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Economy in a World with Environmental Limits, Georg Rebernik

Megafactors in Global Development



Environment policy priority areas

-  Climate change
-  Nature and biodiversity
-  Natural resources and waste
-  Environment, health and quality of life

Source: EEA

Environmental Limits 1

■ Limits to Global Development

- Assumption that if mankind does not respect the limits, the economy (thus the society) will „**overshoot & collapse**“ in the long run (next 40 - 80 years); (collapse: end of society as we know it)
- limits refer to **decent living conditions** for humans; present and future
- prerequisites for **economic activities** of production and consumption
- **Economically and technologically** feasible
- **stable political development**

The aim is to „soften“ as much as possible a „hard landing“ (i.e. to avoid the „collapse“-scenario)

Environmental Limits 2

■ What exactly is limited?

→ **Biodiversity**

→ **natural (physical) resources** / non-renewable & renewable

→ **ecosystem services**

■ Clean Air

■ Clean Water

■ Fertile soils

■ Absorption capacity

→ Most significant and truly most consequential issue:
limited capacity of the atmosphere, the biosphere and the oceans to absorb **greenhouse gases** (only 50%)

Greenhouse Gas Emissions cause Climate Change

- Truly **global issue**: every action affects everybody
- **Time** matters: tipping elements (Arctic & Greenland ice, forests, permafrost soils,...)
- Necessary: **2° target** to keep Climate Change manageable
- → **reduction** of GHG emissions in Industrialized Countries until 2050 between **80% - 95%**
- → “**Societal Conversion**”: fundamental technological, infrastructural, economic and behavioral change

What shall be reduced

- **Financial capitalism** – we do not have time, money, management capacity, social & political acceptance to cope with another crisis → ?
- **Use of fossil fuels & physical matter**
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 - Increasing efficiency / cascadic use as to reduce use by factor 5 - 10 (up to 95% reduction!!)
 - Circular flows and closed loops for physical matter
 - Increase (fossil) fuel prices
 - Compensate for social impacts
 - Be mindful of rebound effects

What shall grow 1

- **Efficiency & recycling** industry
- **Renewable** energy and resources
- → cope with increasing demand for **use of land** (cf. „E 10“-discussion)
- Consumption of **non-physical goods**
- „conversion“: **huge investment** necessary (cf. railway, renewable power generation & supply, thermal insulation, force back urban sprawl – appealing green cities,...)
- **Aid for poor countries** to do likewise in order to establish low carbon economies

What shall grow 2

- Strengthen **Governance Capacity** to follow long term objectives („Ecology is longterm Economy“) with long term commitment
 - **Politics / Democracy** (they are us)
 - **Companies** (long term investments; „need for stable framework“)
 - **Participation**
 - **International** cooperation and settlement
- **Education** → technological, political, economic knowledge → emancipation
- **Social equity** → social responsibility → interregional → intergenerational

Contact & Information

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