INDICES OR INDICATORS: A POLITICAL-INSTITUTIONAL PERSPECTIVE

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The Purpose of Indices/Indicators

- To compare
  - Longitudinal (over time)
  - Cross sectional (between countries / entities)
- To Structure and Frame the Policy Discourse
  - Identify undesirable phenomena
  - Structure the Policy Agenda

Why are indicators popular

- They simplify the world
- Allow decision makers to overlook complexities
- Legitimize

The Types of Indices/Indicators

- Indices
  - Sustainability index
  - Human Development Index
  - Happy world index
  - Vi = $\sum w_{ij} v_{ij}$
- Meaningful single numbers
  - GDP, GNP/cap,
- Multiple Indicators
  - Stiglitz Report

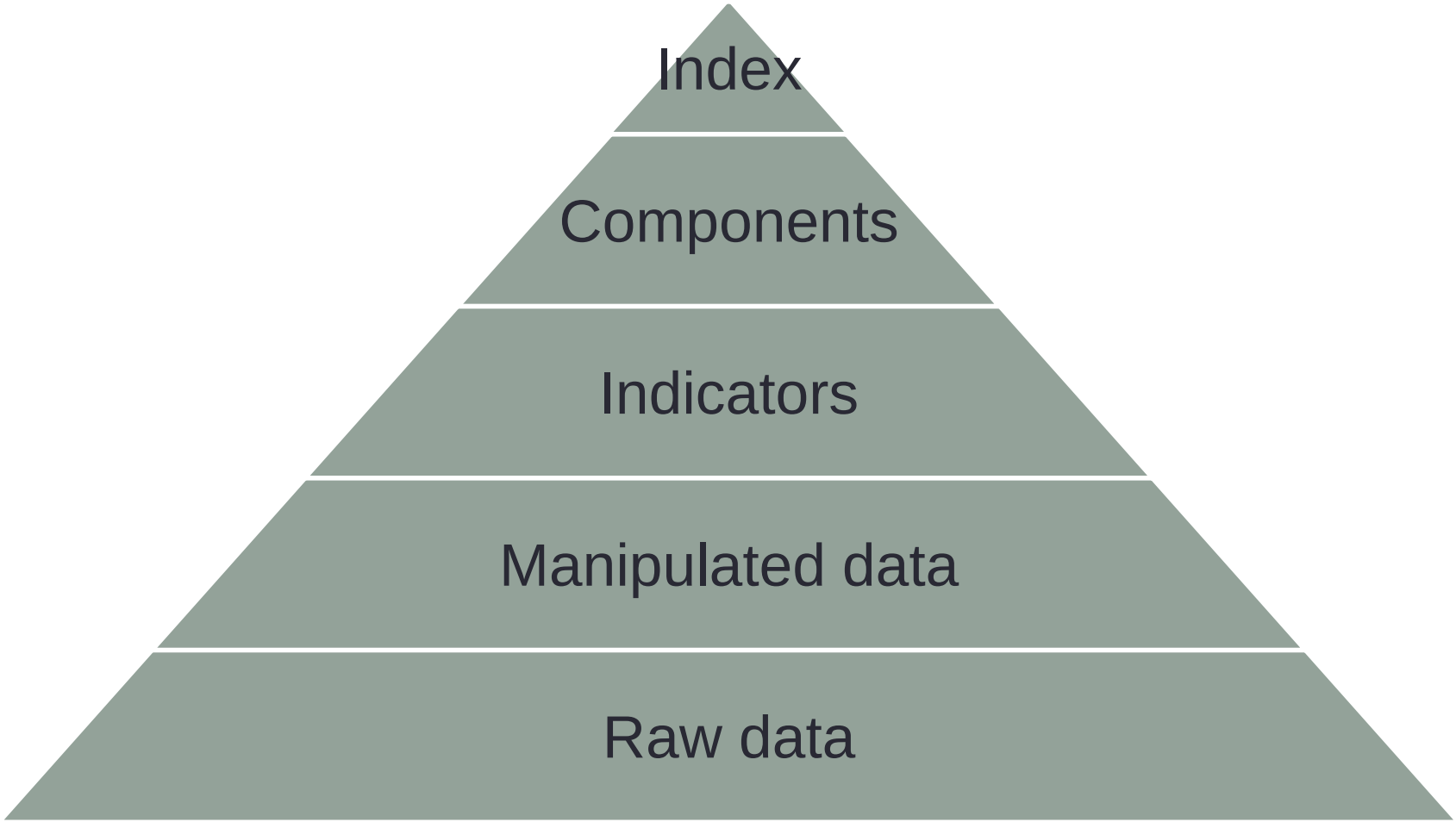
An Example: Water

- Water Poverty Index (Sullivan)
- Meaningful Single Numbers
  - Renewable water per capita (Falkenmakr)
  - Water Poverty (Feitelson & Chenoweth)
  - % of water resources utilized (Raskin et al.)
- Indicators (for Israel)
  - Water levels and salinity in main reservoirs (Sea of Galilee & aquifers)
  - % of wastewater re-used
  - % of residential units not connected to WWTPs

WPI Components

- **Resources**
- • internal Freshwater Flows • external Inflows • population **Access**
- • % population with access to clean water • % population with access to sanitation • % population with access to irrigation adjusted by per capita water resources
- **Capacity**
- • ppp per capita income • under-five mortality rates • education enrolment rates • Gini coefficients of income distribution
- **Use**
- • domestic water use in litres per day • share of water use by industry and agriculture adjusted by the sector's share of GDP **Environment**
- • water quality • water stress (pollution) • environmental regulation and management • informational capacity • biodiversity based on threatened species

The Indices Iceberg



Limitations of Single Numbers (Water)

NUMBER	LIMITATIONS
Per capita water availability	Disregards quality, not all water accessible, country not relevant unit, does not reflect policies, disregards re-use, ‘green’ water, virtual water, water for nature
% of water utilized	Disregards quality, re-use, ‘green water, virtual water
% served by potable water and sanitation	Disregards water resources, ‘ water for food, water for nature,
Marginal Value of water	Disregards quality, water for nature, ‘green’ water, virtual water, wastewater recycling
Water poverty (Feitelson & Chenoweth)	Disregards water for nature, state of water resources

Indices: Pros and Cons

Advantages

- Easy to compare across countries
- Easy to compare over time
- High visibility
- Easy to map

Weaknesses

- Weighting is normative and non-representative
- Underlying calculations are usually opaque
- Not useful for concrete policy actions
- Meaningless in themselves
- Easy to manipulate

Meaningful Single Numbers

Advantages

- Easily understandable
- Easy to map
- Can compare countries or regions
- Can follow over time
- High visibility

Weaknesses

- Present only partial picture
- In some cases not a function of policies (water per capita)
- Not connected directly to policies
- Some aspects are necessarily overlooked (water quality)

Multiple Indicators

Advantages

- Policy relevant
- Provide comprehensive assessment
- Can reveal tradeoffs
- Can show both stocks and flows (Stiglitz)
- Can potentially be used by multiple stakeholders, thereby widening discourse

Disadvantages

- Not easy to compare between countries
- Not easy to map
- Not easy to comprehend
- Can highlight or de-emphasize some of the indicators

Political-Institutional Perspective

- Media requires simple easily mapped comparative indices
- Political arena sensitive to media and public perceptions
- Elected officials prefer to look good and hence utilize indicators of their choice or easily manipulated
- International agencies focus and advance inter-country comparisons
- Local resource managers need to address multiple dimensions, and hence to assess trade-offs
- To manage local resources indicators should be place-sensitive

Main Insights

- Indices and meaningful single numbers are more highly visible and of greater use by the media
- International agencies advance meaningful single numbers as they are comparable over space and time
- The political arena is more sensitive to indices and meaningful single numbers
- But Professional advance and need multiple indicators
- There is a need to assess both stocks and flows

Conclusions and Research Directions

- There is a seeming trade-off between what is most useful internationally and politically and what is most useful locally and professionally
- Research directions:
  - Which type of indices/indicators is utilized, when and by whom
  - Who advances the different types of indicators and indices, and who adopts them and under which circumstances
  - Which indicators are missing from the public and professional discourses? And why?