

# The Evolution of the Global Biodiversity Information Landscape

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# Four key megatrends

- The data torrent
- The emergence of environmental risks
- Global indicators
- Co-production of knowledge

# The data torrent

- The volumes of biodiversity-relevant data are growing exponentially due to sensor automation
  - Genomics data
  - Citizen observations (images, in particular)
  - Remote sensing (from camera traps to satellites)
- The diversity of data has also radiated:
  - presence-absence, abundance, movement, interaction, genetic, acoustic, images
- ‘Big data’ is now part of biodiversity research
  - Conceptual shift from sparse sampling to comprehensive analysis
  - The commercial ‘sense-making’ tools are oriented around unstructured data. Biodiversity data is typically highly structured.
- The price of data collection and storage is falling faster than the price of bandwidth, which suggests that the topology of information systems will change: central, distributed or ephemeral?

# The emergence of biodiversity risks as a widespread social concern

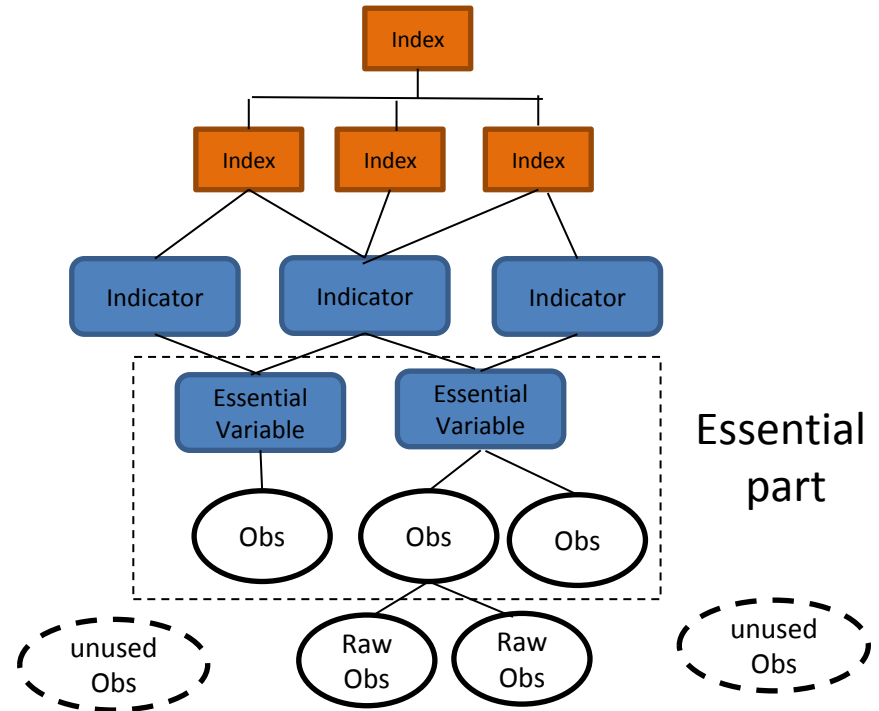
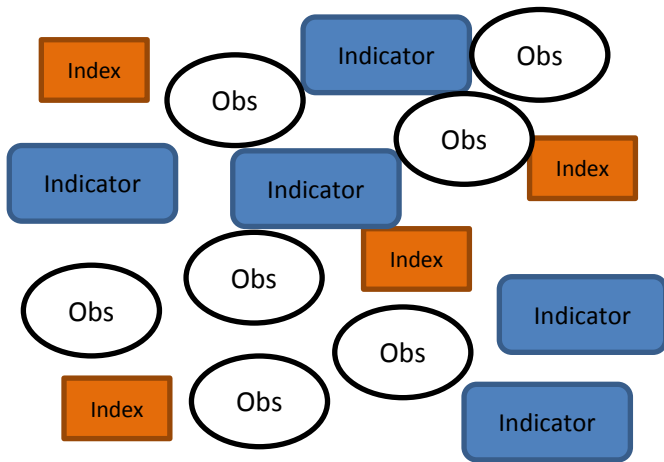
- Biodiversity information is no longer just the domain of biodiversity scientists
  - World Economic Forum rates environmental issues among the highest consequence, highest likelihood issues
  - The Sustainable Development Goals contain several biodiversity-related objectives
  - Private sector performance reporting includes environmental data eg King III

# Indicators of everything

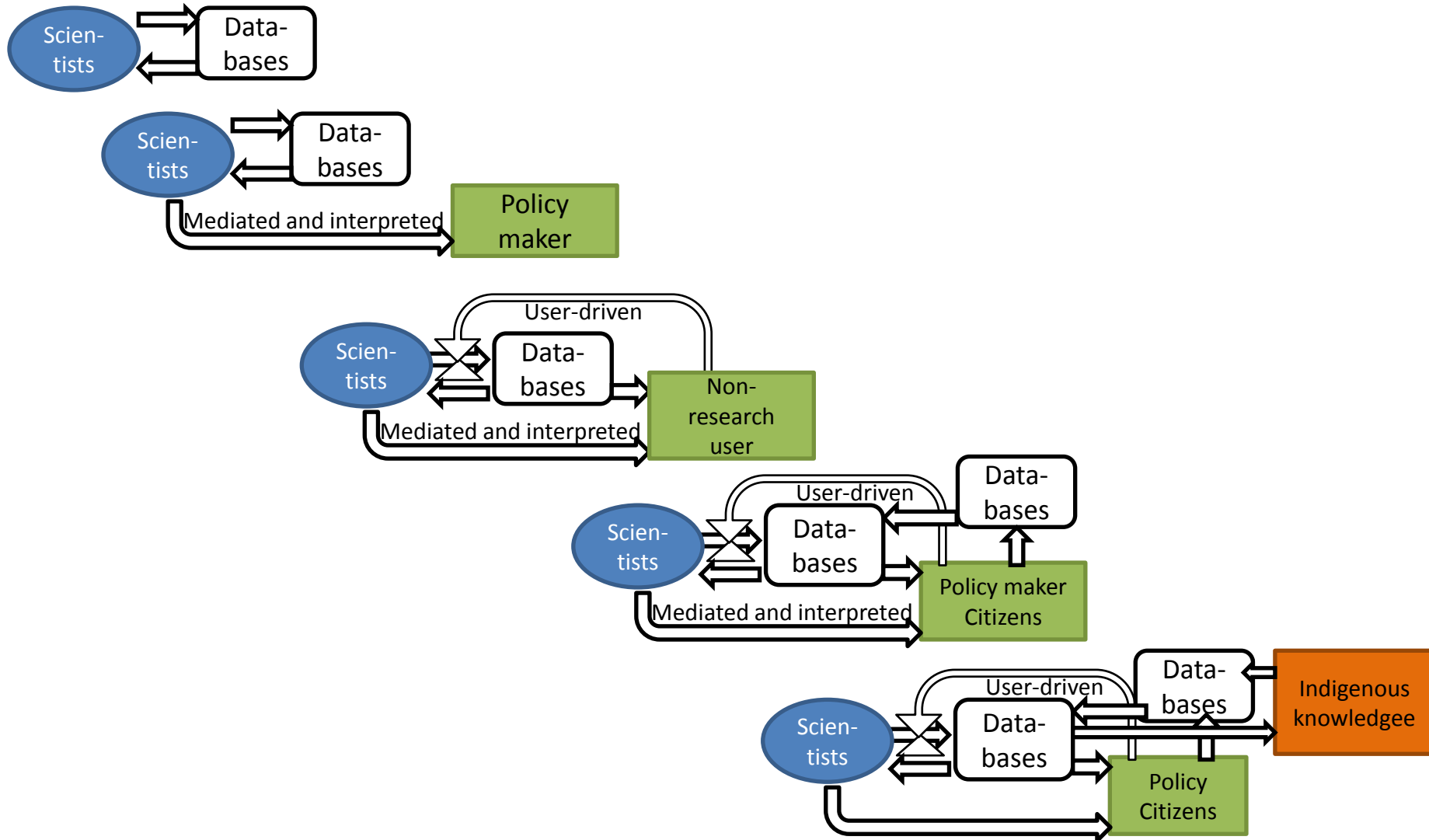
‘what gets measured gets done’

- SDGs: 17 topics, 158 objectives, 200+ indicators...
- Biodiversity indicators – several hundred and counting....
- Aichi targets: only 20 (but 35 indicators, only half of which can be satisfied from existing data)

# The 'essentiality' argument for reducing the clutter



# Co-production of knowledge





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