

# Seminario Más allá del PIB: desafíos estadísticos para la medición del desarrollo



NACIONES UNIDAS

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## Contributions of environmental indicators

Arturo Flores Martínez  
Instituto Politécnico Nacional



## Contenido

- Why is GDP an insufficient measure of development?
- Alternative proposals
- Complementary environmental indicators
- Role of the statistical offices in the conformation of these indicators

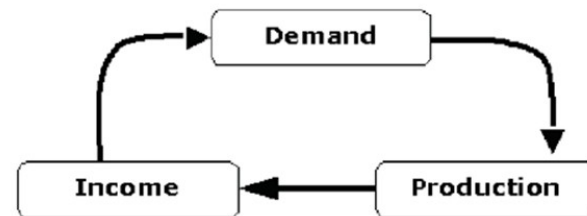
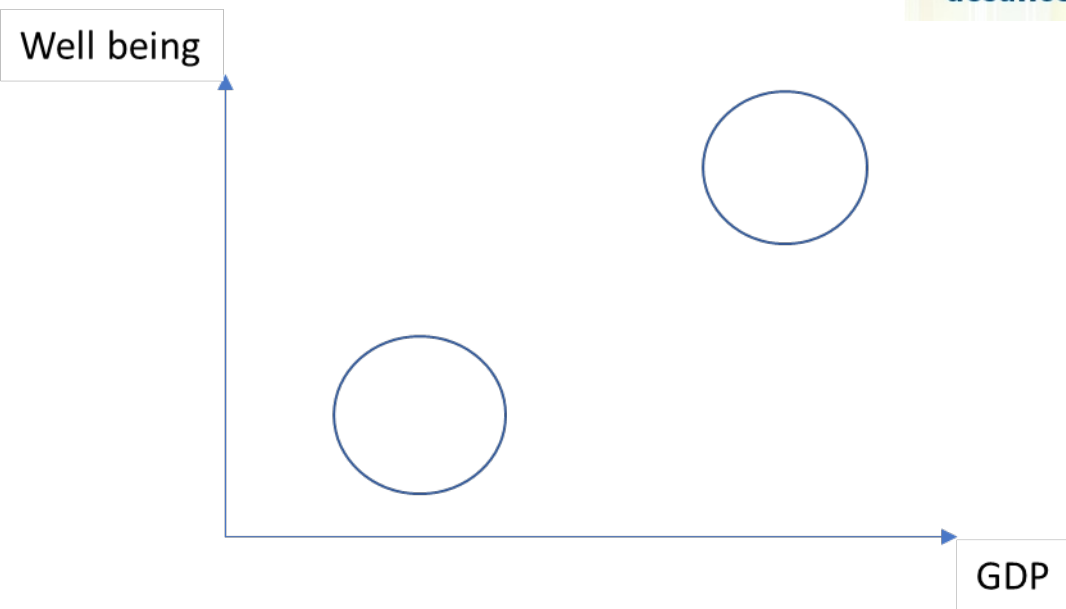
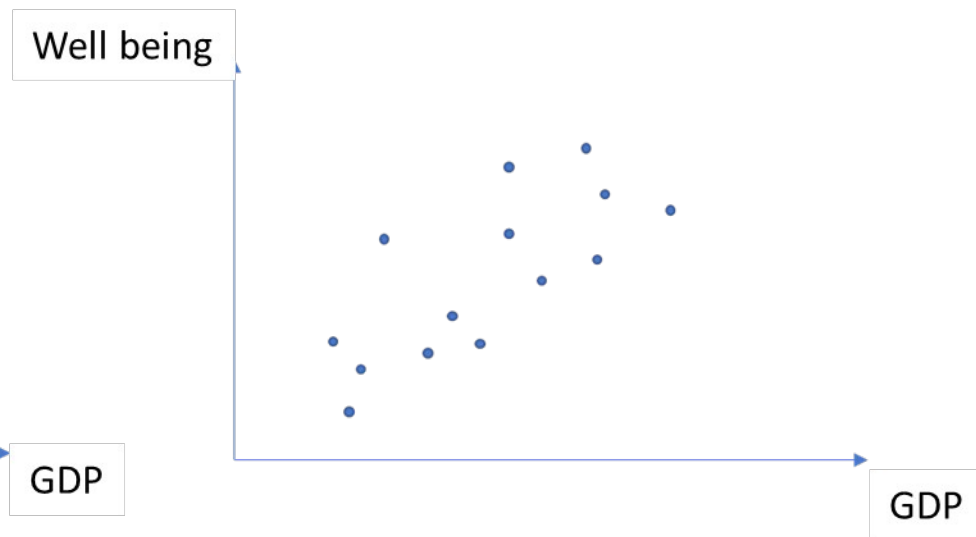
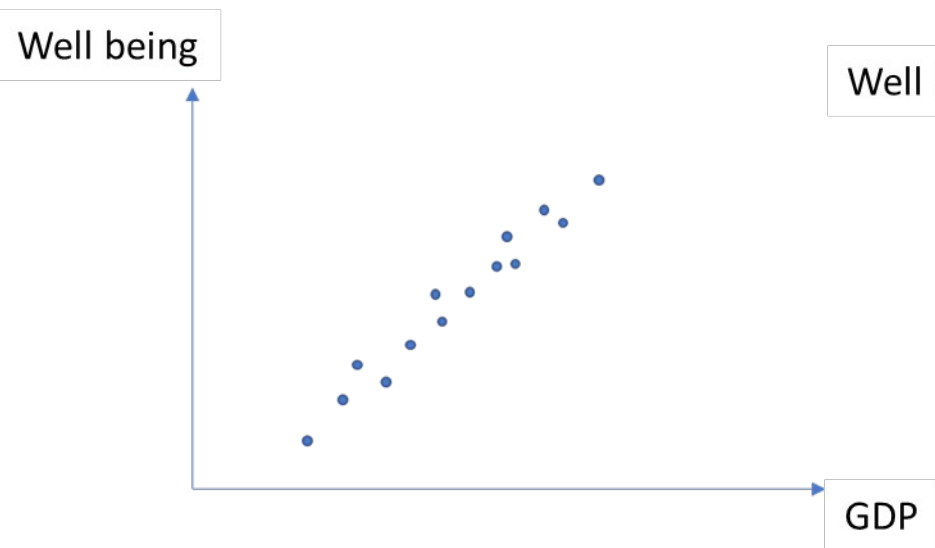
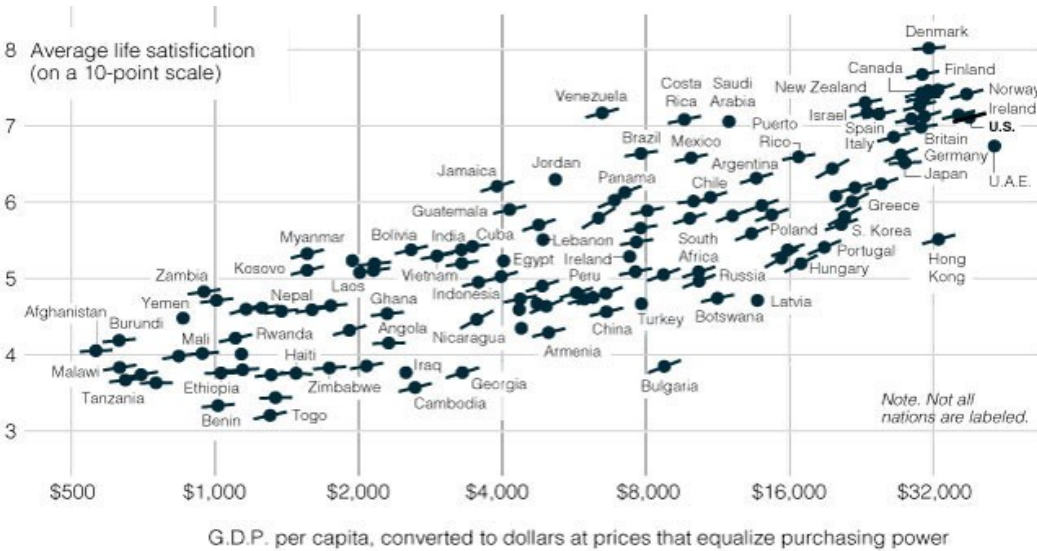


Figure 1: GDP





- High variance
- Nonlinear relationship

Source: Betsey Stevenson and Justin Wolfers, Wharton School at the University of Pennsylvania

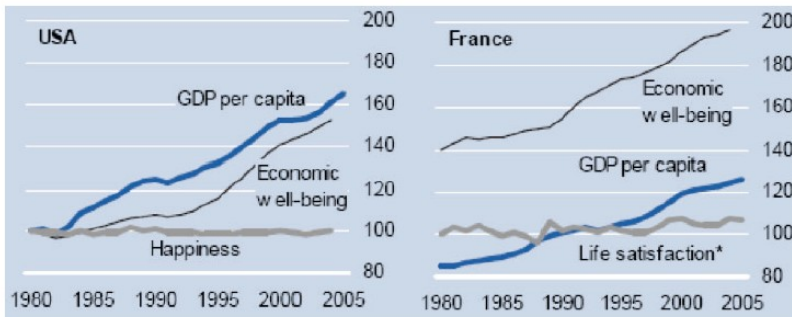
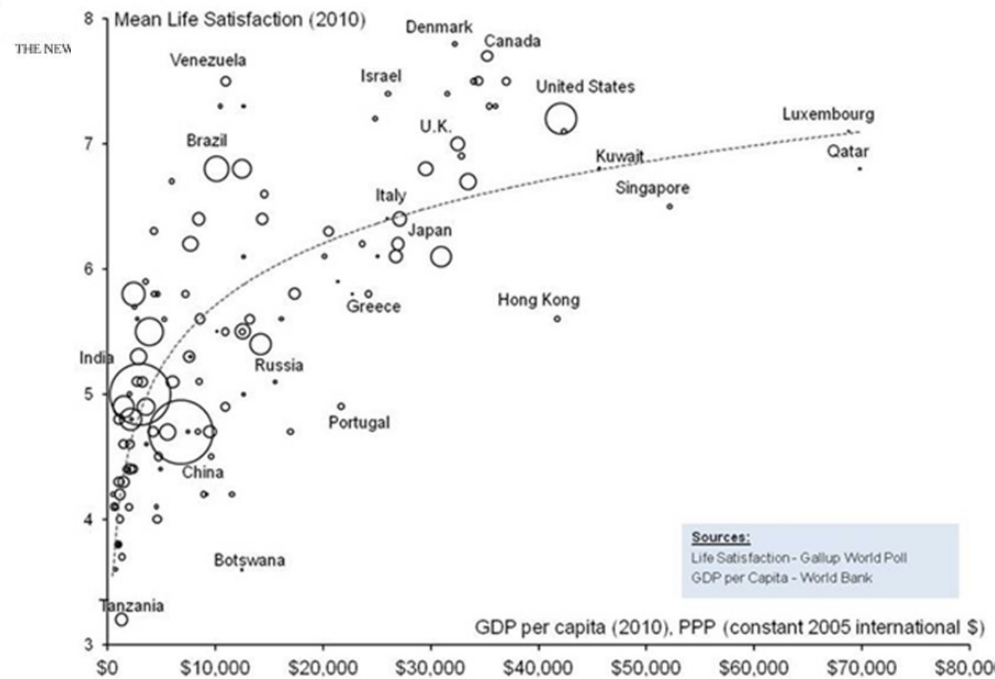


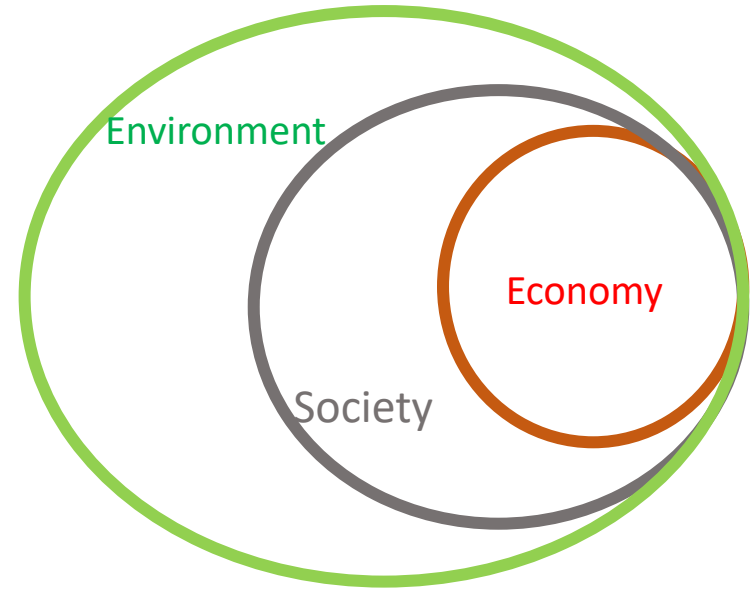
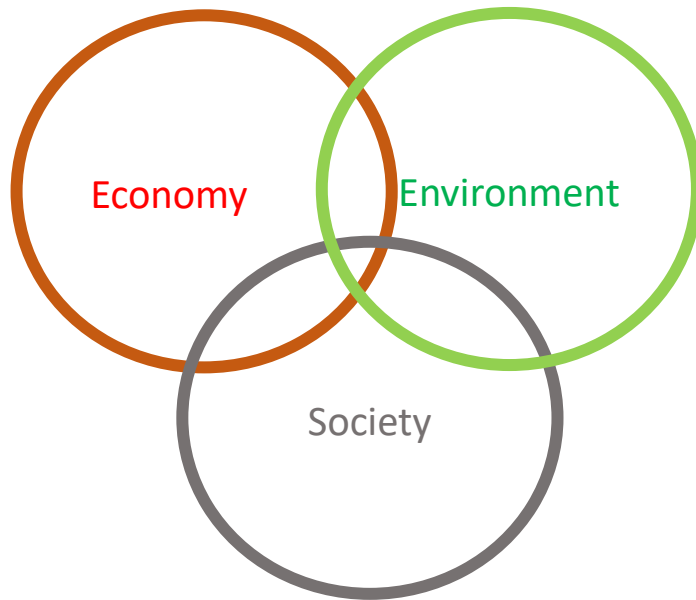
Figure 3: Income, economic well-being and happiness in the USA vs. France, USA 1980 = 100  
(Sources: Deutsche Bank Research (2006), from GGDC, CSLS, GSS, Eurobarometer)



The GDP is an insufficient and not very useful indicator to measure well-being and, even less so, to know (identify) what to do to improve it.

Why is still used?:

- **There is no other**
- It is familiar and “understandable” by users
- It is consistent with the economic logic of the development model



### Alternatives:

- Modify the GDP
- Alternative índices/indicators: HDI, Huella ecológica
- Complementary indicators to the GDP: SEEA, EPI, ESI.

The commitment is to complement GDP...

*The United Nations Secretary-General... calls for "new measures to complement GDP, so that people can gain a full understanding of the impacts of business activities and how we can and must do better to support people and our planet".*

# Environmental indicators

*From a conceptual framework to a list of Indicators*

There are different approaches to defining sustainability.

“Sustainable development refers to the capacity that the human system has developed **to meet the needs of current generations** without compromising the resources and opportunities for the **growth and development of future generations.**”

Brundtland Report, “Our Common Future”, 1987

The definition of sustainability implies a current condition but also a future one (conditions and resources).

## **I. Natural resources:**

- Quantity
- Quality
- Consumption (extraction rate based on renewal rate)

## **II. Services and processes**

- Pollination, soil formation, climate regulation, pest control, etc.

## **III. Habitability (local and global)**

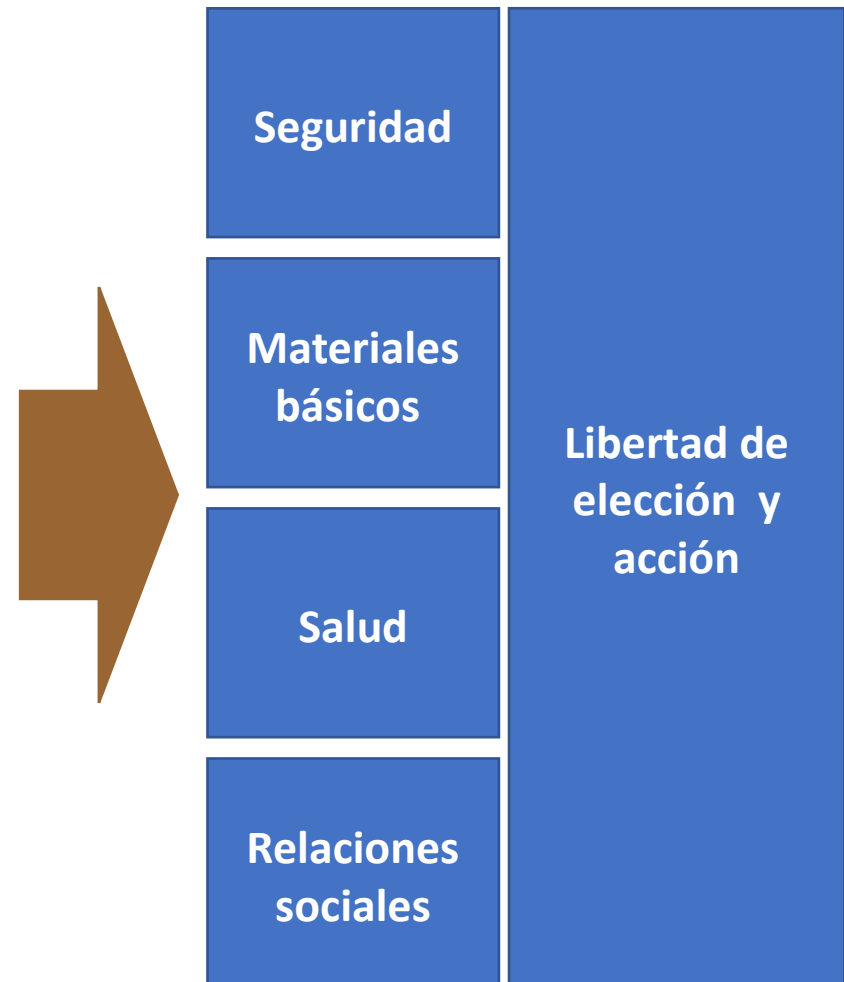
- Healthy environment (air quality), safe (vulnerability to extreme hydrometeorological phenomena), culture, recreation, etc.
- Global: Global environmental change (climate change, ocean acidification, defaunation, etc.).



## Ecosystem services



## Components of well-being



## From the framework to indicators

Indicator:

- sign, clue, hint.
- purpose and context

Importance of defining users/target audience

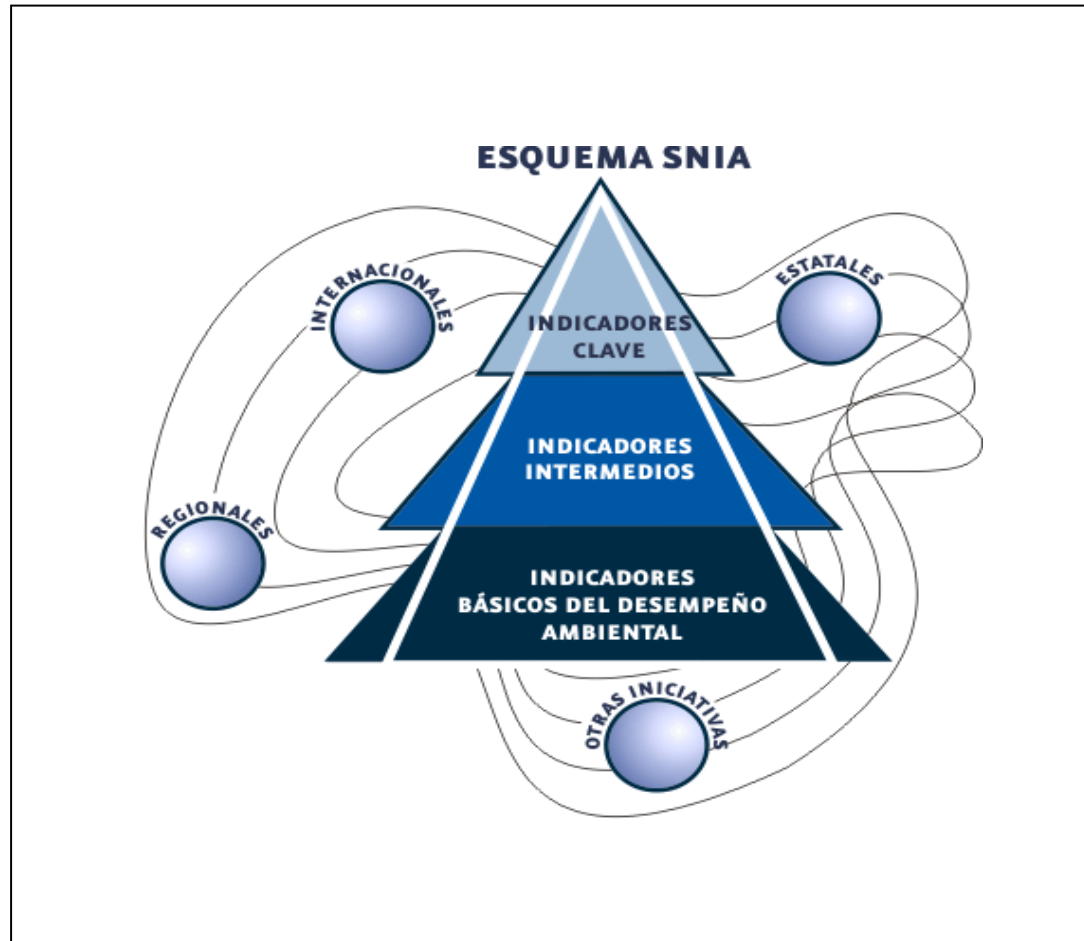
- If the central objective is international comparison: standardization, feasibility of "global" calculation, reduced number of indicators.
- If the central objective is for local/national use:

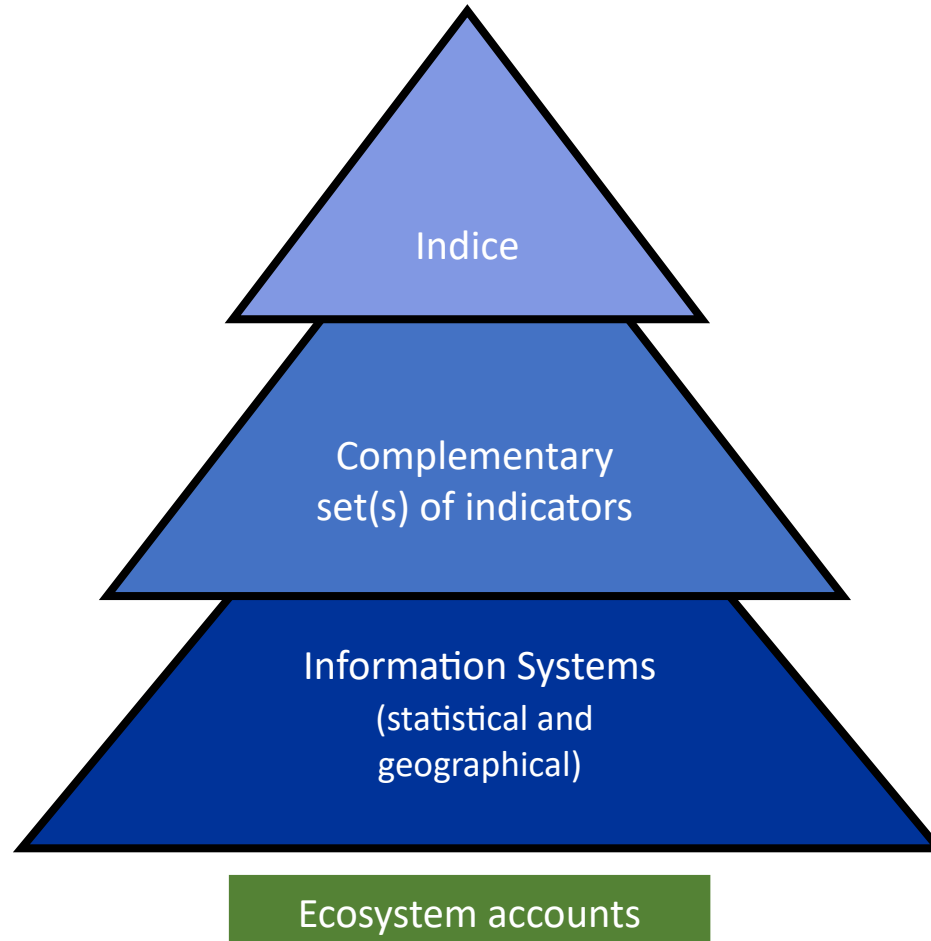
### Flexible approach

With the same sense of theme and scale BUT that the precise definition of “resource, service or habitability” depends on the conditions and realities of each country/region

- The important resources/habitability for a Caribbean island could be different from those of a mainland country like Mexico.
- The priority ecosystems are different for the countries (e.g., Grasslands-Uruguay; Forests, tropical forest and shrublands for Mexico)

One or several indicator sets??





*Natural Capital Accounting and Valuation of Ecosystem Services*

## Environmental accounts of ecosystems

- Strong conceptual framework
- Direct relationship with well-being
- Identification, quantification and characterization of natural resources
- Identification of goods and services and their beneficiaries
- Spatially explicit
- Analysis at different scales

## Role of the National Statistical Offices

### Challenges:

- More and better information
- Ensuring the quality and continuity of information

Can the NSO do it alone?

- Personnel not sufficiently specialized in environmental issues
- Much of the necessary environmental information has a different logic and methods in its generation than those usually used by the NSO
- NSO do not have “field” infrastructure to obtain information



Thanks for your attention