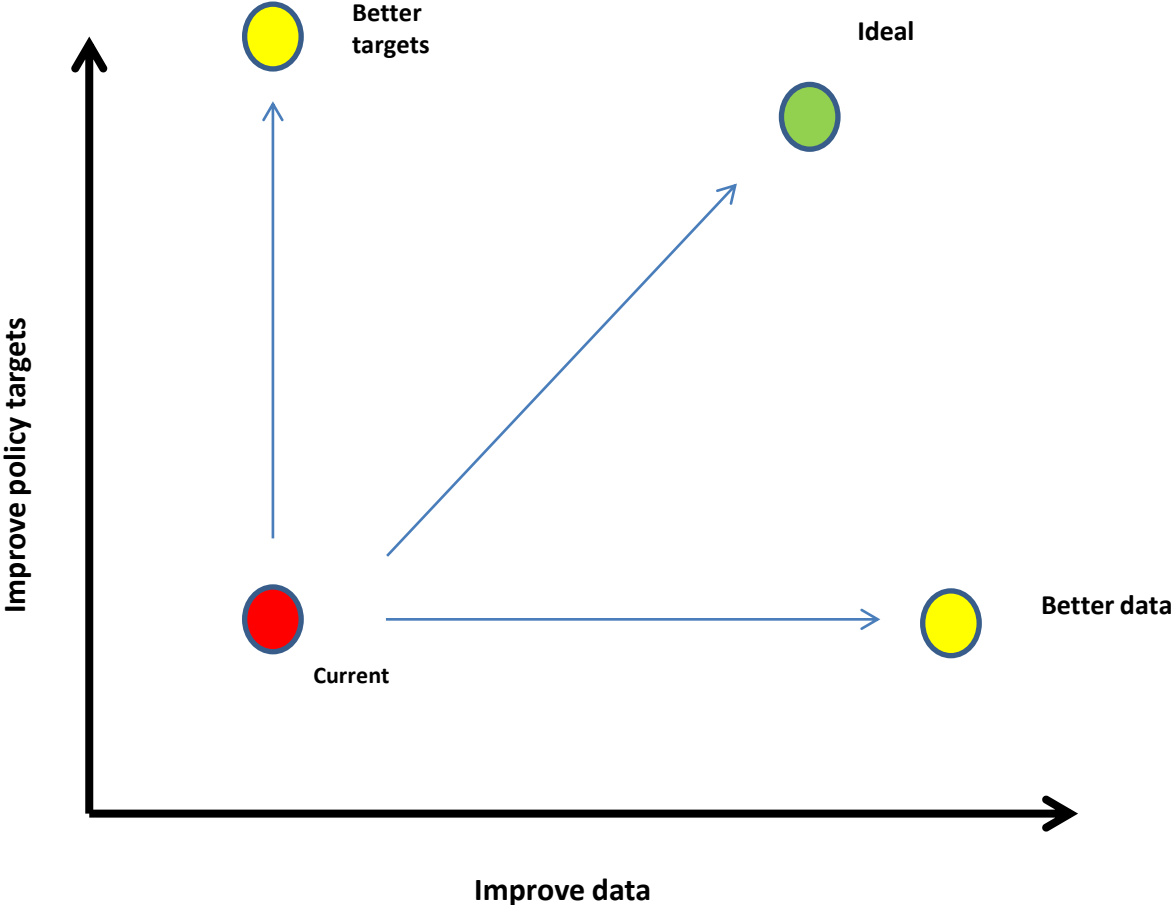
Opportunities to move up the y-axis

A UNIFIED FRAMEWORK

A set of six sustainable development goals (SDGs) follow from combining the Millennium Development Goals (MDGs) with conditions necessary to assure the stability of Earth's systems.

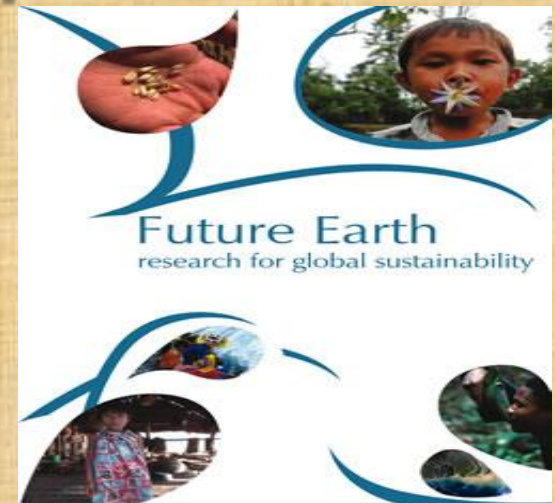


Opportunities to move up the x-axis



Opportunities to move up the x-axis

- The GEO Biodiversity Observation Network(GEOBON)
- Future Earth
- Vital signs
- Census



Thanks

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