

SUSTAINABLE DEVELOPMENT

NATURAL RESOURCES

2017-2018

Juan A Ferriz-Papi



Natural resources



Raw materials that come from the Earth

We cannot produce natural resources



Natural resources



We transform natural resources so that they are beneficial to us



Examples of natural resources

Natural resources	Ways to use them
Air	Wind energy
Animals	Food, clothing
Coal	Heating, electricity
Minerals	Metals
Oil	Fuel, electricity
Plants	Wood, paper, cotton
Water	Drinking, energy
Sun	Energy, photosynthesis
Soil	Crops



Types of natural resources

Biotic & Abiotic

Fossil fuels

Renewable and Non-renewable resources



CONSUMISM

INDIVIDUAL HAPPINESS



PURCHASE OF GOODS
AND SERVICES





PROBLEMS:

Overpopulation

2,8 ha/person, consuming 1.6 earths a year (Living Planet report 2016)

The bigger growth the less productive land per person

<https://www.youtube.com/watch?v=QsBT5EQt348>



PROBLEMS:

Unequal distribution of resources

Depending on the society model

Bangladesh 0.5 ha/inhabitant

US 9.6 ha/inhabitant

Also differences inside every society

<https://www.youtube.com/watch?v=V2Olt1w7Sas>



PROBLEMS:

Deep social differences

Migration from poor to rich countries

Opposition to free movement of people



PROBLEMS:

The current economic model does not consider natural resources

A country wealth is measured by the Gross Domestic Product (GDP)

No or very reduced value to natural resources

Artificialisation of the economy





NATURAL CAPITAL
comprises all natural resources



NATURAL INCOME

CARRYING CAPACITY

If we consume more than the natural income
then we enter unsustainable territory



¿CAN NATURAL CAPITAL BE SUSTITUTED BY ARTIFICIAL CAPITAL?





WEAK SUSTAINABILITY

STRONG SUSTAINABILITY

Resources are changed into money
Natural capital not considered
Unlimited exploitation of resources (predation)
Looking for resources in other territories

Examples of weak sustainability?



WEAK SUSTAINABILITY

STRONG SUSTAINABILITY

Resources are valued and preserved
Limited exploitation of resources
Natural income/carrying capacity
Territory self-sufficiency

Examples of strong sustainability?



¿WHAT ARE EXPANSIONARY POLICIES?

Necesity to get resources to consume for the population

Market expansionary policies are designed to catch Resources from other territories

USE OF FREE MARKET AND NEOLIBERALISM

Ocurring problems:

- Pollution of other territories
- Destruction of natural Resources and natural capital
- Increase of transport and energy consumption
- Generation of bigger volumes of waste
- Concentration of land – destruction of local economy
- dependency on multinational corporations

The market is only free for the ones who invented the Free Market



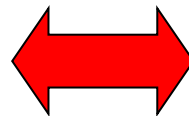
Sustainable Development

Brundtland Report “Our Common Future”

World Commission for Environment and Development, UN (1987)

Bet on technological development and increase of life quality and consumption in developing countries as a way of sustainable development.

Technological Development



Natural Resources



In 1999 we already exceded the Earth carrying capacity by 20%

We need one year and three months to recover one year consumption

(Mathis Wackernagel, 2002)

Living Planet Report 2016: In 2012, 1.6 earths were needed to produce our consumption

The Earth has 2.1 ha/inhab. We consume 2.8 ha/inhab.

Urgent actions:

- Reform our food and energy systems
- Meet global commitments on climate change
- Protect Biodiveristy (58% of vertebrate population reduction between 1970 andy 2012)
- Support sustainable development

