

Economic valuation of environment and policies in Mexico

Presented by:
Raúl Figueroa Díaz



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Why is necessary the economic valuation in Mexico?

In order to get a better management of natural resources, the Mexican environmental sector requires a **proxy in monetary** values of environmental damage.

- ✓ General Law of Ecological Balance and Environmental Protection (LGEEPA, by Spanish acronym)
- ✓ General Law on Climate Change
- ✓ National Development Plan
- ✓ Sectoral Program for the Environment and Natural Resources
- ✓ Global Environmental Outlook (GEO)
- ✓ Environmental Performance Reviews (OECD)
- ✓ Sustainable Development Goals
- ✓ Aichi Biodiversity Targets
- ✓ The Biodiversity Finance Initiative (BIOFIN)



General Law of Ecological Balance and Environmental Protection (LGEEPA)

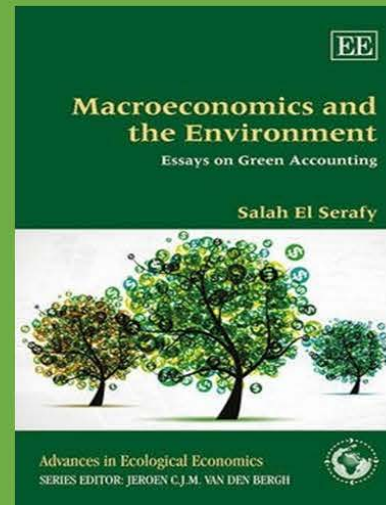
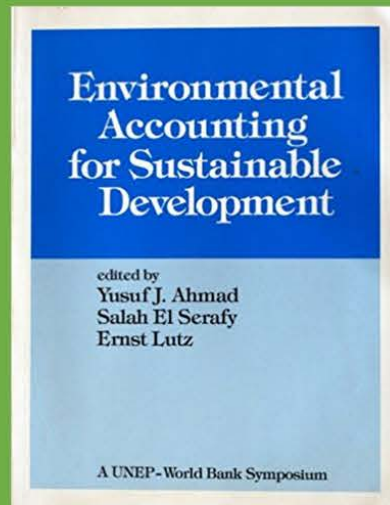
- “Through **quantification of environmental pollution and depletion cost** caused by economic activities (...) **the Ecological Net Domestic Product** will be calculated (...) INEGI will integrate the Ecological Net Domestic Product into the System of National Accounts.” (Art. 15).



Why is economic valuation necessary?

Considering these information needs from the environmental sector, international proposals are reviewed to resolve the adjustment to GDP due to environmental impact.

- Robert Repetto
- Salah El Serafy
- Jan van Tongeren
- Stefan Schweinfest
- Ernst Lutz



Net Domestic Product environmentally adjusted (PINE)

Production Methodology

Output

Intermediate consumption (-)

GDP

Consumption of fixed capital (-)

NDP

Depletion cost (-)

Degradation cost (-)

PINE $(X - M) + \text{Final Consumption (Household+Government)} + \text{Economic asset accumulation} + \text{Non produced asset accumulation}$



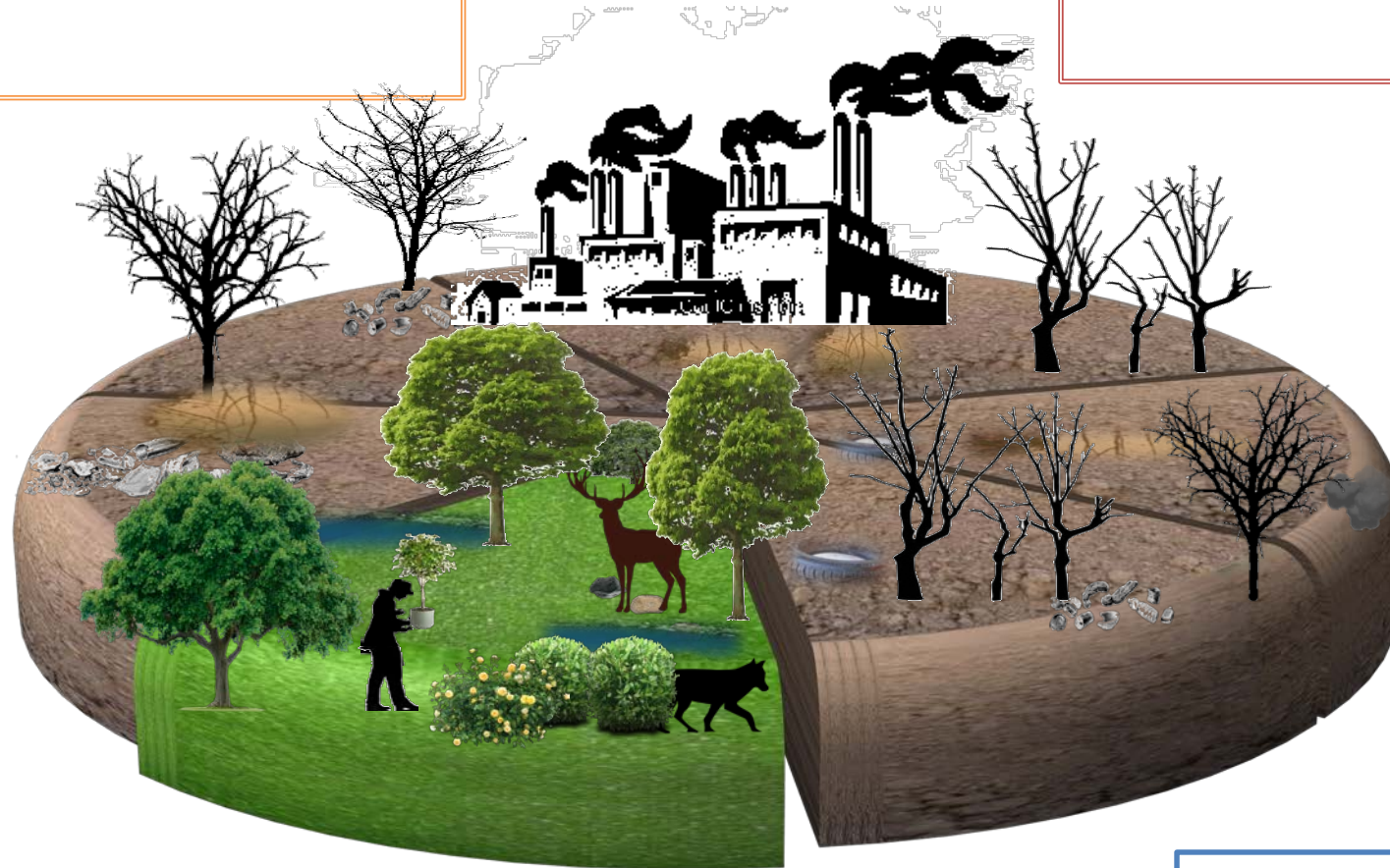
Expenditure

Methodology

Main results: Environmental Accounts of Mexico 2016

In 2016, the environmental impact was **6 times** more than the actions to protect it

Environmental Costs
(Depletion and Degradation)
USD 49 billions



Environmental Protection Expenditure
USD 7 billions

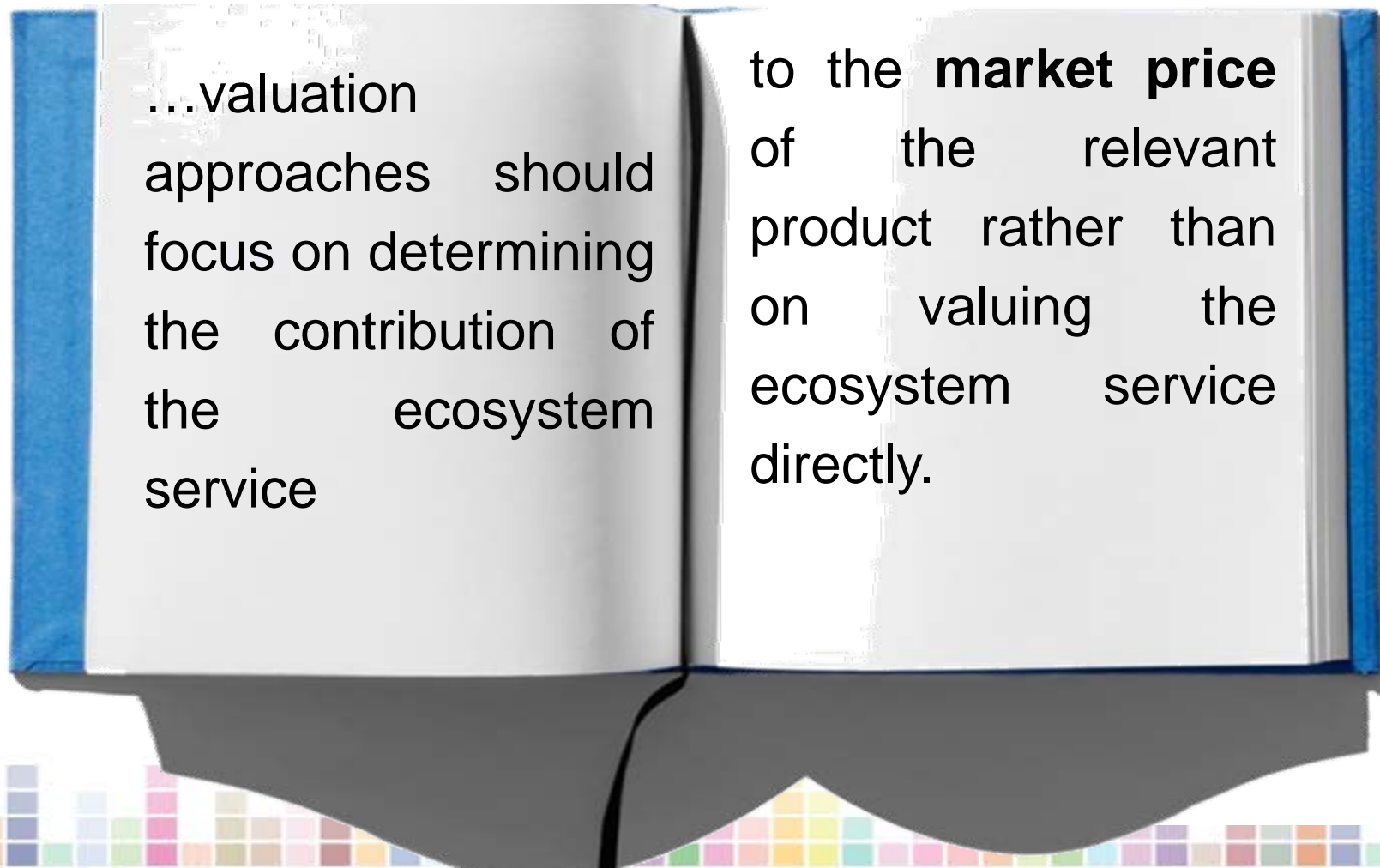


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Environmental deficit
USD 42 billions

General framework

According to SEEA-EEA... (Page115; Para. 5.57)



Valuation techniques

Groundwater
depletion:
Shadow prices

Air emissions:
Technological
change

Water pollution:
Treatment costs

Hydrocarbons
depletion:
Net income

Solid waste:
Waste
management

Soil degradation:
Reposition costs

Forest resources
depletion:
Replacement costs

Soil carbon:
Social costs



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What's next?

- ✓ **Replicate valuation exercises** for the whole country
- ✓ Replicate the exercises at **Protected Natural Areas** level
- ✓ Value the service of **carbon capture in soil and biomass**
- ✓ Value **other types of soil erosion**
- ✓ Continue working on the “**Natural Capital Accounting and Valuation of Ecosystem Services**” project in coordination with the European Union and the UNSD



Thank you!



Direction of Satellite Accounts

<http://www.inegi.org.mx/est/contenidos/proyectos/cn>