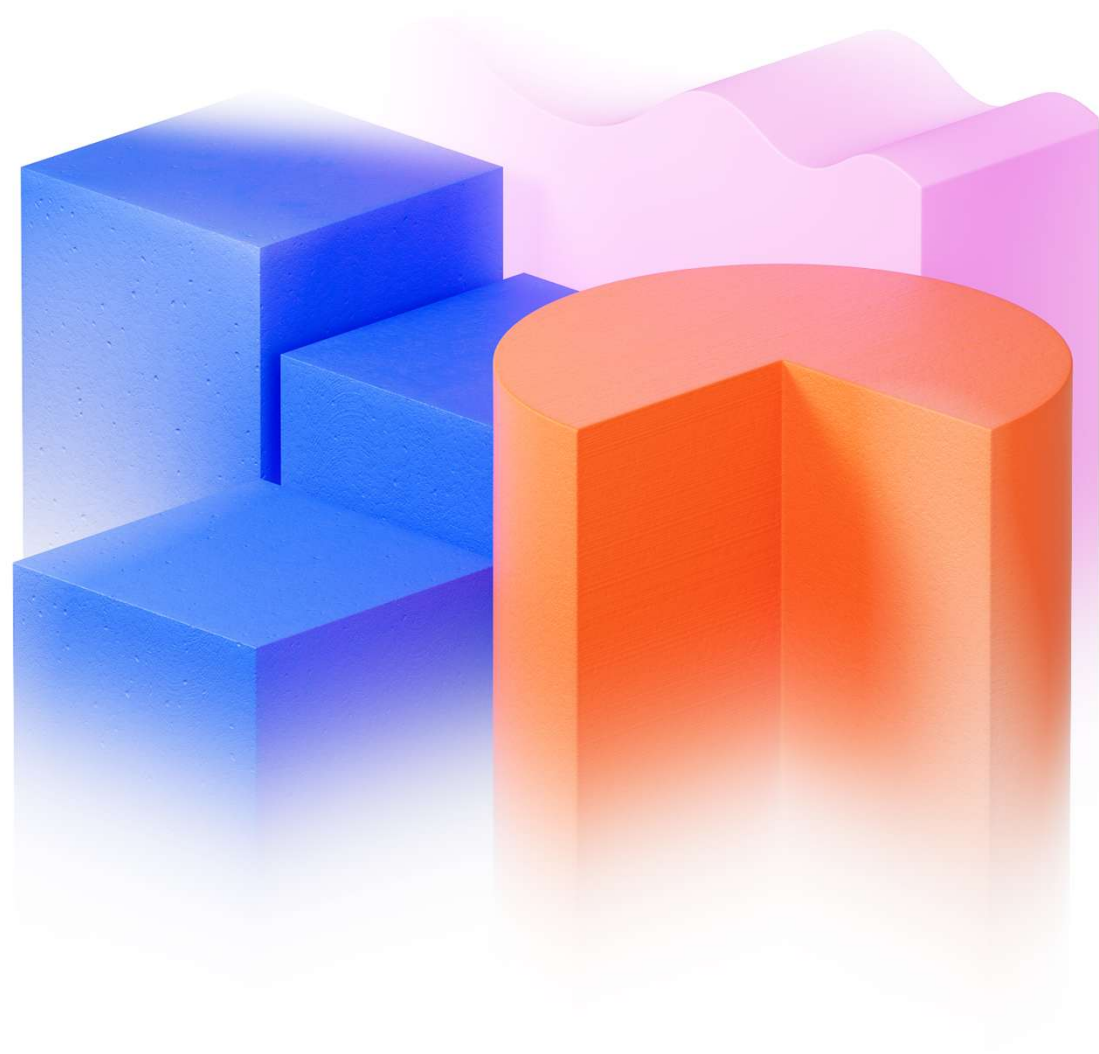


A systems perspective on the environment for the SEEA CF

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Background

- Discussions in SEEA CF 2028 process, autumn 2025:
 - "environmentally friendly"
 - "circular economy"
 - "bioeconomy"
- Other ongoing processes, notably the expert group on well-being measurement, environment task team
- The SEEA uses SNA structures to a great extent. Could the SEEA benefit with more structure from an environmental perspective

Systems perspectives on the environment are widespread and well-established

POLICY

- England's environmental improvement plan
- EU 8th environmental action plan
- Canadian Federal Sustainable Development Strategy
- Swedish environmental quality objectives
- Japan's 6th Basic Environment Plan

ENVIRONMENTAL ASSESSEMENT

- Life cycle impact assessment (LCIA)

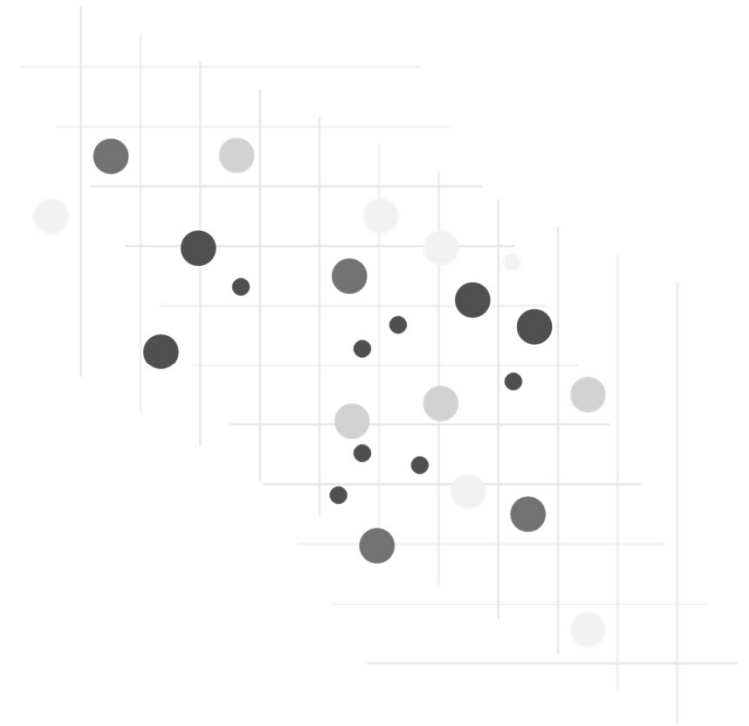
EARTH SCIENCE

- Planetary boundaries framework

These perspectives generally identify about a dozen system elements

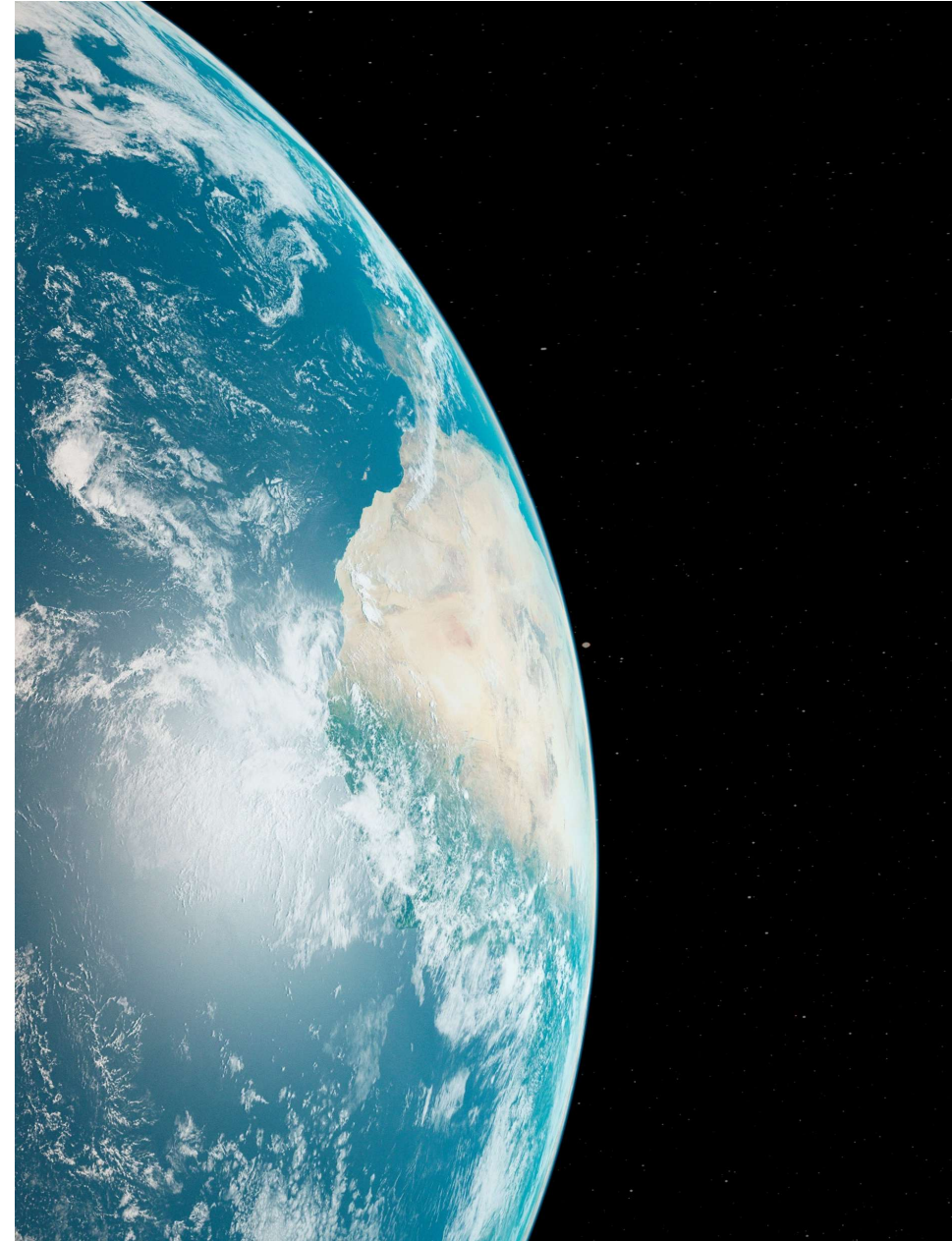
For example:

- Biodiversity
- Climate change
- Toxic substances
- Air quality
- Eutrophication
- Acidification
- Radiation
- Resource use:
 - Land
 - Biotic
 - Abiotic
-

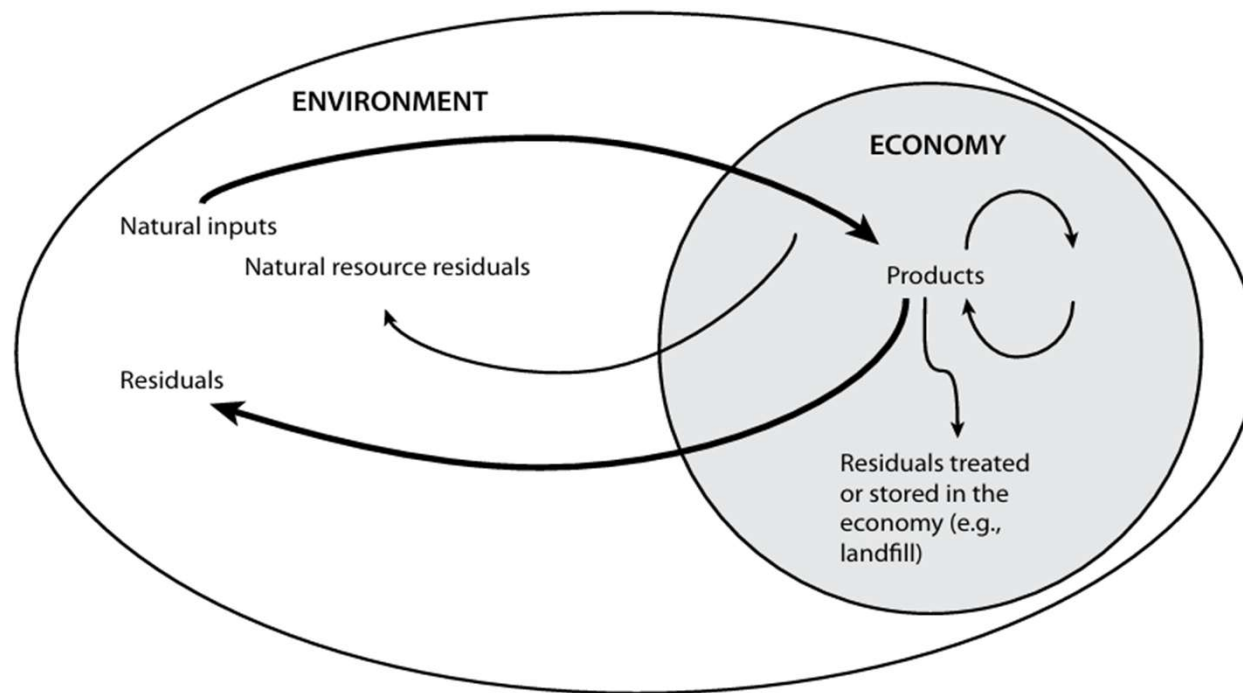


Identifying what is important in the environment system

- Planetary Boundaries:
 - **“safe-operating space for humanity”** by identifying quantitative limits for 9 *critical Earth system processes that regulate the stability and resilience of the planet*
- Life cycle assessment:
 - Negative effects on parts of the environmental system are connected to “areas of protection”:
 - Human health
 - Ecosystems
 - Resource availability



The environmental system in the SEEA CF 2012



Residuals according to SEEA CF 2012 physical flows

Group	Typical components
Solid waste (includes recovered materials) ^a	Chemical and health-care waste, radioactive waste, metallic waste, other recyclables, discarded equipment and vehicles, animal and vegetal wastes, mixed residential and commercial waste, mineral wastes and soil, combustion wastes, other wastes
Wastewater ^a	Water for treatment and disposal, return flows, reused water
Emissions to air	Carbon dioxide, methane, dinitrogen oxide, nitrous oxides, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, carbon monoxide, non-methane volatile organic compounds, sulphur dioxide, ammonia, heavy metals, persistent organic pollutants, particulates (e.g., PM10 dust)
Emissions to water	Nitrogen compounds, phosphorus compounds, heavy metals, other substances and (organic) compounds
Emissions to soil	Leaks from pipelines, chemical spills
Residuals from dissipative use of products	Unabsorbed nutrients from fertilizers, salt spread on roads
Dissipative losses	Abrasion (tyres/brakes), erosion/corrosion of infrastructure (roads, etc.)
Natural resource residuals	Mining overburden, felling residues, discarded catch

The environment system in SEEA activity accounts: CEP Scope

- The scope of environmental activities (primary):

“The economic activities whose primary purpose is to reduce or eliminate pressures on the environment or to make more efficient use of natural resources are called characteristic environmental activities. These are the environmental activities defined in SEEA CF, §§ 4.11 – 4.13.”

- The scope of environmental activities (secondary):

“certain other activities that do not directly serve an environmental purpose but produce specifically designed products whose use serves an environmental purpose. ”

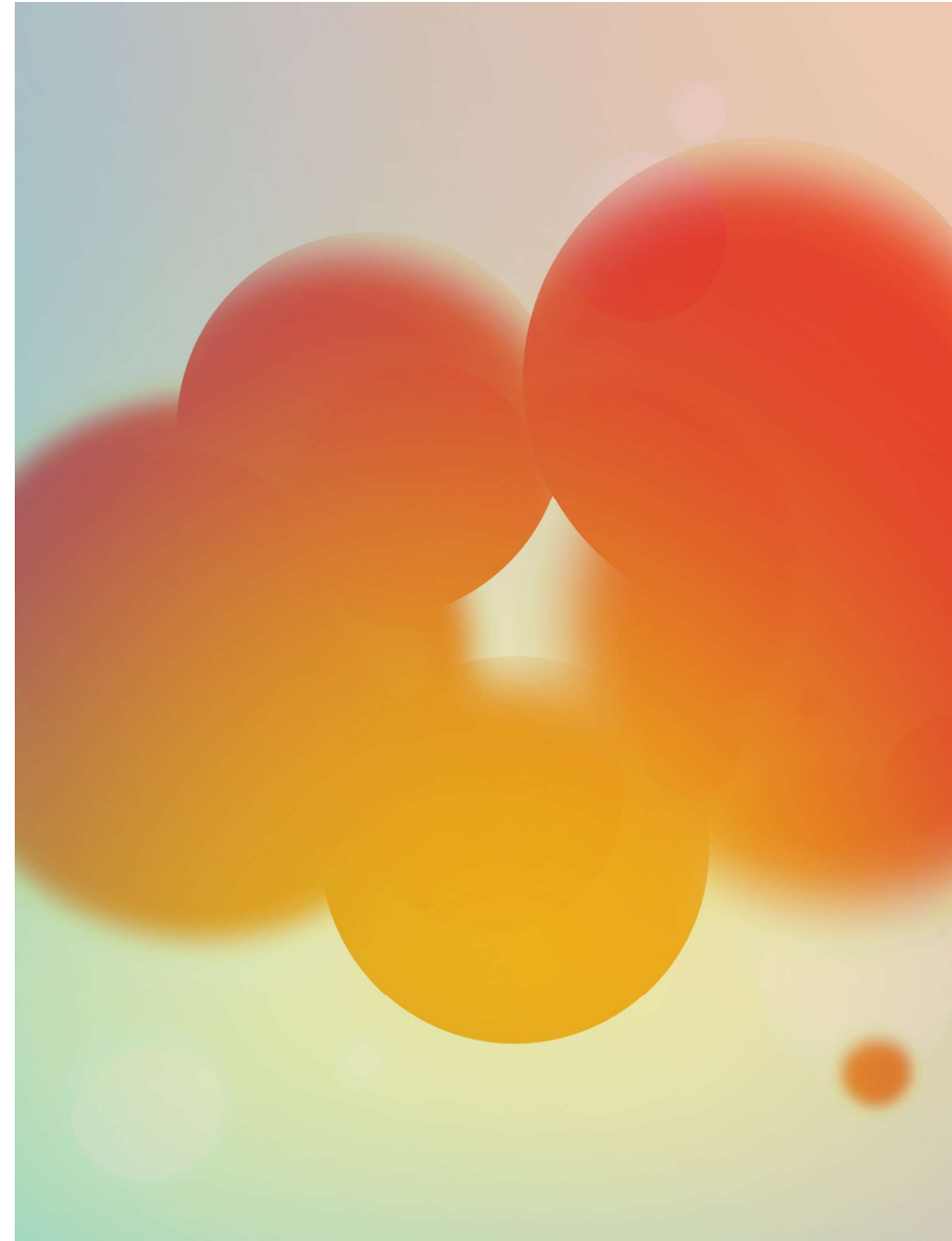
- Possibility of primary and secondary purposes that have opposite environmental outcomes, e.g. land remediation activities, biofuels, more?



The environment system in SEEA activity accounts: CEP Identification

- Technical nature – inputs, production process and output for a given activity. This is preferred as the de facto basis for determining purpose, for its neutrality
- Intention, motivation or presumed effect
- Legislation, for example purpose stated in provisions or preambles of the legislation
- Real effect, or objectively proven consequences on the environment of an activity or action. Noted as a last resort

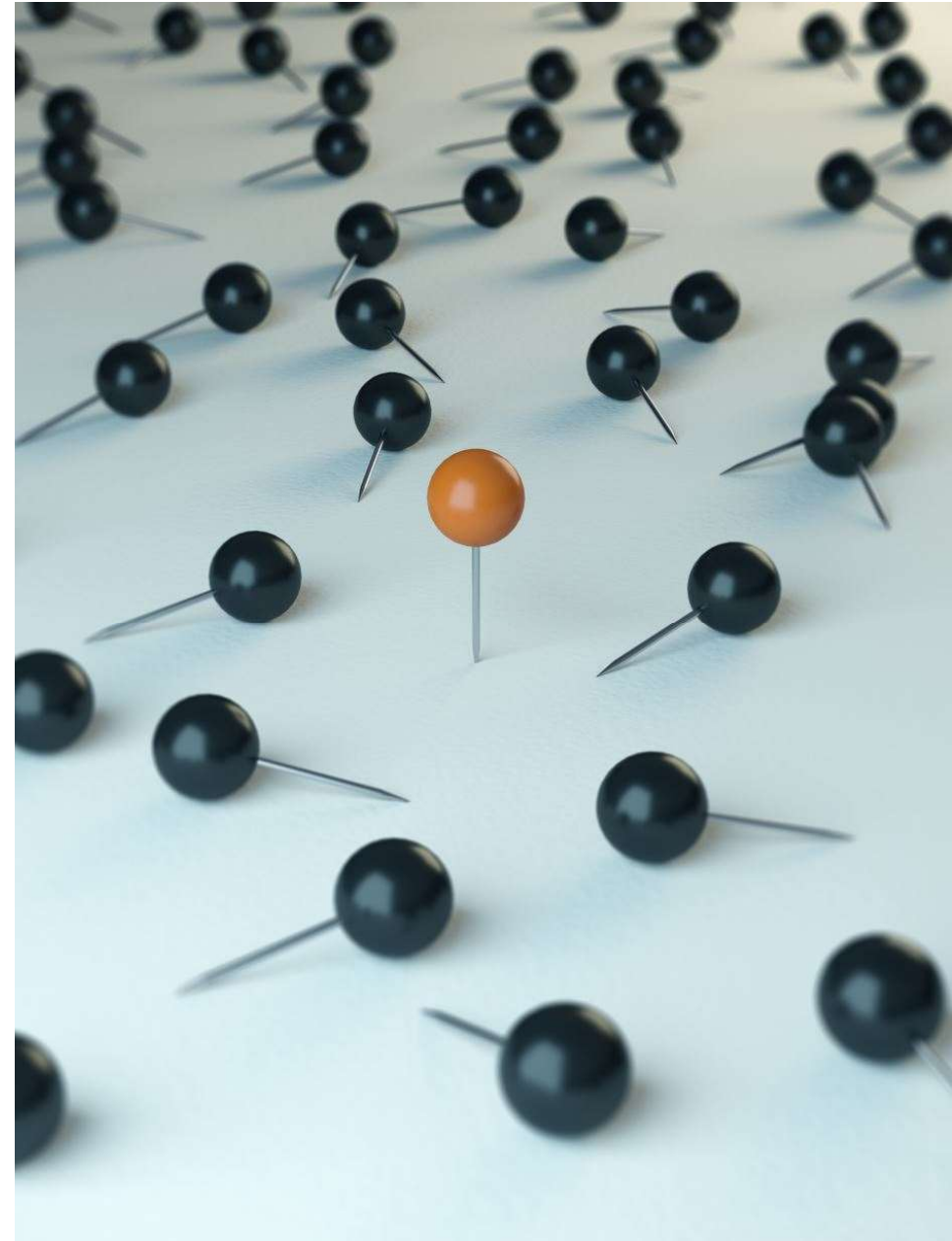
=> Compare lists, e.g. Eurostat indicative compendium



CEP and the EU taxonomy

Classes of the CEP have been mapped to the policy areas of the the EU taxonomy for sustainable finance:

- climate change mitigation
- climate change adaptation
- sustainable use and protection of water bodies
- circular economy
- pollution prevention and control
- protection and restoration of biodiversity and ecosystem



Discussion

1. "Environment system" considerations do occur in SEEA CF
 - Can consistency be improved to reason why residuals/resource use are significant, what is important?
2. How would the CEP map to areas of planetary boundaries?
3. Connection between the SEEA CF 2012 and other relevant international processes:
 - SEEA ecosystem accounting
 - Pressure accounts guidance note
 - High-level expert group on beyond GDP
 - Expert group on well-being measurement
 - Framework for the development of environment statistics
4. How could improved structure better support SEEA adoption?
 - Resources are always constrained

Questions for the London Group

- What other systems perspectives on the environment of SEEA relevance could be considered?
- In what way can the systems perspectives considered better support the identification of environmental activities for specific policy areas?
- How can the systems perspectives be used to highlight activities that have both positive and negative environmental consequences?

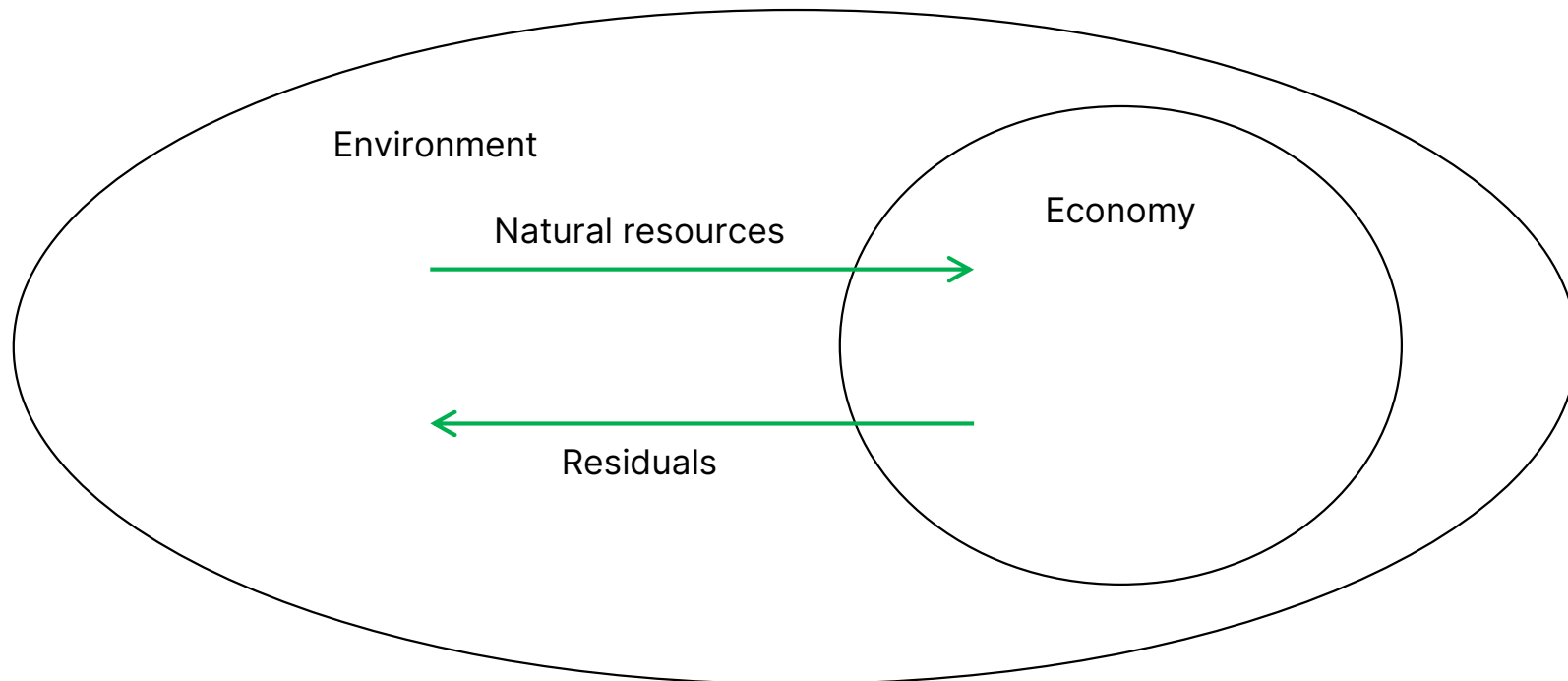
Thank you! Gracias!

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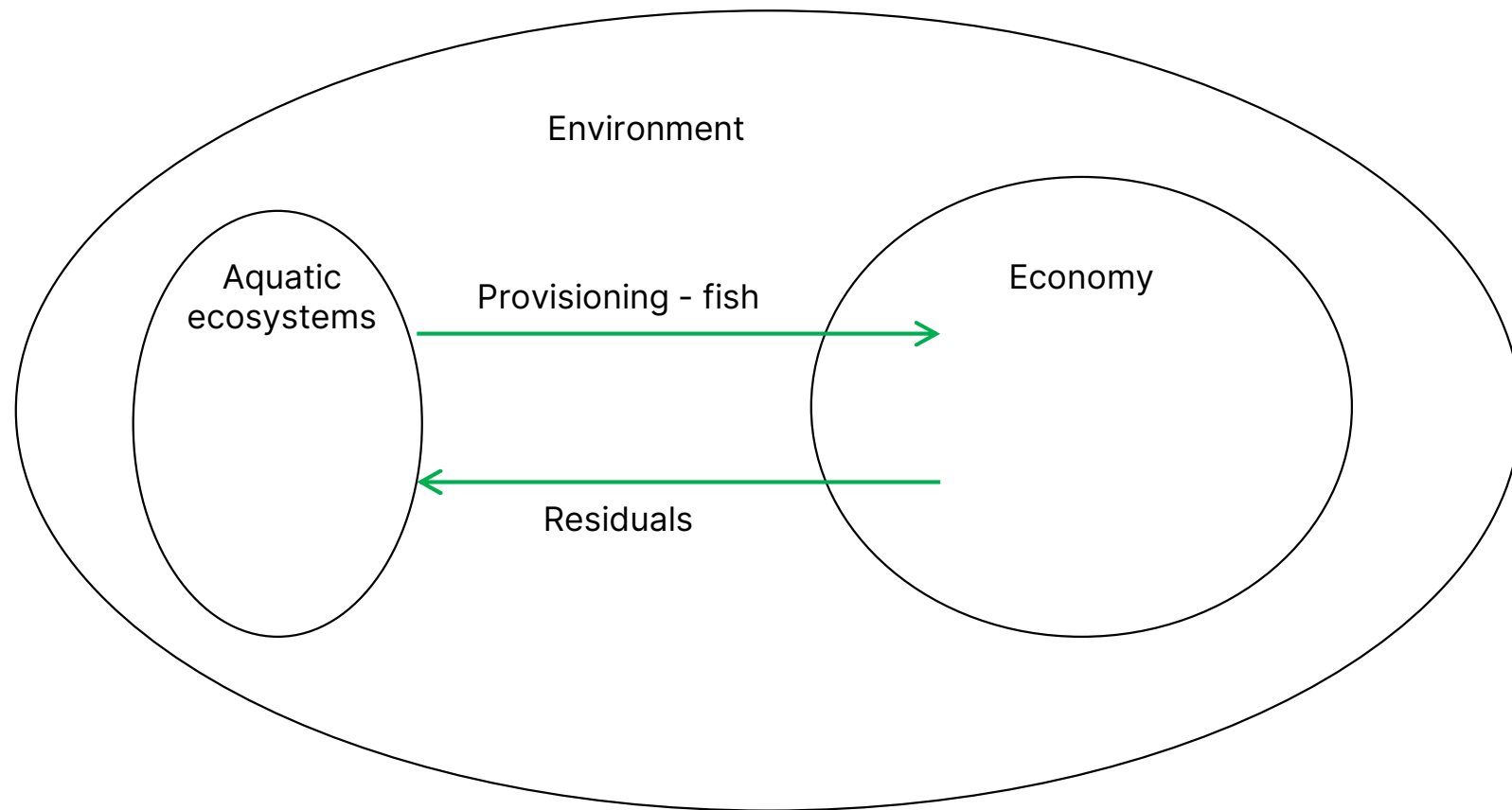


EXTRA SLIDES

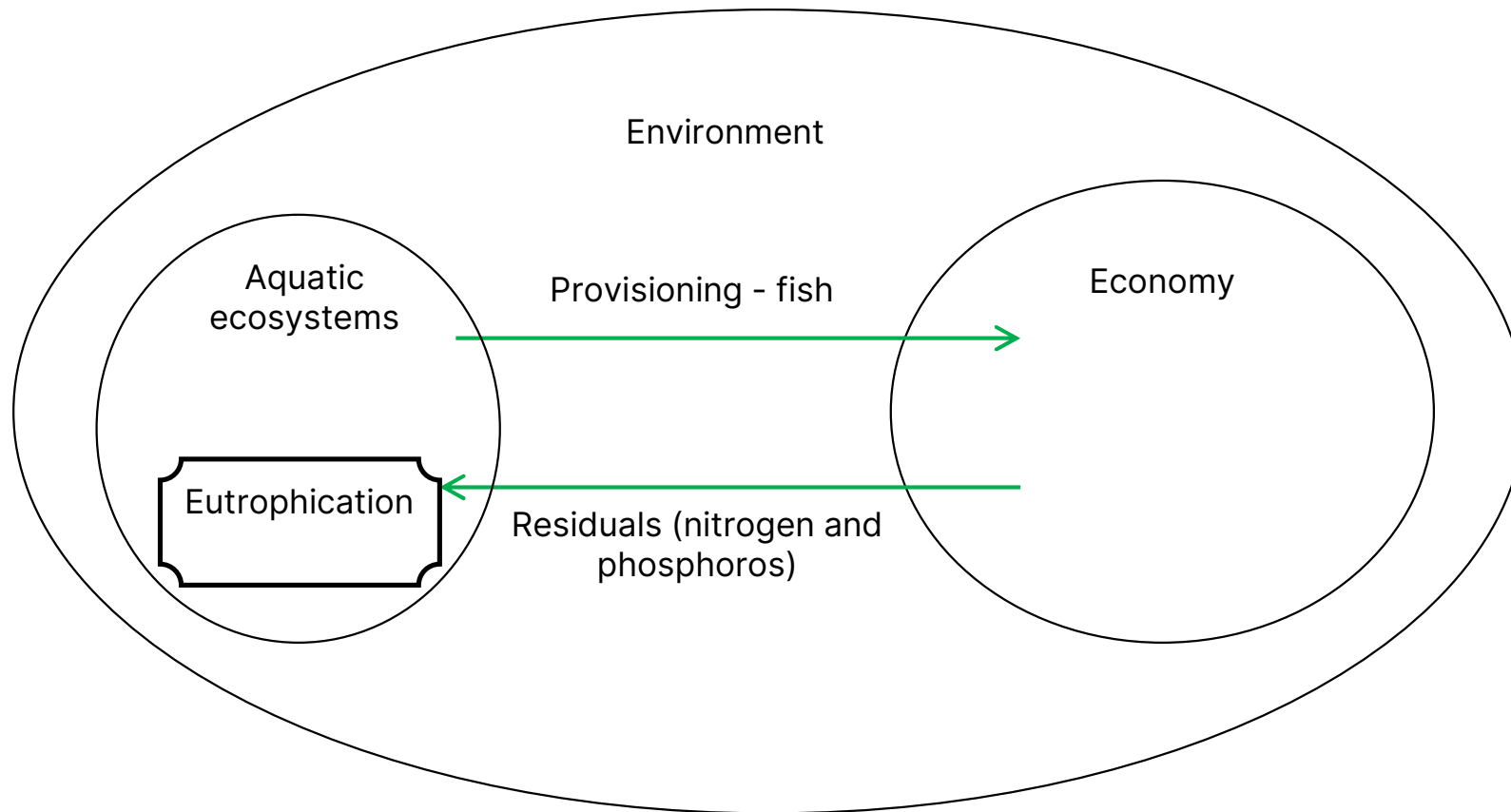
The environment system in the SEEA CF 2012



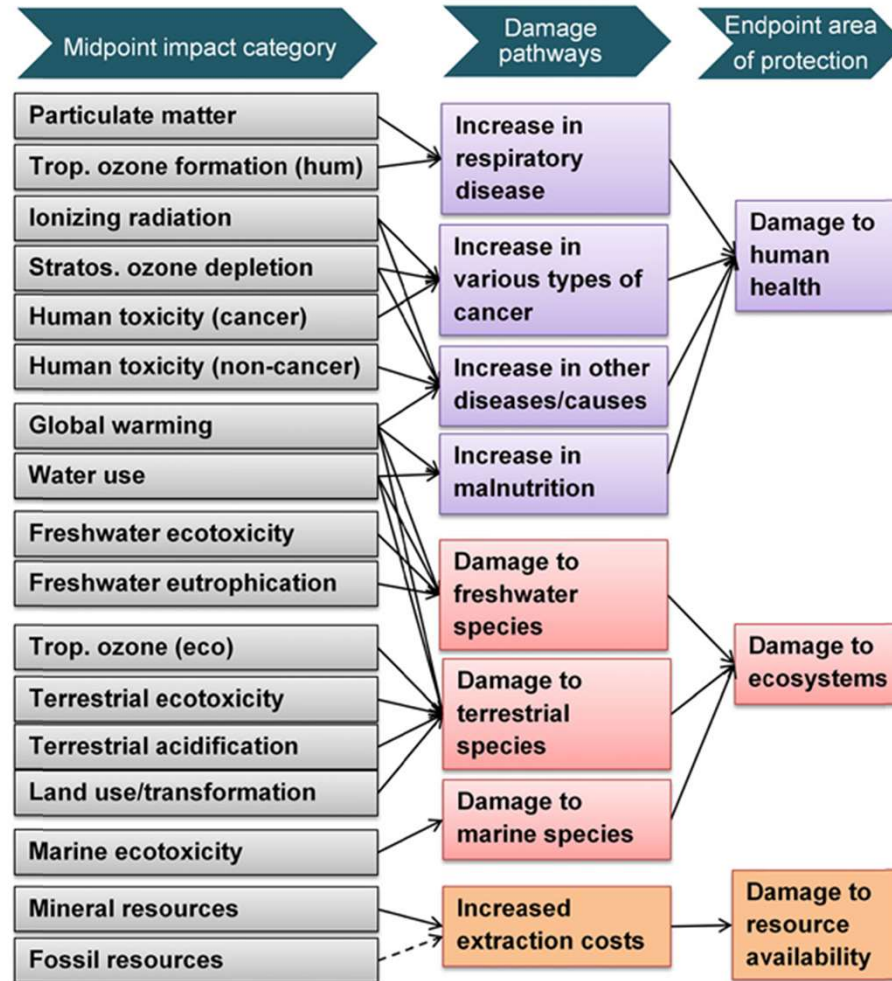
The ecosystem perspective



The ecosystem perspective, revised



Connecting midpoints and endpoints in LCIA - ReCiPe



ILCD – connecting residuals with environmental impacts

