National workshop:

Generating climate change and disaster indicators for policy decision-making in Belize
09 -11 Nov 2022

ECLAC's methodology to produce environment, climate change and disaster indicators

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Content

This methodology can be found in ECLAC Manual 61:

Methodological Guide to develop Environment and Sustainable Development Indicators in Latin American and Caribbean countries

It is based on an **inter-institutional collaborative** work approach to build and agree on the technical specifications of relevant and quality **indicators set** that describe or quantitatively report on the situation and trends of:

- **Environment as a whole**
- **Components of the environment** (water, air quality, forest, ecosystems and biodiversity, renewable energy and energy efficiency, agri-environmental, residuals, environmental health, environmental management, etc.)
- **Multi-Domain processes:**
  - Climate change
  - Disasters

Updated 2021, pending print

manuals 61

Methodological Guide for developing Environmental and Sustainable Development Indicators in Latin American and Caribbean countries

Rayén Quiroga

UNITED NATIONS
ECLAC

Santiago, Chile, June 2009

Download:
https://www.cepal.org/en/publications/37890-methodological-guide-developing-environmental-and-sustainable-development
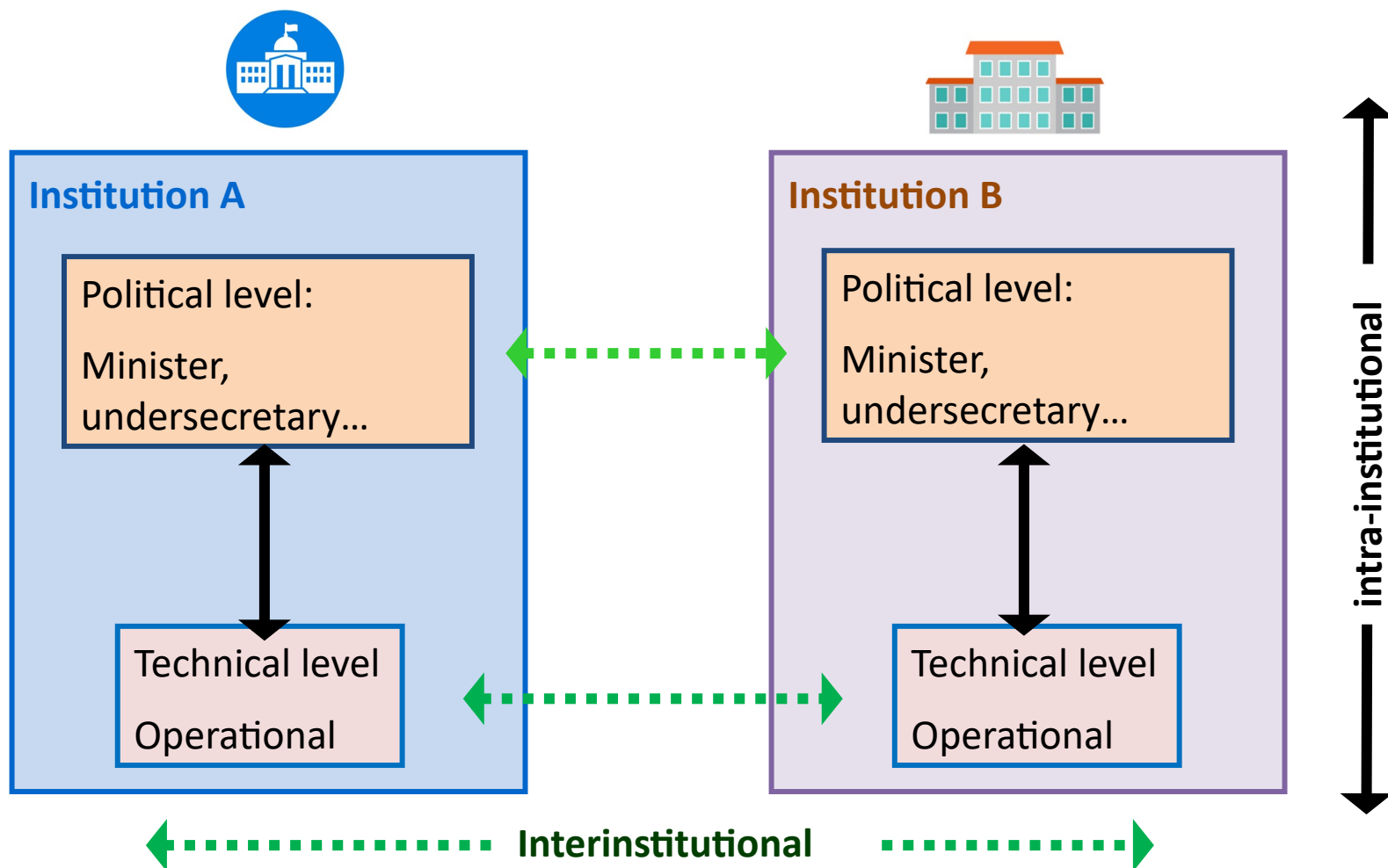
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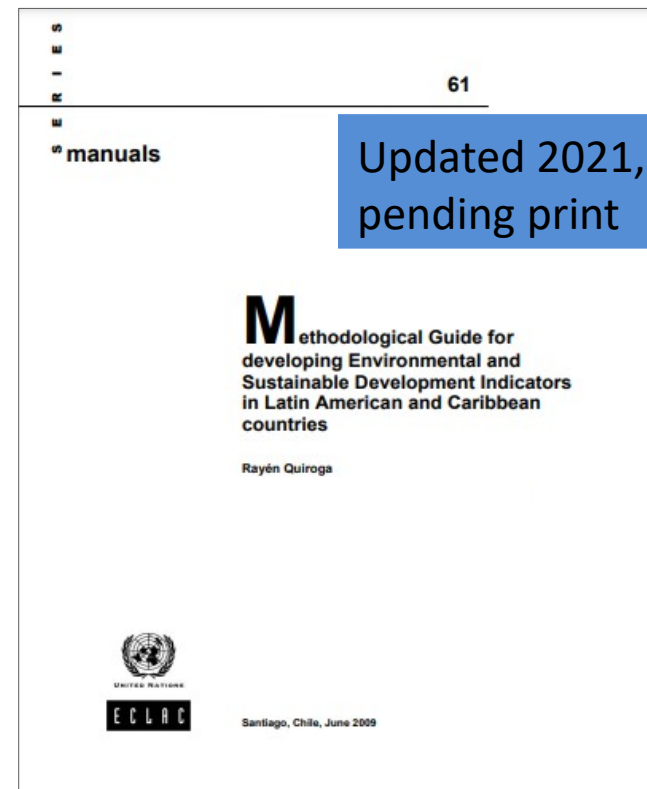
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Principles for constructing indicator sets

▸ Engage **producers**, processors, compilers and **users** of environmental and multi-domain indicators

▸ **Inter-institutional team** with work plan, goals and established leadership

▸ **Capacity building** for common methodology, concepts and tools to better construct the indicator set

Principle 2: Inter-institutional coordination and cooperation

Clear organization of cooperation among institutions and levels

Institution A

Political level:

Minister, undersecretary…

Technical level

Operational

Institution B

Political level:

Minister, undersecretary…

Technical level

Operational

intra-institutional

Interinstitutional

Principle 3: Demand-driven indicator sets 1/2

Decision making and interventions →

| 1. **Identification of the most important and critical decisions**
(Reports or profiles of environment, development sustainability, the situation of climate change and/or occurrence and impact of disasters in the territory) | 2. Identification and selection of the most useful potential indicators

(Draft list of potential indicators) | 3. Verification of statistical feasibility of the potential indicators

(verification of existence, quality and statistical series and primary data systematization) | 4. Assessment of primary statistical sources for datamining:

• Surveys and Censuses
• Quality ground monitoring stations and programs (air, water, soil, etc.)
• Remote sensing
• Administrative records
• Estimates
• Scientific research |

Building **demand-driven** indicators for decision-makers, **we make better use of limited resources**

Why are indicators important?

Indicators help demonstrate:
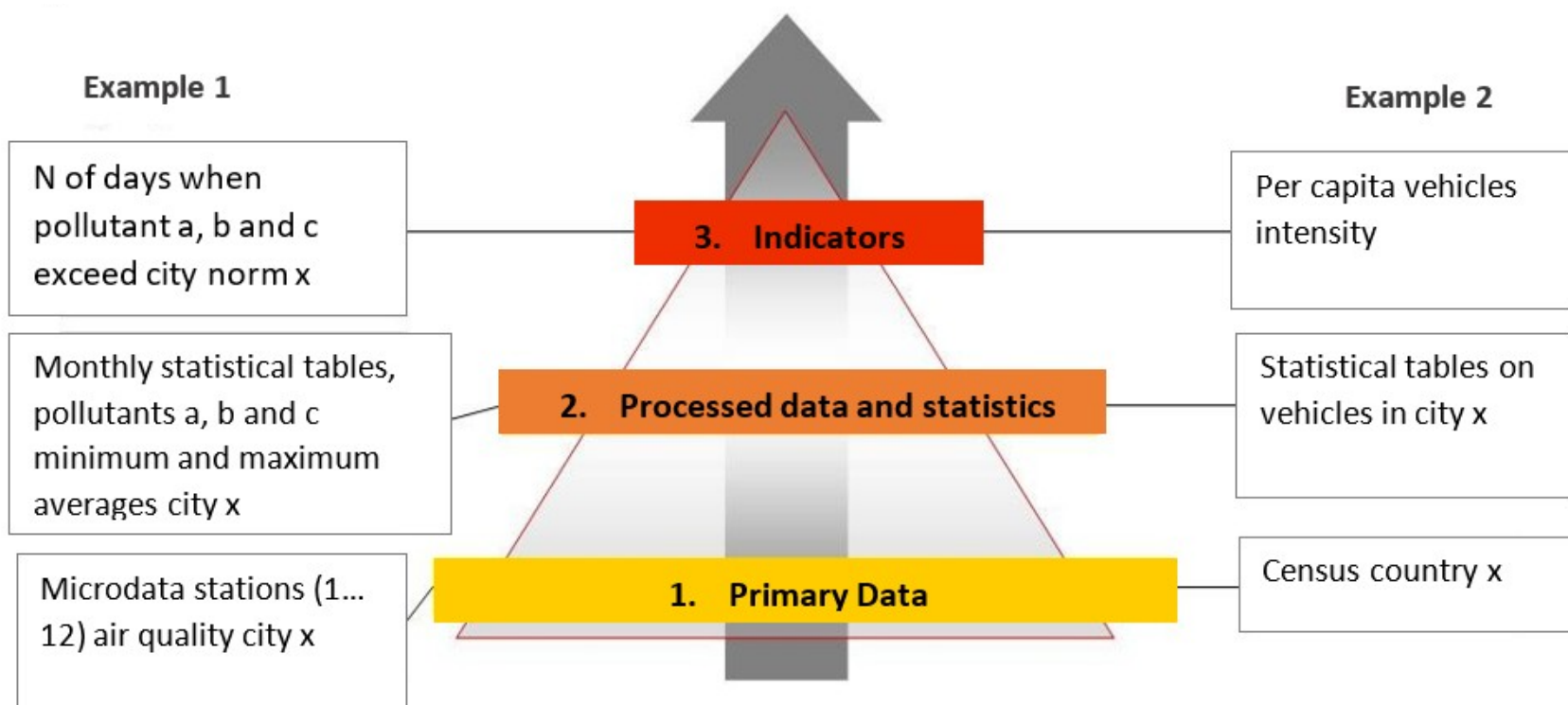
The scope and magnitude of an issue	The resources needed	The measure of progress	The gaps in data available	Opportunities for convergence

Example 1

N of days when pollutant a, b and c exceed city norm x

Monthly statistical tables, pollutants a, b and c minimum and maximum averages city x

Microdata stations (1... 12) air quality city x

3. Indicators

2. Processed data and statistics

1. Primary Data

Example 2

Per capita vehicles intensity

Statistical tables on vehicles in city x

Census country x

Principle 5: Manageable number of indicators (modular progressive approach)

- Each indicator (design, construction, publication, update) requires:
  - a strong investment of time
  - energy
  - dedication (knowledge, coordination, creativity, consultation, decision, consensus building)
- The first set of indicators should be manageable with available resources
- Each indicator counts and must contribute to the whole set

Less is more!!!

▸ Protect the **quality of the primary data**

▸ **Describe fully** each indicator using the Methodological Sheet

▸ **Carry out consultations** with agencies and scientific experts to understand the value of each of the indicators and its main implications.

▸ Sustain critical working attitude and **frequent evaluations** of the indicators.

▸ Indicators should be displayed in an **attractive and easily understood by the users**.

▸ **Give sufficient time and trained staff** to the design phase of the platform of the indicators

▸ Carefully select the **appropriate language** used and the presentation for the indicator

▸ **Proper selection** of the publication media

▸ **Plan and spend time on the launching** of the indicators, complete with media coverage and institutional backing

Principle 8: Flexible attitude/Perseverance

▸ **There are always** methodological, institutional, financial, capacity and primary information **challenges** to face during the work:

  ▸ Deal with changes

  ▸ Review

  ▸ Improve

  ▸ Remove

▸ Identify and develop new potential indicators at any time during their work.
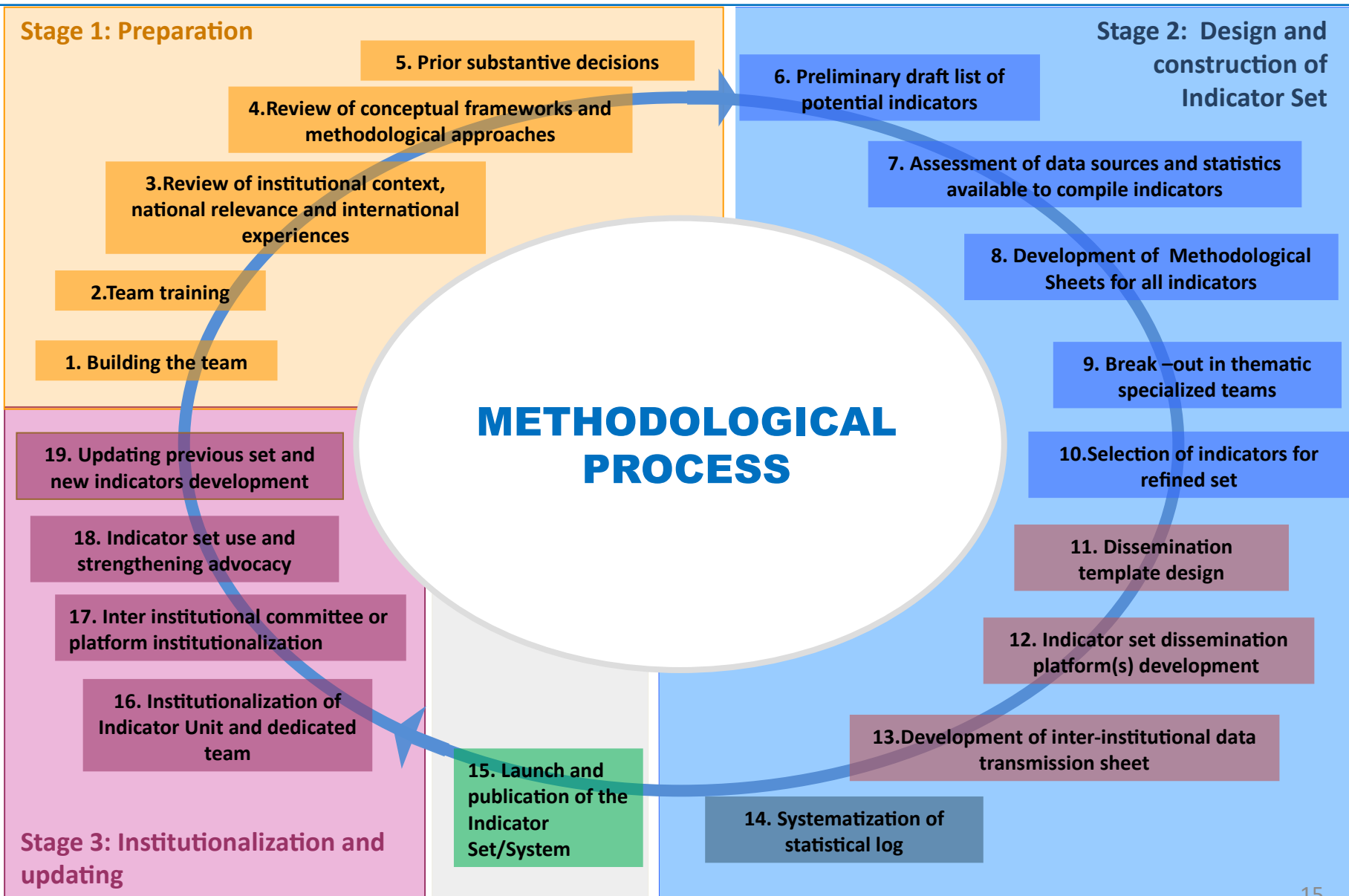
▸ Avoid inflexibilities of any sort

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Building indicators: Methodological road map

Stage I: Preparation

Stage II: Design and construction of indicator set

Stage III: Institutionalization and updating

2. Methodological road map

Stage 1: Preparation

5. Prior substantive decisions

4. Review of conceptual frameworks and methodological approaches

3. Review of institutional context, national relevance and international experiences

2. Team training

1. Building the team

Stage 2: Design and construction of Indicator Set

6. Preliminary draft list of potential indicators

7. Assessment of data sources and statistics available to compile indicators

8. Development of Methodological Sheets for all indicators

9. Break –out in thematic specialized teams

10. Selection of indicators for refined set

11. Dissemination template design

12. Indicator set dissemination platform(s) development

13. Development of inter-institutional data transmission sheet

14. Systematization of statistical log

15. Launch and publication of the Indicator Set/System

METHODOLOGICAL PROCESS

Stage 3: Institutionalization and updating

19. Updating previous set and new indicators development

18. Indicator set use and strengthening advocacy

17. Inter institutional committee or platform institutionalization

16. Institutionalization of Indicator Unit and dedicated team

Development of Methodological Sheet for all indicators

▸ **Key tool** in constructing the indicators set

▸ For **Internal use**

▸ Contains **all the technical specification**s and its underlying variables

▸ **Clarifies technical content** and specificities

▸ Allows for a **common comprehensio**n and building process

▸ Informs about the **design/construction progress** of each indicator

▸ **Facilitates the technical analysis** of each indicator

▸ Content will be used in the **dissemination template**

▸ **Enables comparability** of the indicator over time and across space

Stage II: Design and development of indicators
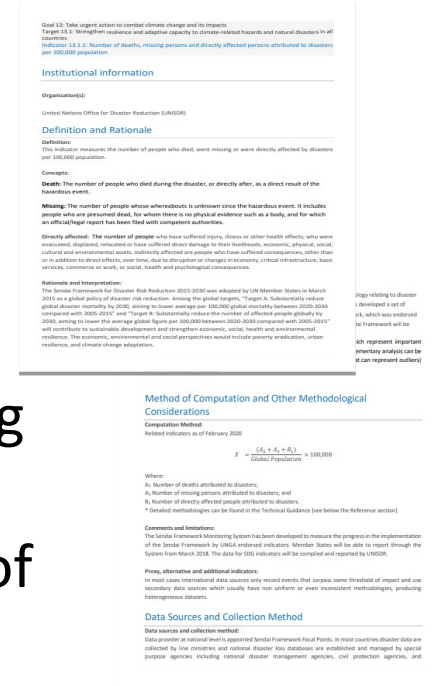
Criteria for selection of indicators (to be included in refined set)

Please, don't forget!

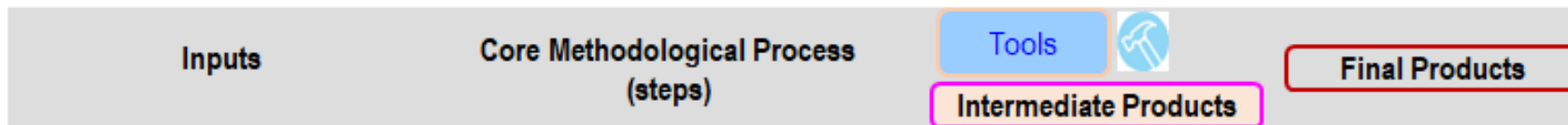- Indicator **relevance and pertinence** to target or policy objective
- Statistical **feasibility,** availability of data series
- **Data quality** of underlying variables
- **Robustness**
- **Simplicity**
- **Clarity, directionality** and **user friendliness**
- **Integrity** and **coherence** between fields in the methodological sheet
- **Optimal** representation and **graphic design** for dissemination purposes
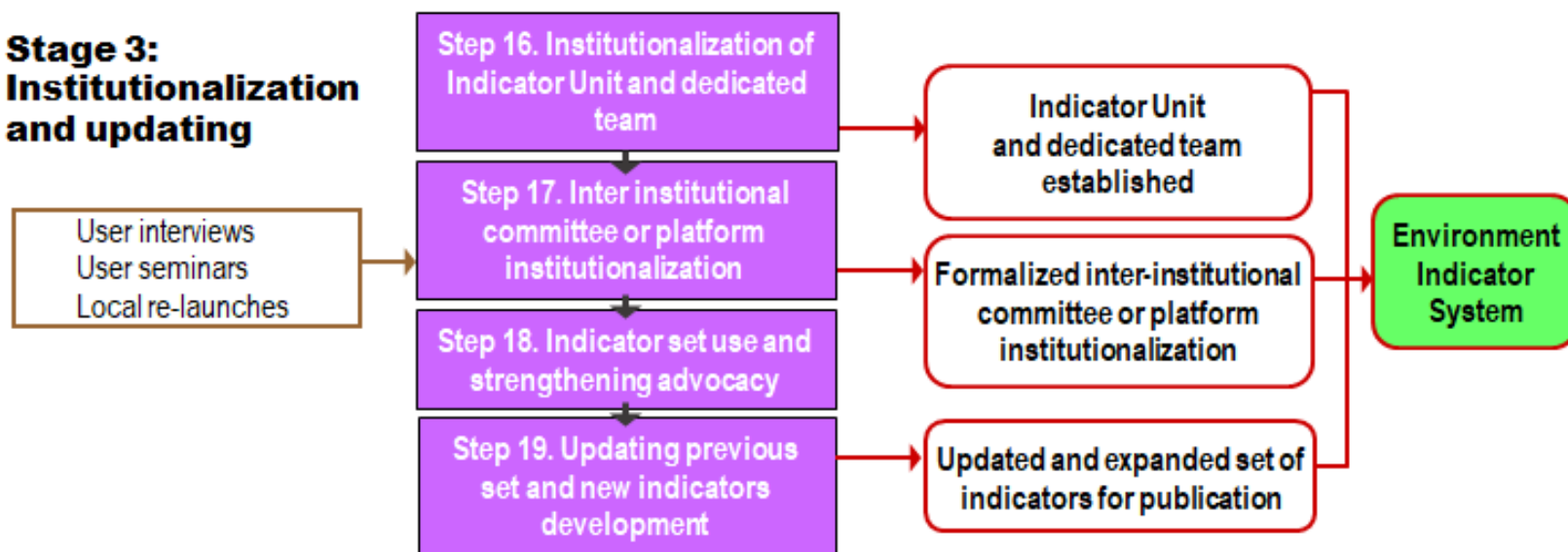

DATA FILTERING
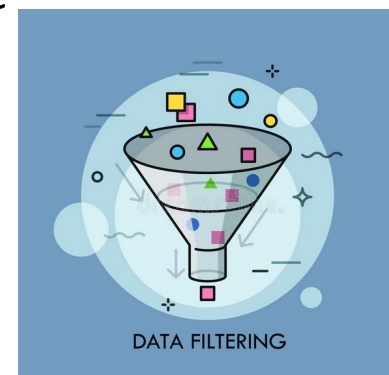
No single indicator can report the full complexity of environmental or multidomain phenomena.
However, each indicator selected must provide sufficient statistical value to justify its place in the indicator set.
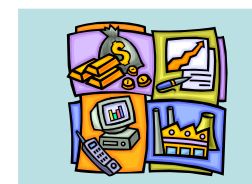
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Products resulting from the indicator-building process

3. Products

1. Developers of first set of indicators ➡ Indicators Unit
    Operations, team and resource allocation in annual program of work and regular budget

2. First set of Indicators
    Set of MS and dissemination template and platform Published or ready to be published

3. National environment/climate change/disasters indicator system
    Institutions, dedicated teams, resources, network and equipment

4. Inter-institutional committee or formal mechanism
    To organize and facilitate data sharing, regular updating and further development of new indicators

Thank you!

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