System of Integrated Environmental and Economic Accounting and the UN Committee of Experts on Environmental-Economic Accounting

United Nations Statistics Division

Outline

- The SEEA – what it is
- Strengths of an accounting approach
- The SEEA and SDI – possible links
- UNCEEA

SEEA – what is it?

- Satellite system of the System of National Accounts to better measure the inter-relationship between the economy and the environment
- Flexible data system that allows for the presentation of environmental and economic information, in physical and monetary terms, in a common data framework, thus facilitating integrated analysis

SEEA – what it does

- Information system which describes in depth aspects that are implicit in the accounts (e.g. environmental expenditures, env. taxes and subsidies, licenses to use the resource, etc.)
- Expand the asset boundaries of the SNA in physical and monetary terms (e.g. water, minerals and energy, etc.)
- Include complementary elements (e.g. physical information, etc.)

SEEA – what it does (2)

- Develop a consistent data system for economic and environmental data to:
  - Assess availability of natural resources, their use in production and final consumption and the value of the natural capital and cost of depletion
  - Assess the level and cost of emissions and other waste from production and consumption (e.g. maintenance/damage costs)

Why an accounting approach?

- Encourages the adoption of standards
- Introduces accounting concepts to environmental statistics thus facilitating analysis of inter-linkages between the economy and the environment
- Improves both economic and environmental statistics by including checks and balances in the environment statistics
- Encourages the development of comprehensive data system of official statistics produced on a regular basis from which to derive indicators

Why compile the SEEA?

- MONITORING
  - state of the environment and economy
  - progress toward meeting goals identified in policies and strategic plans

  HOW?
  - Indicators of sustainability, macro and sectoral
    - Indicators of impact of economic policies on environment (de-coupling indicators)
    - Indicators of progress toward meeting specific environmental goals (e.g. Kyoto protocol, MDGs, etc.)

SEEA and UN SDI

Sustainable Development Indicator		Source of data in SEEA
Atmosphere		
Climate Change	Emissions of Greenhouse Gases	SEEA flow accounts for emissions of greenhouse gases
Ozone Layer Depletion	Consumption of Ozone Depleting Substances	SEEA flow accounts for use of ozone depleting substances
Land		
Agriculture	Arable and Permanent Crop Land Area	Reported in land asset accounts
	Use of fertilizers	Could be reported in the physical flow accounts
	Use of Agricultural pesticides	Could be reported in the physical flow accounts
Forests	Forest Area as per cent of Land Area	Reported in land and forest asset accounts
	Wood Harvesting Intensity	Reported as harvesting in the forest asset accounts
Desertification	Land Affected by Desertification	Could be reported in land asset accounts
Urbanization	Area of Urban Formal and Informal Settlements	Could be reported in land asset accounts

Oceans, seas and coasts		
Fisheries	Annual Catch by Major Species	Reported in fisheries asset accounts
Fresh water		
Water Quantity	Annual Withdrawal of Ground and Surface Water as per cent of Total Available Water	Calculated from SEEA water flow accounts.
Water Quantity	BOD in Water Bodies	Could be calculated from SEEA water quality accounts
	Concentration of Faecal Coliform in Freshwater	Could be calculated from SEEA water quality accounts
Biodiversity		
Ecosystem	Area of Selected Key Ecosystems	Reported in ecosystem asset accounts
	Protected Area as per cent of Total Area	Reported in land asset accounts and in ecosystem asset accounts
Species	Abundance of Selected Key Species	Reported in wildlife asset accounts

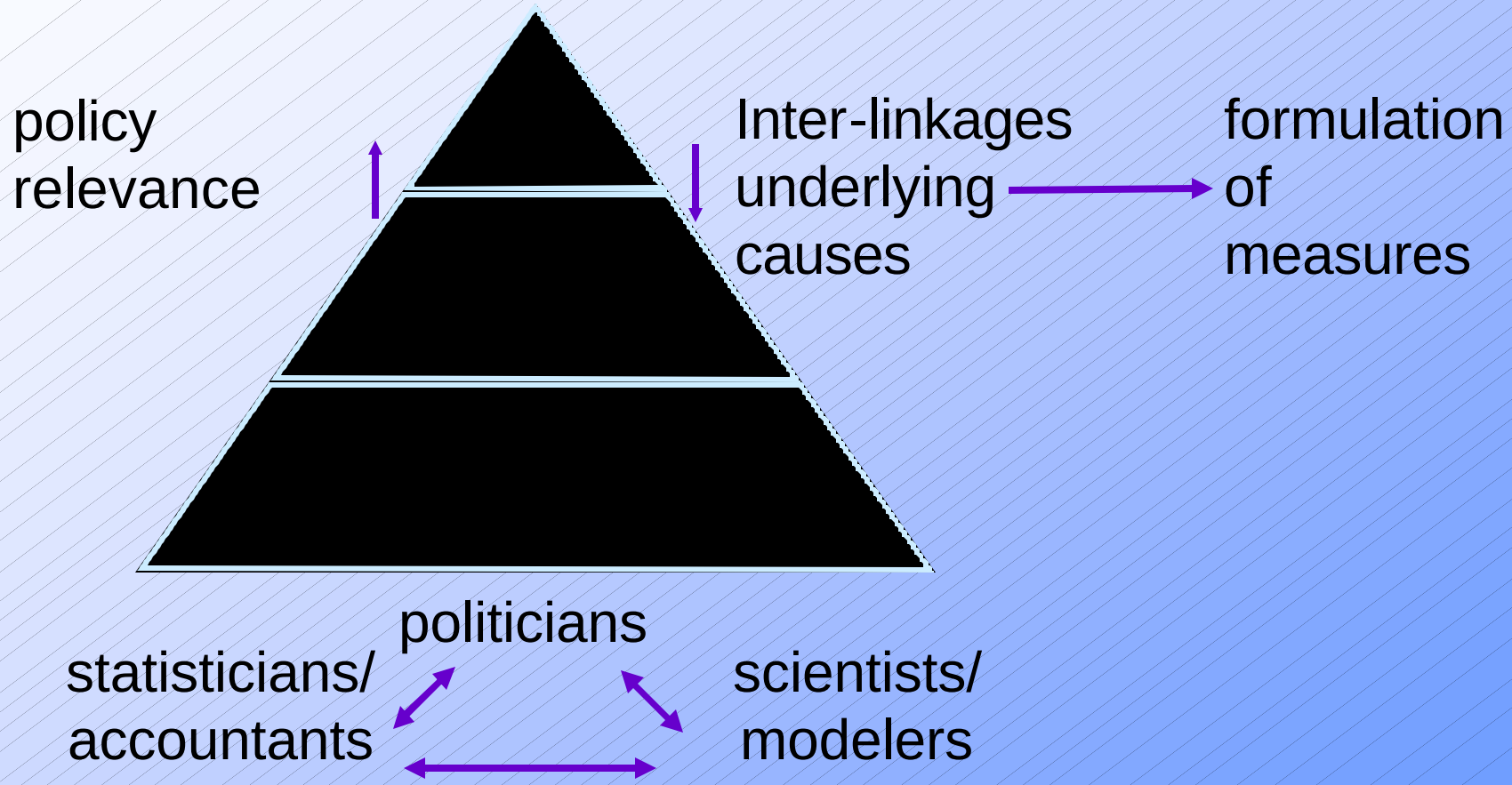
Consumption and production patterns		
Material Consumption	Intensity of Material Use	SEEA flow accounts report total material inputs; indicator can be derived by dividing GDP by total material inputs
Energy Use	Annual Energy Consumption Per Capita	SEEA flow accounts report total energy use; indicator derived by dividing total energy use by population
	Share of Consumption of Renewable Energy Resources	Calculated from composition of energy flow accounts
	Intensity of Energy Use	SEEA flow accounts report total energy inputs; indicator can be derived by dividing GDP by total energy inputs
Waste Generation and Management	Generation of Industrial and Municipal Solid Waste	SEEA flow accounts for solid waste.
	Generation of Hazardous Waste	SEEA flow accounts for specific types of waste
	Generation of Radioactive Waste	SEEA flow accounts for specific types of waste
	Waste Recycling and Reuse	SEEA flow accounts for waste, recycling and reuse

Why compile the SEEA? (2)

- ANALYSIS
  - To design better regulations and environmental instruments
  - To design better resource management policies
  - To assess alternative development paths
  - To design policies to achieve sustainable development

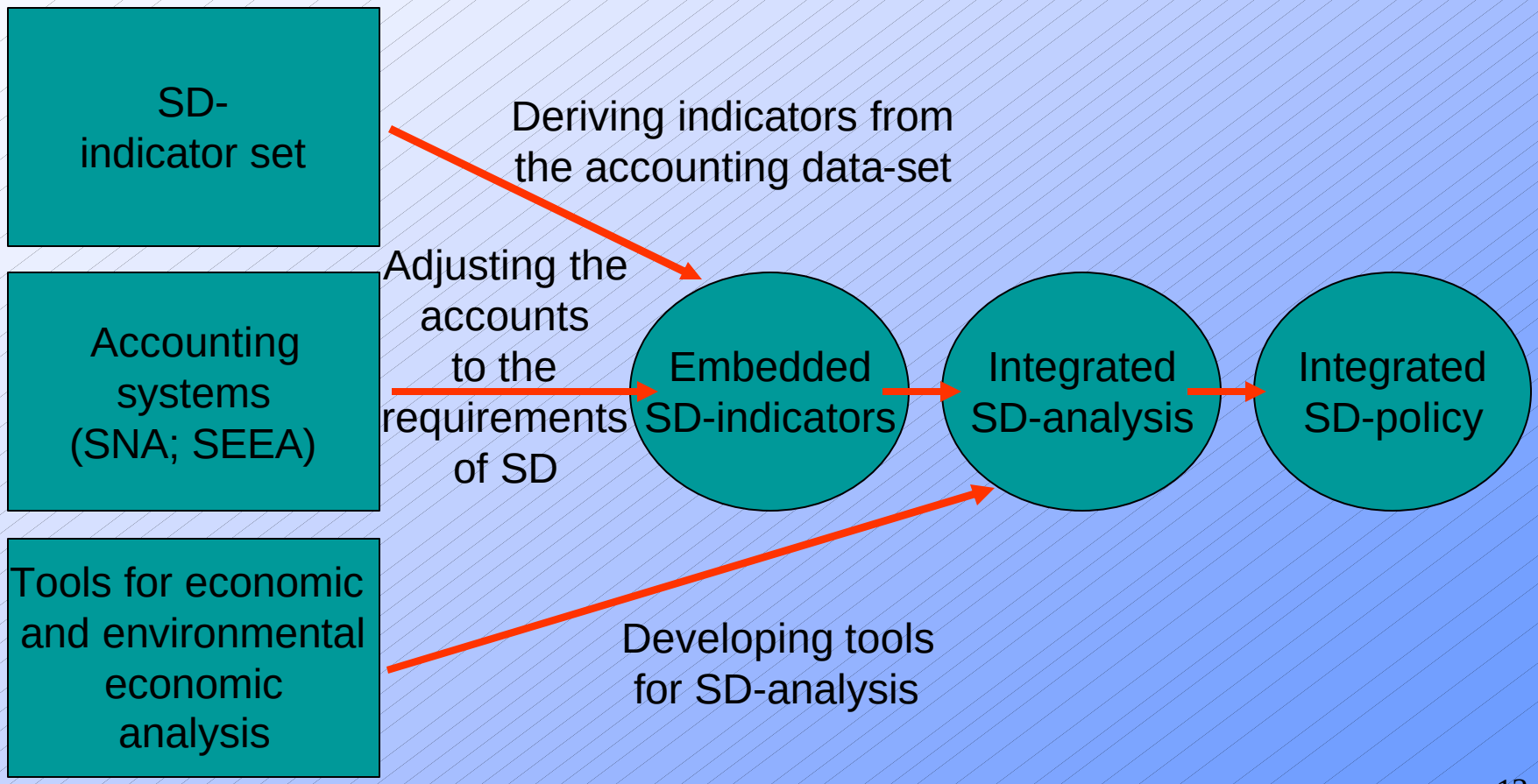
  HOW?
  - Input-output analysis
  - Decomposition and life cycle analysis
  - Scenario modeling

The German example of linking SEEA with SDI



Example: Germany EEA press conference 2004

Strategy for an integrated sustainable development analysis and policy – Germany



The UNCEEA

- TORs approved by the Bureau of the Statistical Commission
- Objectives:
  - Mainstream environmental accounting and related statistics
  - Elevate the SEEA to the level of a standard
  - Promote the implementation of the SEEA in countries

Components of programme

- Coordination among the different groups working environment and related statistics

  Actions: Scope and compliance survey, establishment of a knowledge-based platform on the UNCEEA website
- Promotion of environmental accounting and related statistics

  Actions: user-producer dialogues
- Implementation of environmental-economic accounts

  Actions: coordinated TC activities, training material

Components of programme (2)

- Methodological research

  Actions: Joint research agenda

- Harmonization of data collection activities

  Actions: harmonization of questionnaires of environment and related statistics with environmental-economic accounts

Some thoughts

- The SEEA allows for measuring the interaction between the economy and the environment in a coherent and consistent data framework
- Allows for the derivation of a lot (not all) SDIs (mostly economic and environmental)
- Need to promote the SEEA in the users' community
- The SEEA implementation is a big effort but in can be done – do it in steps (e.g. selected resources, accounts, etc.)