Data, Information and Knowledge For Action

The Foundation for Sustainable Development

Regional Conference on Environmental Data

Palais des Nations, Geneva, Switzerland

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Measurement Matters ?

“If a measurement matters at all, it is because it must have some conceivable effect on decisions and behavior. If we can't identify a decision that could be affected by a proposed measurement and how it could change those decisions, then the measurement simply has no value.”

Measurement is the first step that leads to management and eventually to improvement:

If you can’t measure something, you can’t understand it. If you can’t understand it, you can’t manage it. If you can’t manage it, you can’t improve it.

Agenda 21 Chapter 8 Integrating Environment And Development In Decision-Making

Section D. Establishing systems for integrated environmental and economic accounting

The main objective is to expand existing systems of national economic accounts in order to integrate environment and social dimensions in the accounting framework.

The resulting systems of integrated environmental and economic accounting (IEEA) to be established in all member States at the earliest date should be seen as a complement to, rather than a substitute for, traditional national accounting practices.

IEEAs would be designed to play an integral part in the national development decision-making process.

OECD (2012) Review of the Implementation of the OECD Environmental Strategy for the First Decade of the 21st Century (p. 89)

> "A common challenge is to design environmental information systems so as to respond to the needs of decision makers, and to avoid a supply- or technology-driven approach."

http://www.oecd.org/env/50032165.pdf

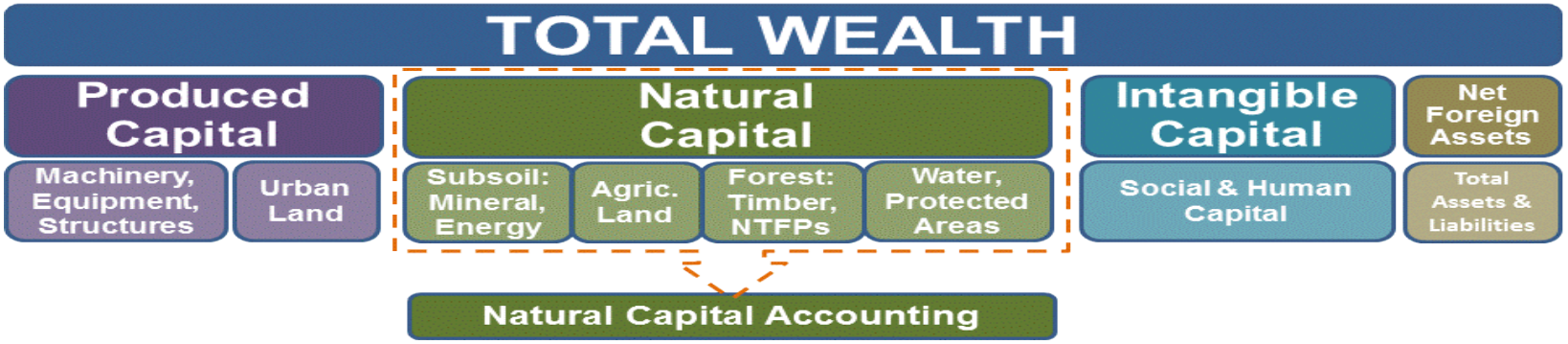
WAVES

What measure affects what we do and if our measurements are flawed, decisions may be distorted.

We don't judge a company solely on the basis of its income statement -- look at both *income* and *balance sheet*. Increasing assets (wealth) support *long-term* growth. In the short term, income can appear to grow by liquidating assets, but this undermines long-term growth.

Why do we assess country economic progress on the basis of national income, GDP alone? (J. Stiglitz,, WB Nobel prize, economics, former WB Chief Economist)

The source of income and well-being is wealth, broadly defined to include: Manufactured capital; 'Intangible' capital – net financial assets, human capital - social capital; and Natural Capital - wealth that comes from mineral, energy, agricultural, soil, timber, and water assets



What Do Policy-Makers Need from Water Accounts?

Information to make decisions:

Allocation of water, water infrastructure among competing users:
economic users and water productivity
ecological requirements
international requirements for shared water resources

Water pricing and economic instruments:
Variation of water delivery costs/scarcity by region
Impact of water tariffs on different industries and different social groups, especially the poor

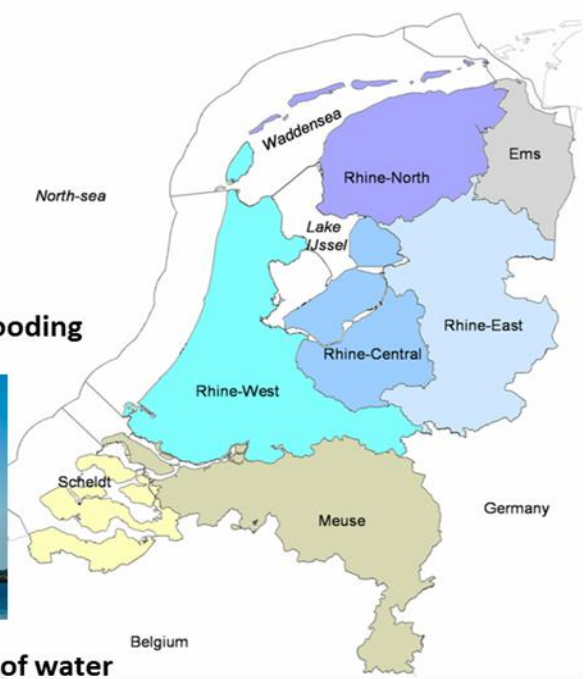
Managing water pollution: sources, costs & benefits of reducing pollution

Coordinating policy in related sectors: agriculture, rural development, tourism, etc.

Planning for future water requirements, water demand management.

NETHERLANDS - Water issues

Safety, protection against flooding



Water management: excess of water

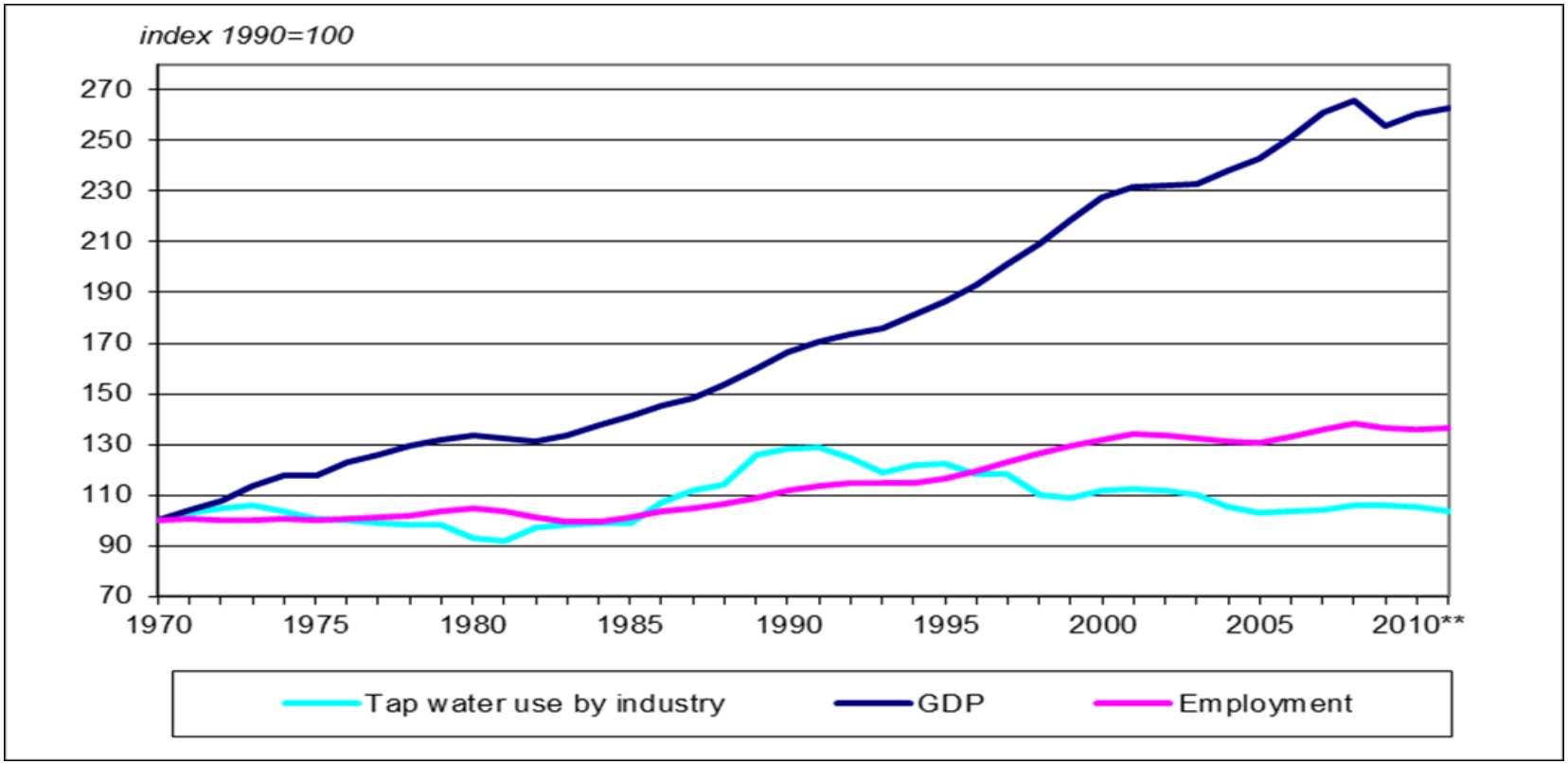
Water management: water resources and water use

Water pollution

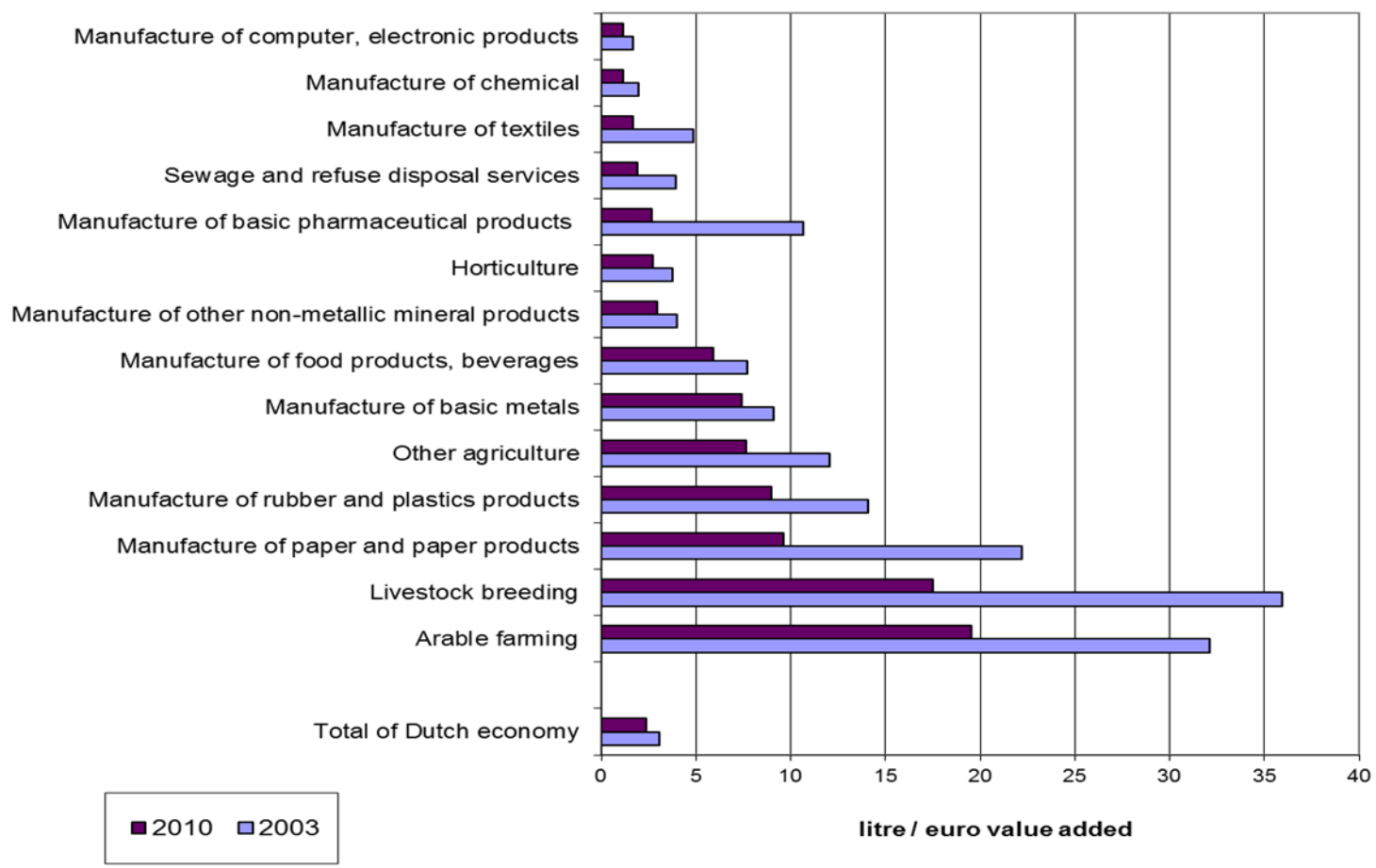
Water quality

NETHERLANDS: Is there decoupling between water use and economic growth ?

Volume change GDP, employment and tap water used for production

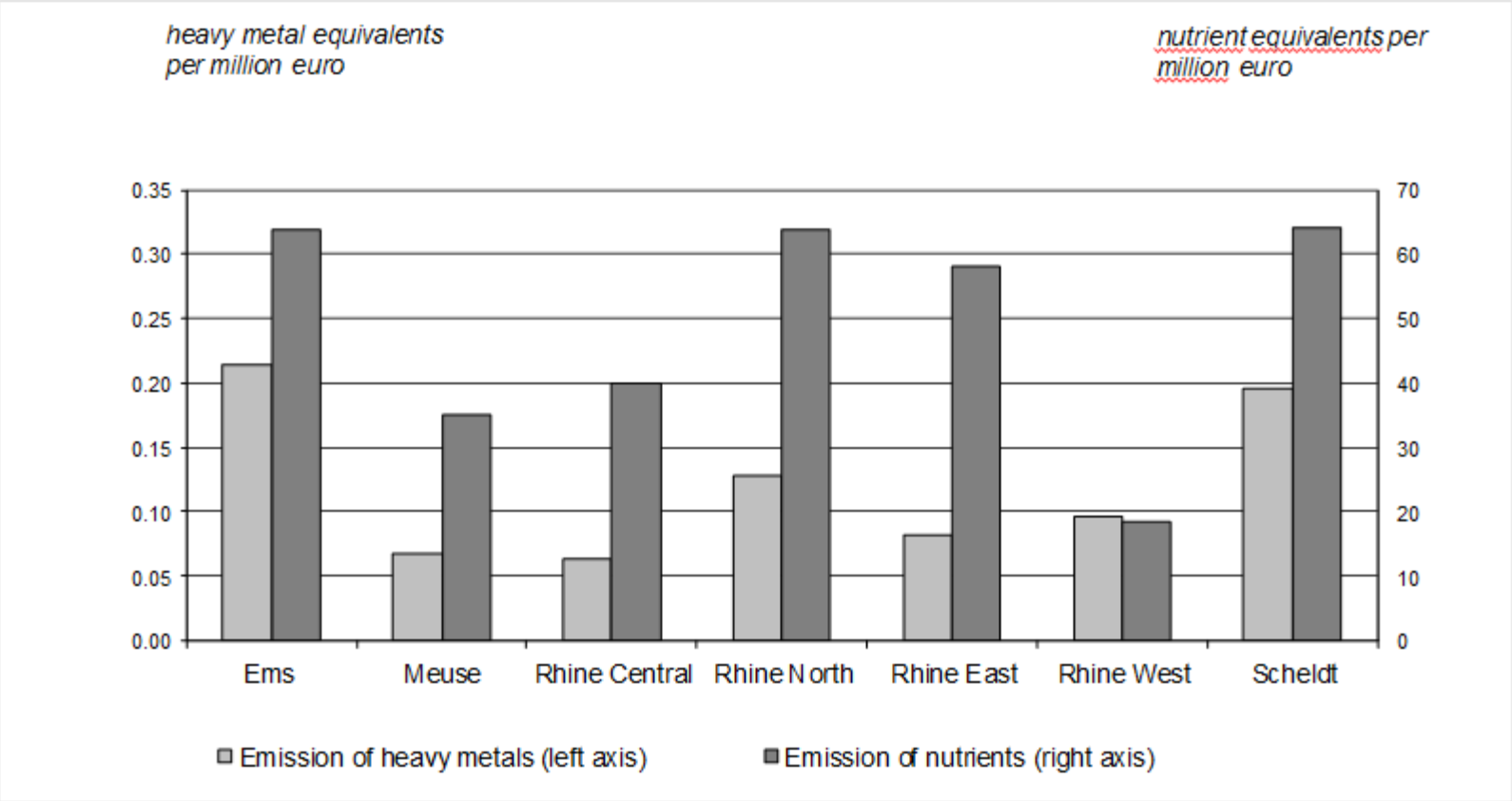


NETHERLANDS: Water Profiles: What are the most important users of water? Is their water productivity improving between 2003 and 2010? (liter/ euro of sector value-added)

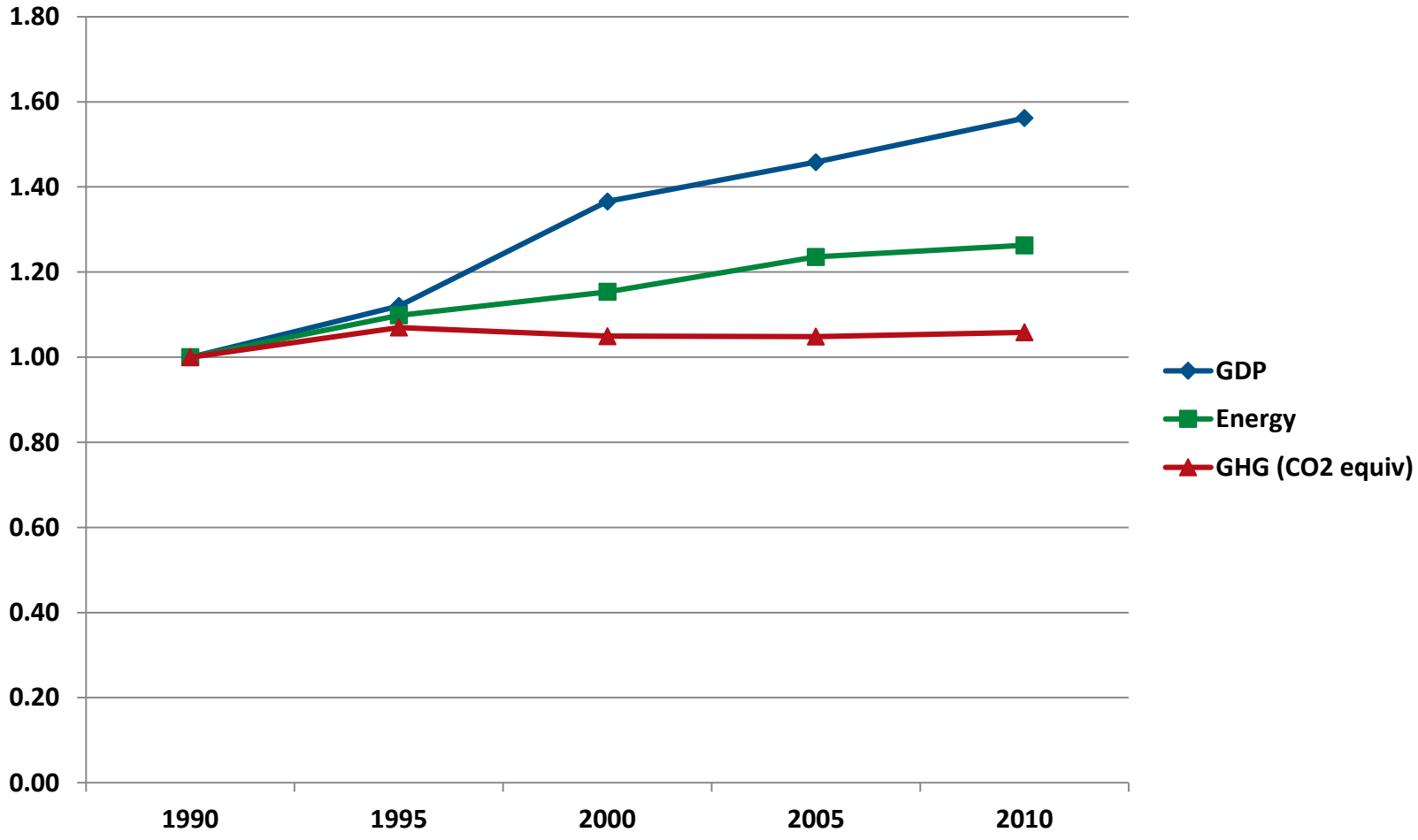


NETHERLANDS :Are there regional differences in emission intensity ?

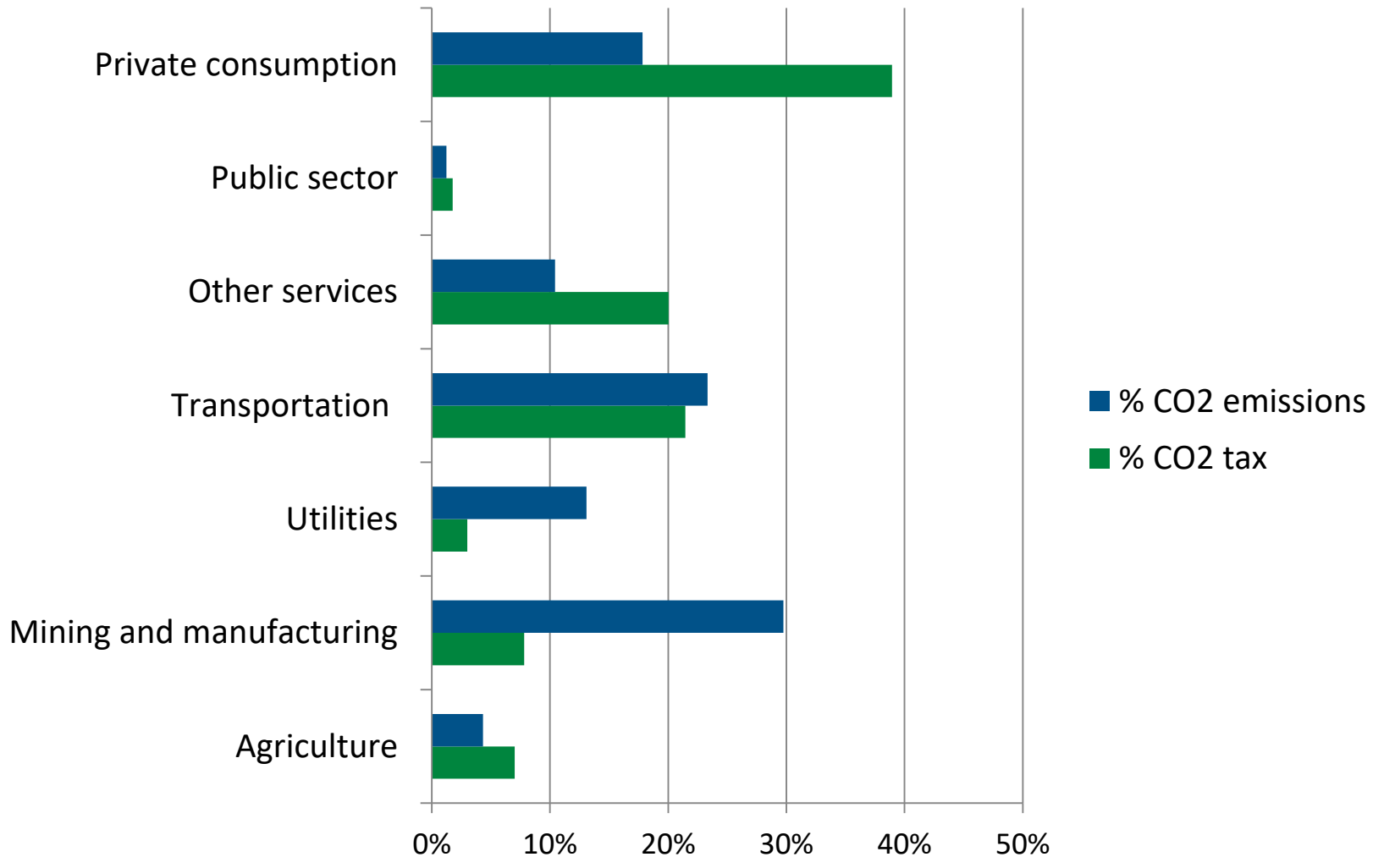
Emission-intensity per river basin (only producers)



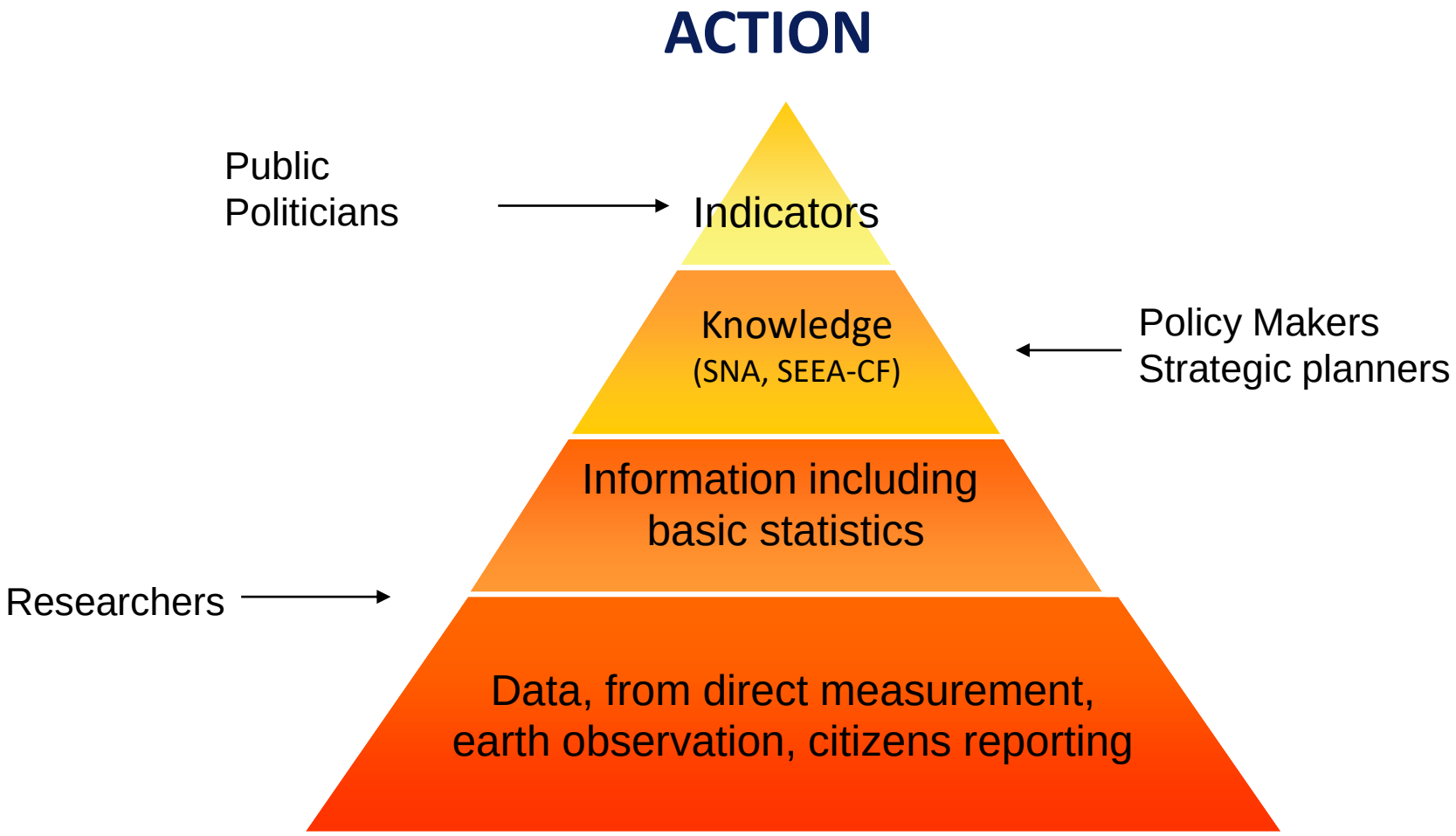
Decoupling economic growth from energy use and GHG in the Netherlands



Carbon emissions and carbon taxes by sector in Sweden



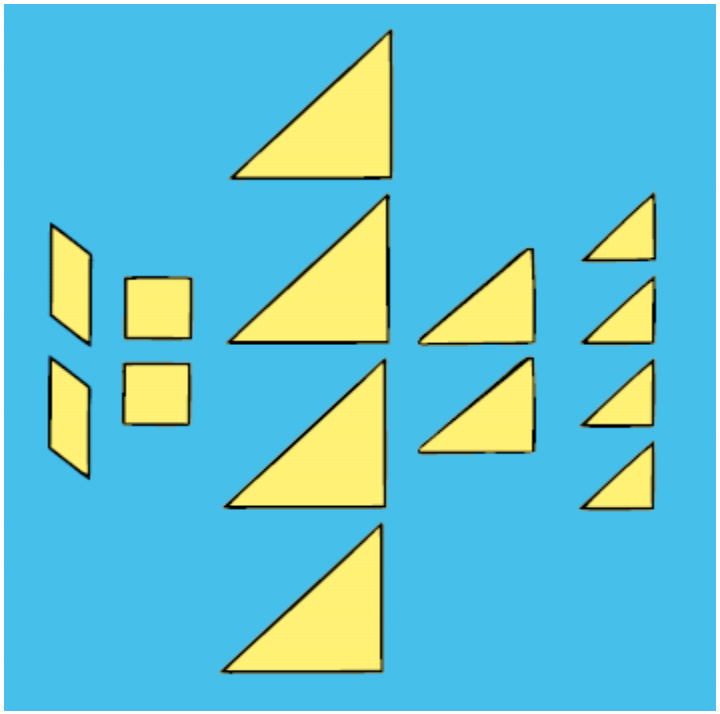
Audiences for data, information and knowledge



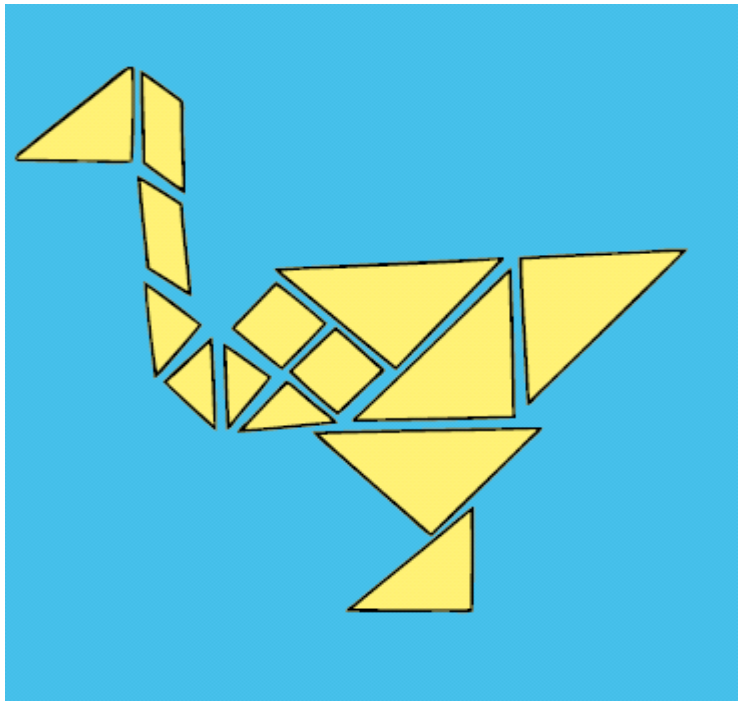
From Statistics to Accounts

SEEA integrates environment and economic statistics by following the same statistical principles (those of the System of National Accounts)

Statistics

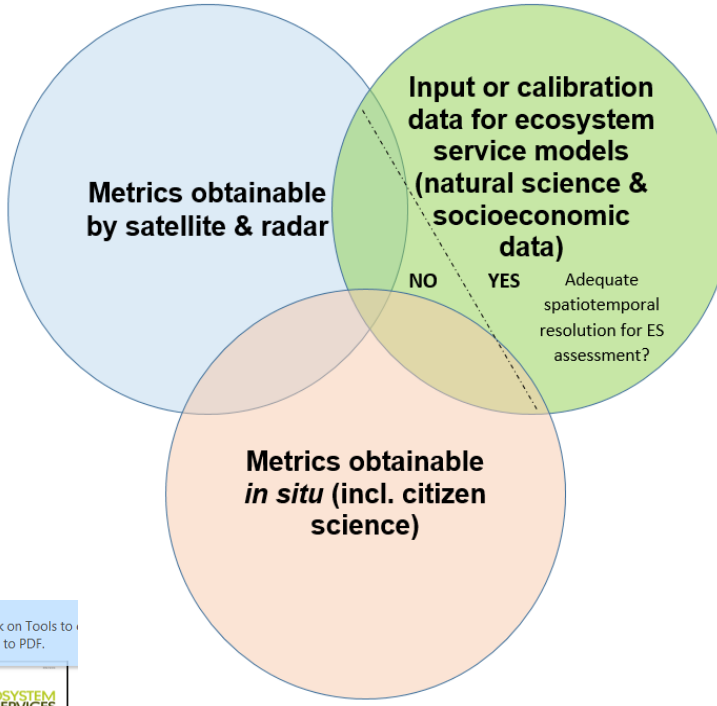


Accounts



Source: United Nations Statistics Division

Moving from experimental to standardized approaches



Ecosystem Services 5 (2013) e27–e39

Contents lists available at ScienceDirect

Ecosystem Services

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ELSEVIER

A comparative assessment of dec
services quantification and valua

Kenneth J. Bagstad [a,*], Darius J. Semmens [a]

U.S. Geological Survey, Geosciences & Environmental Change Science C
BSR, San Francisco, CA, USA
Socioeconomics Program, USDI—Bureau of Land Management, Washing

PNAS

Measuring the value of groundwater and other forms of natural capital

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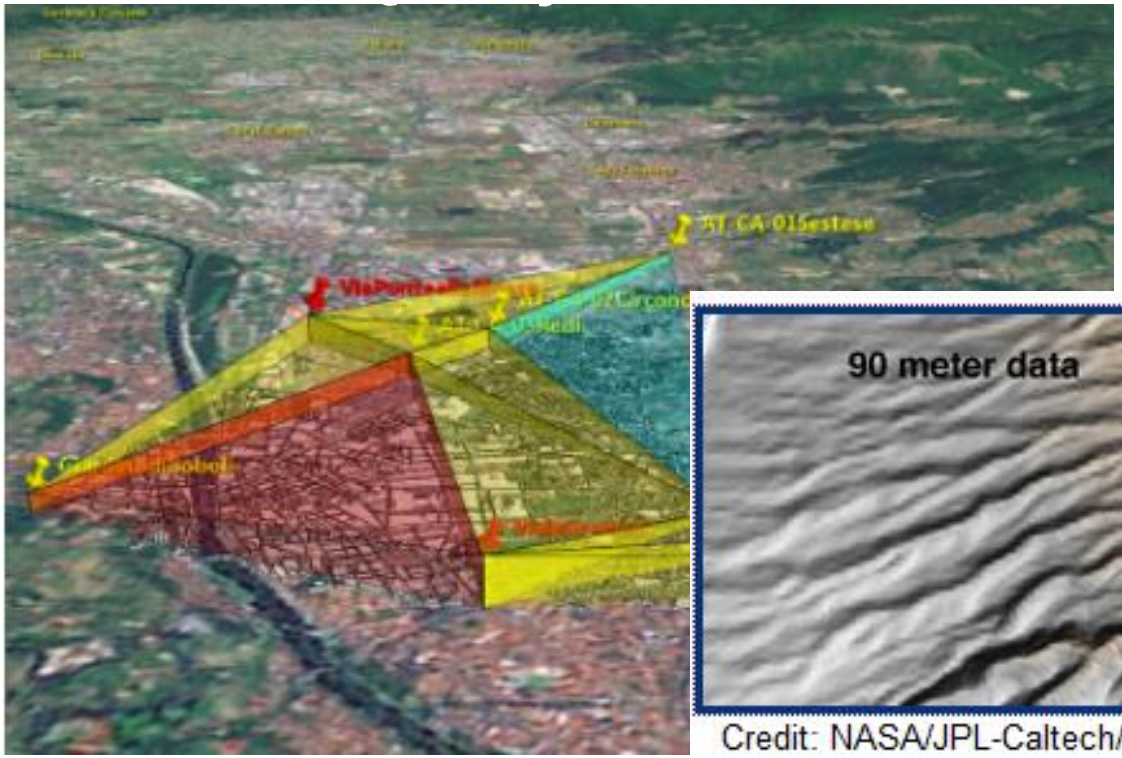
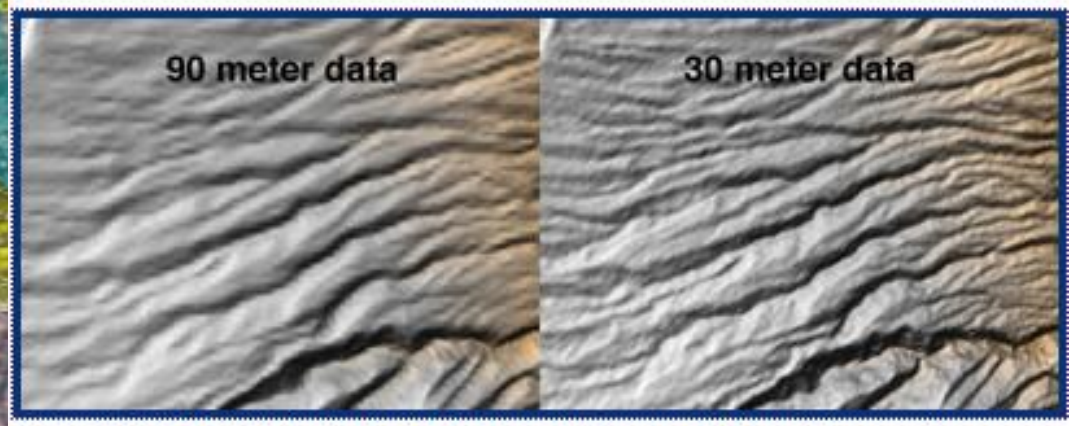
Valuing natural capital is fundamental to measuring sustainability. The United Nations Environment Programme, World Bank, and other agencies have called for inclusion of the value of natural

et al. (9) review the theory of natural capital prices in wealth indices, and note the dearth of theory for measuring them. Moving beyond rhetoric to valuing natural capital is imperative

GROUP ON
EARTH OBSERVATIONS

New Global Urban Air Quality Data





Credit: NASA/JPL-Caltech/National Geospatial Intelligence Agency

Air-Quality Data 3D Visualization
www.cirgeo.unipd.it/nasaww

Shuttle Radar Topography Mission 2 NASA

UNEP

GEO 6 GLOBAL ENVIRONMENT OUTLOOK

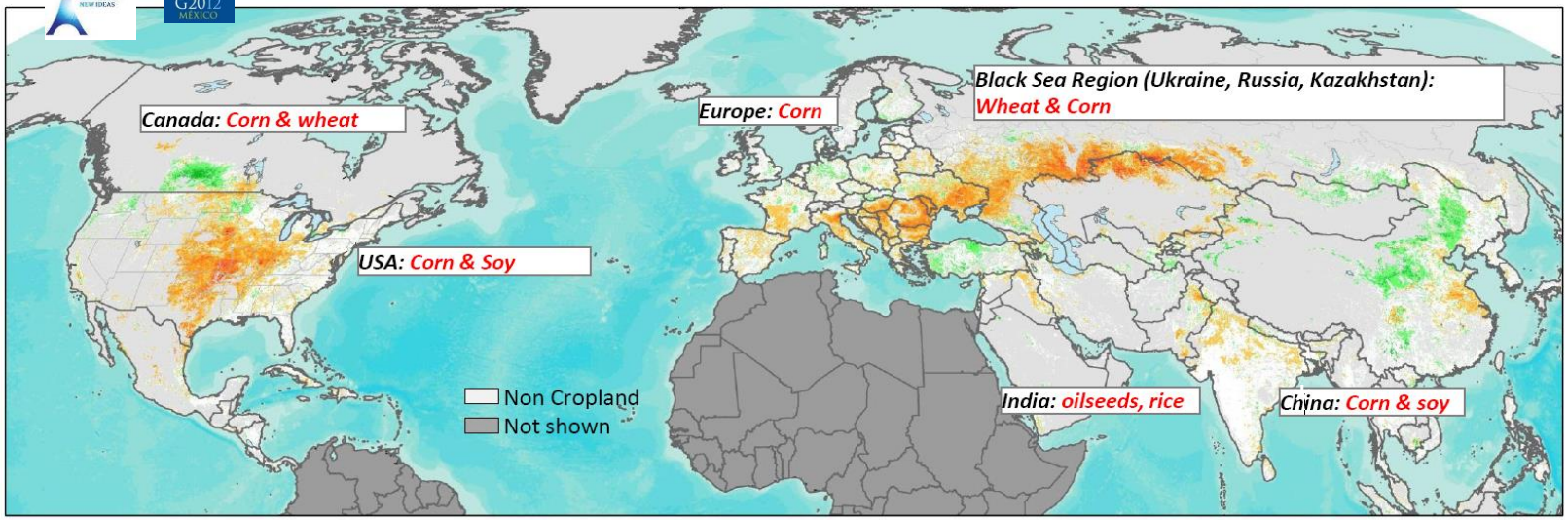
HEALTHY PLANET HEALTHY PEOPLE

GEOGLAM part of G20 Action Plan on Food Price Volatility

(Canada, China, EC, France, Japan, Kazakhstan, India, Mexico, Russia, USA, CEOS, FAO)

GEOGLAM
Global Agricultural Monitoring

Northern Hemisphere NDVI Crop Anomaly, August 13th, 2012



Crop NDVI Anomaly

-0.4	0	0.4
Worse than normal	normal	Better than normal

Observed highlights:

- Drought conditions persist in US, south eastern Ukraine, Russia, and Kazakhstan, with slight improvement in some areas in northern Kazakhstan
- Rains in India mitigate dry conditions

RIO Principle 10

Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Thank You

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