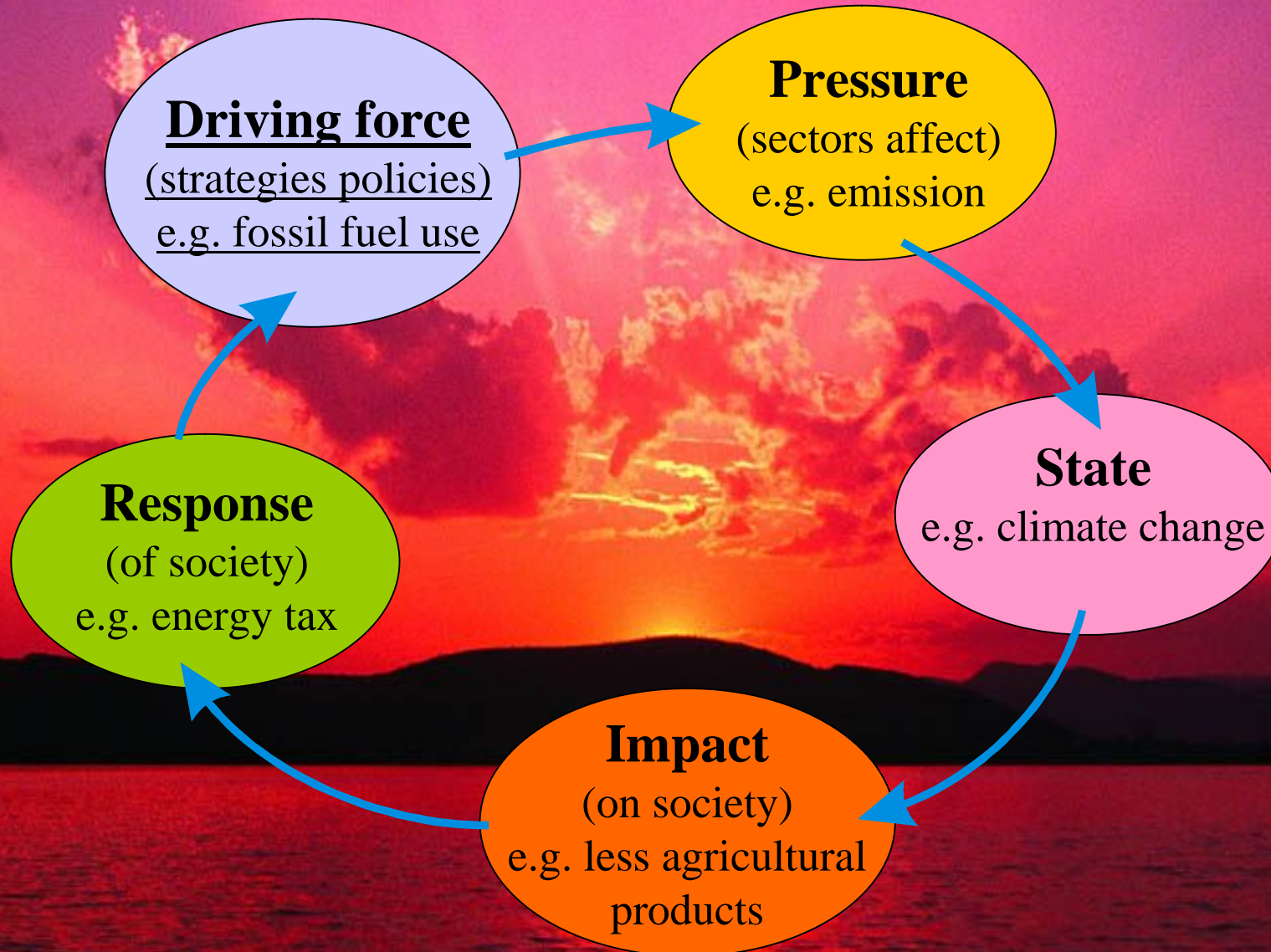


Principles of natural resource management and potential tools for resource capping

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Environmental indicators



Problem statement

- Drivers: Making more products to meet the needs of a consumer society. We must intensify production as capitalists want profit
- Pressures: People mobilize resources from geological storages, and in the same time reduce the extension of ecosystems
- These are extra burdens for the existing biogeochemistry of the Planet
- State: Biogeochemistry can't keep its equilibrium, a structural change becomes true (e.g. GHG)
- A new structure means a new function (e.g. climate change)
- Impact: decreasing biodiversity, less carrying capacity
- Response: Multinational environmental agreements, EU sustainability policy, Emission trading

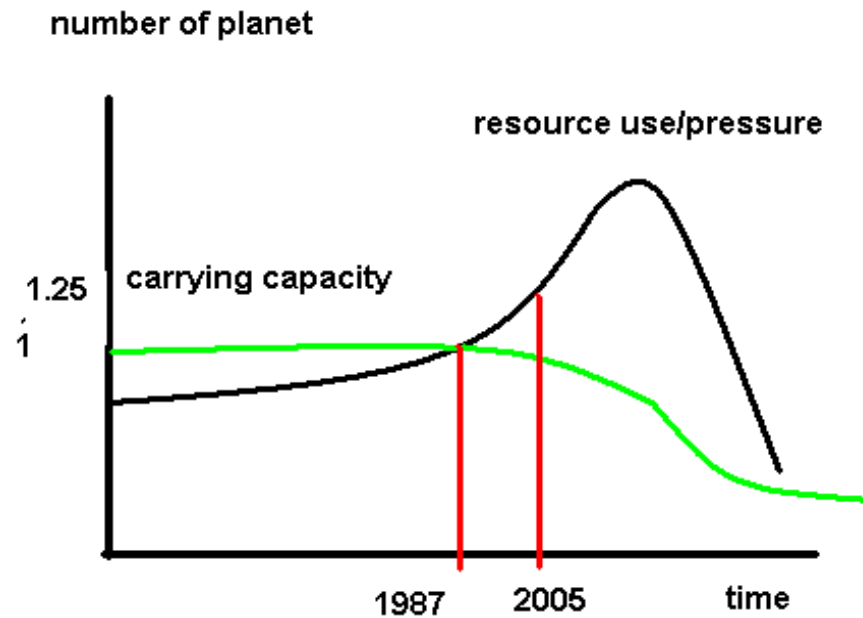
Why current mitigation policies fail?

- To mitigate climate change or biodiversity loss failed because policies do not target the underlying causes
- The direct link to biodiversity loss is the growing environmental pressure
- It comes from drivers, which link to economic growth

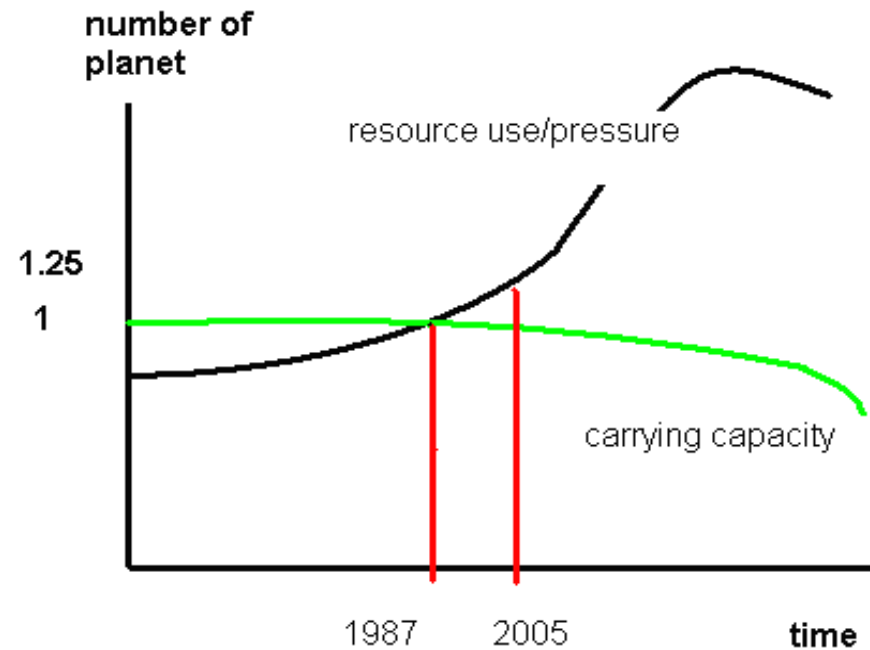
Response

- Response can target the underlying causes (cultural level) – prevention
- Response can target the structural level – mitigation
- Response can target the impact - compensation

Future Scenario I. Business as usual compensation



Scenario II. Eco-efficiency Mitigation



The myth of eco-efficiency

- High tech leads to bigger efficiency in using resources (eco-efficiency)
- High tech results labour efficiency, competitiveness and less working place
- Growing capital income from efficiency results bigger investment potential
- It results growing number of production and service facilities
- It results new demand for human resources
- It results growing pressure on the environment (efficient use, but growing demand for space and resource, growing beyond carrying capacity)

The myth of knowledge first

- Knowledge is just knowledge
- SD requires long term consideration of social and environmental impacts of the economy
- Long term consideration supposes wisdom in using knowledge

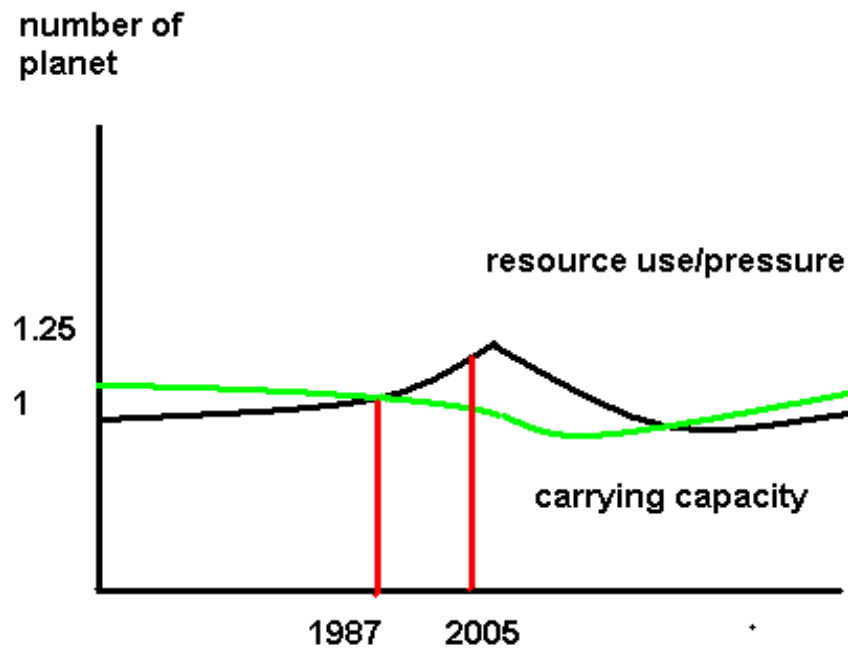
What sustainable resource use means?

- We must reduce the pressure!
- We make three different types of pressure to the environment by carrying out our human activities
- These three types of pressure go together
- When we use natural resources we put pressure to the space and pollute the environment
- When we pollute environment we put pressure on resources and space
- When we use space we put pressure on resources and pollute environment

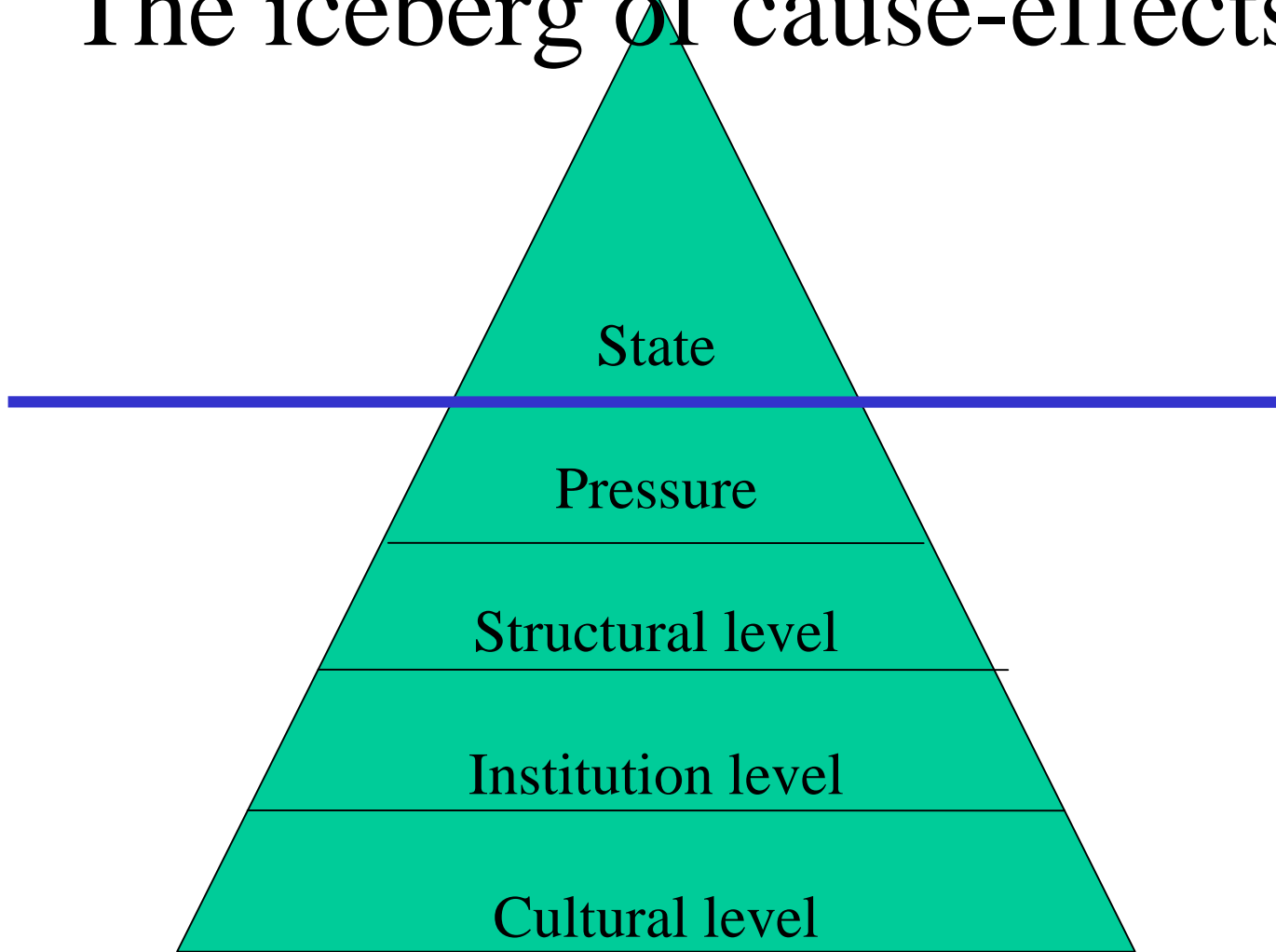
What sustainable use means

- Do not grow beyond carrying capacity
- Two parallel targets:
 1. Maximise eco-efficiency
 2. Put a resource cap on total energy consumption

Scenario III. Sustainable resource use - prevention



The iceberg of cause-effects



The idea of a national non renewable resource budget

- ❖ An integrating set of tools to manage environmental, social and economic crises.

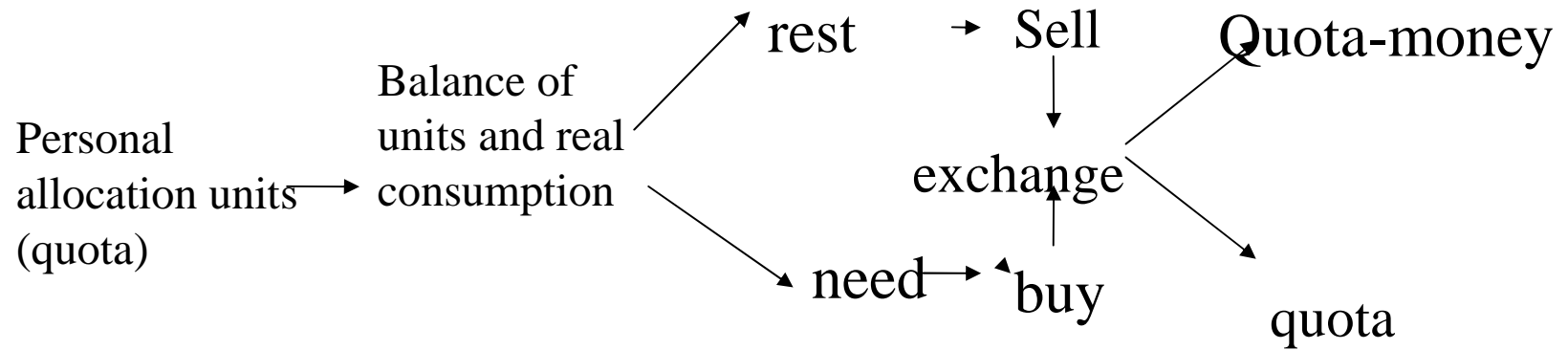
Regulation of resource input

- Outputs comes from inputs
- Less input means less resource use, less use of land, and less emission
- Production and consumption patterns to be changed
- Economic incentives
- There is still need to regulate emissions (e.g. toxics)
- Legal regulation

What is the national non-renewable resource budget?

- The aim is to reduce non-renewable resource use year by year
- A national cap and share (trade) system for resources instead of GHG emission capping
- Users are grouped, get a cap and share
- All users have personal allowance (called quota – right to consume)
- Users trade with savings
- A new type of money becoming into the system, called quota-money

How quota money born?



The quota money

- The quota money is a complementary currency/new currency
- Complementary currency requires financial security – guarantee
- In this case the forint is the guarantee at the managing organisation
- New currency: the guarantee is the future energy savings and the work associated.
- Quota money has zero interest
- Turnover is secured by the pressure of saving needs
- There is an exchange for the quota money including a fee

Quota money fro what?

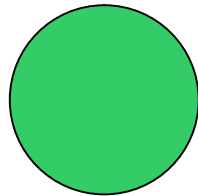
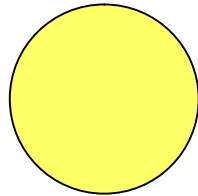
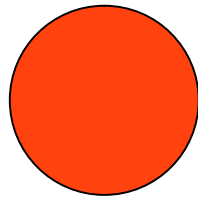
- An internal local market established for environmentally sound goods and services
- The market is free, must meet with requirements
- Excludes certain goods
- Credit for investments in order to produce the appropriate goods for the internal market or save energy

Revolving Fund

- Revolving Fund is a financial instrument to have sufficient amount of credit
- Revolving Fund uses the quota money for crediting
- Zero interest – low speed return is possible
- Credit covers all costs of investment, and returns at 100% to the fund from the savings
- Saving create quota money
- Speed of return depends on speed of saving

We need room for interaction to renew
resources and keep processes at the right
track

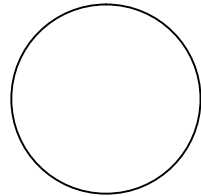
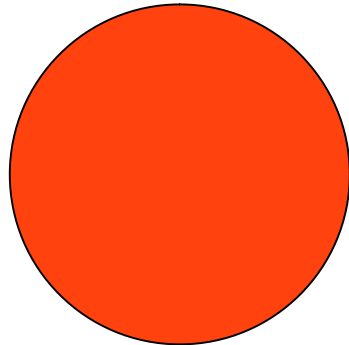
The traffic light concept



Red: intensive use of areas (agricultural land, forest, settlements, industry)

- Yellow: sustainable use
- Green: non use

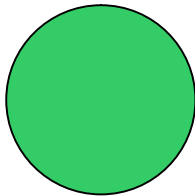
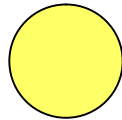
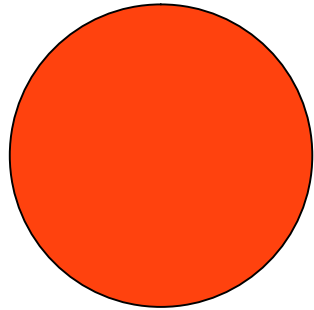
Stage I. Introduce regulatory framework



Paying tax on
intensive use
(modest tax, lot of
people)

- Incentives for sustainable use
- State buys, no expense

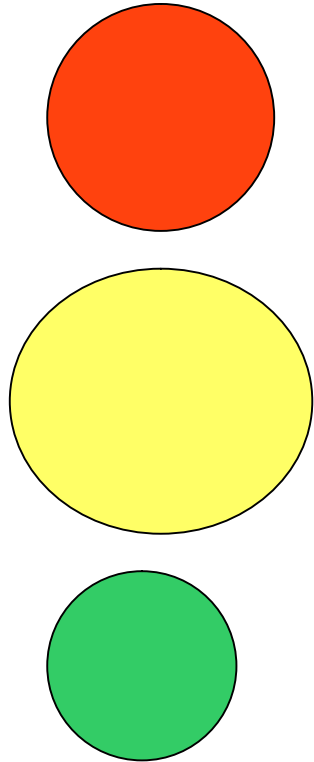
Stage II.



Increasing tax

- People move to sustainable use and non use

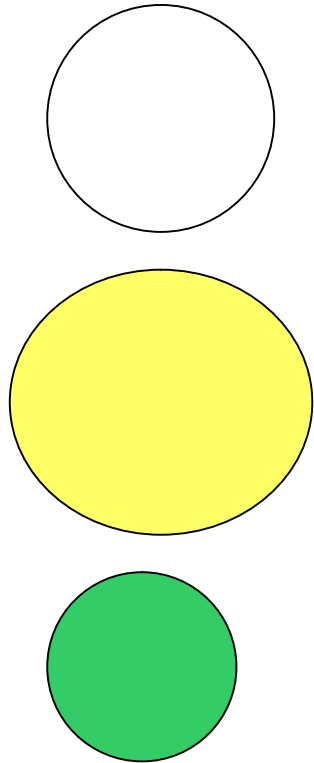
Stage III.



Tax is increased
(hard tax, less people
in the red)

- More and more people move to sustainable use and non use

Stage IV.



Tax is eliminated

- sustainable use ensures that there is minimal negative external pressure on the non use area

Conclusions

We are not allowed to change the structure of the global system!

- If we changed the structure and the function is changing we have to adapt to these changes
- We force ourselves into an adaption trap
- We and many others might not adapt

How to solve the problem?

- Limit the inputs (total energy and material consumption)
- Value resources by limiting them
- Change production and consumption towards a less energy and material intensive pattern
- Consider space, resource and emission equally for sustainable resource use

Build understanding of sustainability

- Change perception towards development/quality of life
- Change values
- Build new moral