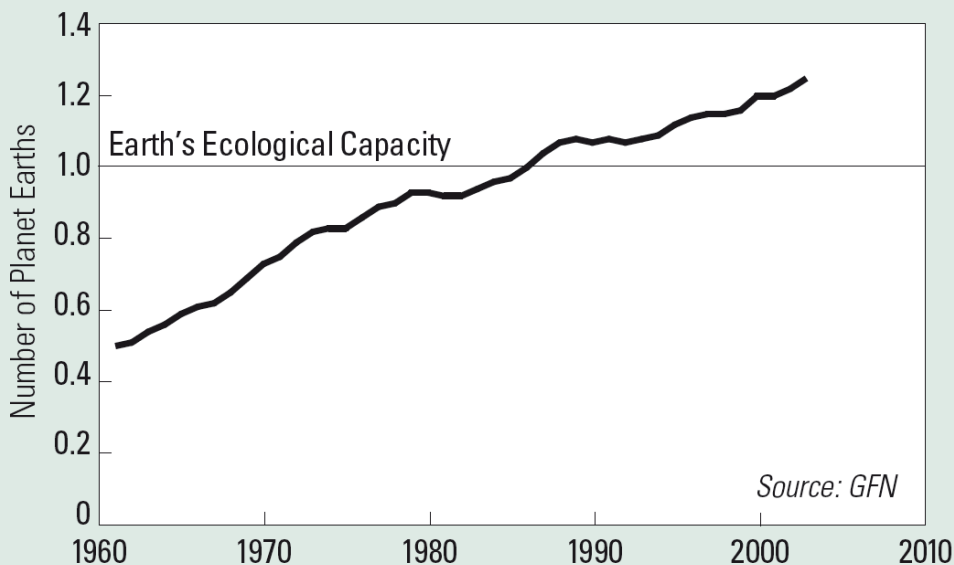# Dimensions of

# Sustainable Development

# Sustainable Development – what is it about?

- natural ecosystems = sustainable system

**SD – to live and thrive within the Earth's ecological capacity**

*"SD is a complex **set of strategies** that makes possible to meet **people's social needs**, both material and spiritual, by using right **economic instruments**, while respecting **environmental limits**."*



Figure 3. Humanity's Ecological Footprint, 1961–2003

Source: GFN

# Sustainable Development – what is it about?

- natural ecosystems = sustainable system

**SD – to live and thrive within the Earth's ecological capacity**

*„SD is a complex **set of strategies** that makes possible to meet **people's social needs**, both material and spiritual, by using right **economic instruments**, while respecting **environmental limits**."*



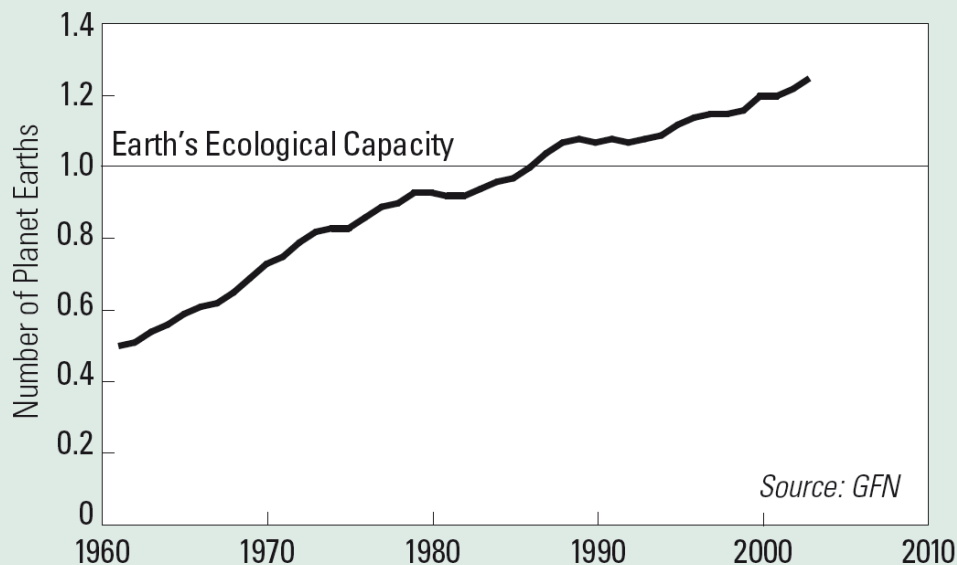Figure 3. Humanity's Ecological Footprint, 1961–2003

Earth's Ecological Capacity

Number of Planet Earths

Source: GFN



Bioproductive Land

Bioproductive Sea

Energy Land

Built Land

**Biodiversity**

©BFF 2005

# What are the three main pillars of sustainable development/sustainable society?

# Scope of Sustainable Development as defined by the United Nations

| | | | | | | |
|---|---|---|---|---|---|---|
| Agriculture | Consumption & Production Patterns | Finance | Industry | Land Management | Sanitation | Trade and Environment |
| Atmosphere | Demographics | Forests | Information for Decision Making & Participation | Major Groups | Science | Transport |
| Biodiversity | Desertification and Drought | Fresh Water | Integrated Decision Making | Mountains | Small Islands | Waste (Hazardous) |
| Biotechnology | Disaster Reduction & Management | Heath | International Law | National Sustainable Development Strategies | Sustainable Tourism | Waste (Radioactive) |
| Capacity-Building | Education and Awareness | Human Settlements | International Cooperation for Enabling Environment | Oceans and Seas | Technology | Waste (Solid) |
| Climate Change | Energy | Indicators | Institutional Arrangements | Poverty | Toxic Chemicals | Water |

# Sustainable Development Goals (2015 – 2030)
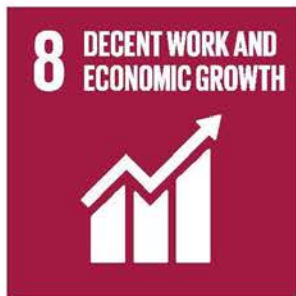
# Goals, targets and indicators

| Goal description | Target | Description | Indicator |
|---|---|---|---|
| 1<br><br>End poverty in all its forms everywhere. | 1.1 | By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day. | 1.1.1 Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural) |
| | 1.2 | By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions. | 1.2.1 Proportion of population living below the national poverty line, by sex and age |
| | | By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions. | 1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions |
| | 1.3 | Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable. | 1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work injury victims, and the poor and the vulnerable |
| | 1.4 | By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance. | 1.4.1 Proportion of population living in households with access to basic services |
| | | By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance. | 1.4.2 Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure |

# Sustainable Development Goals (2015 – 2030)

**11**

Make cities and human settlements inclusive, safe, resilient and sustainable.

| | | |
|---|---|---|
| 11.1 | By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums. | 11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing |
| 11.2 | By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons. | 11.2.1 Proportion of the population that has convenient access to public transport, by sex, age and persons with disabilities |
| 11.3 | By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries. | 11.3.1 Ratio of land consumption rate to population growth rate |
| | By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries. | 11.3.2 Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically |
| 11.4 | Strengthen efforts to protect and safeguard the world's cultural and natural heritage. | 11.4.1 Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal) |
| 11.5 | By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the economic losses relative to gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations. | 11.5.2 Direct economic loss in relation to global GDP, damage to critical infrastructure and number of disruptions to basic services, attributed to disasters |
| | By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the economic losses relative to gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations. | 11.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population |
| 11.6 | By 2030, reduce the adverse per capita environmental impact of cities, including by | 11.6.1 Proportion of municipal solid waste collected and managed |

# WELL CONNECTED

The transport facilities, including public transport, help people to travel within and between communities and reduce dependence on cars. There are facilities to encourage safe local walking and cycling.

TRANSPORT

**WELL SERVED**

High quality services for families and children (including early years childcare). A good range of affordable public, community, voluntary and private services (eg. retail, fresh food, commercial, utilities, information and advice) that are accessible to the whole community.

**WELL CONNECTED**

The transport facilities, including public transport, help people to travel within and between communities and reduce dependence on cars. There are facilities to encourage safe local walking and cycling.

SERVICES

TRANSPORT

...ABLE ...NITIES

ENVIRONMENTALLY SENSITIVE

WELL SERVED

WELL CONNECTED

ENVIRONMENTAL

SERVICES

TRANSPORT

Actively seek to minimise climate change (eg. people are encouraged to recycle and save water, live in homes that do not waste electricity and are built on wasteland so that no new forests/fields are destroyed). Create cleaner, safer and greener neigbourhoods (eg. by reducing graffiti and maintaining pleasant public spaces).

High quality services for families and children (including early years childcare). A good range of affordable public, community, voluntary and private services (eg. retail, fresh food, commercial utilities, information and advice) that are accessible to the whole community.

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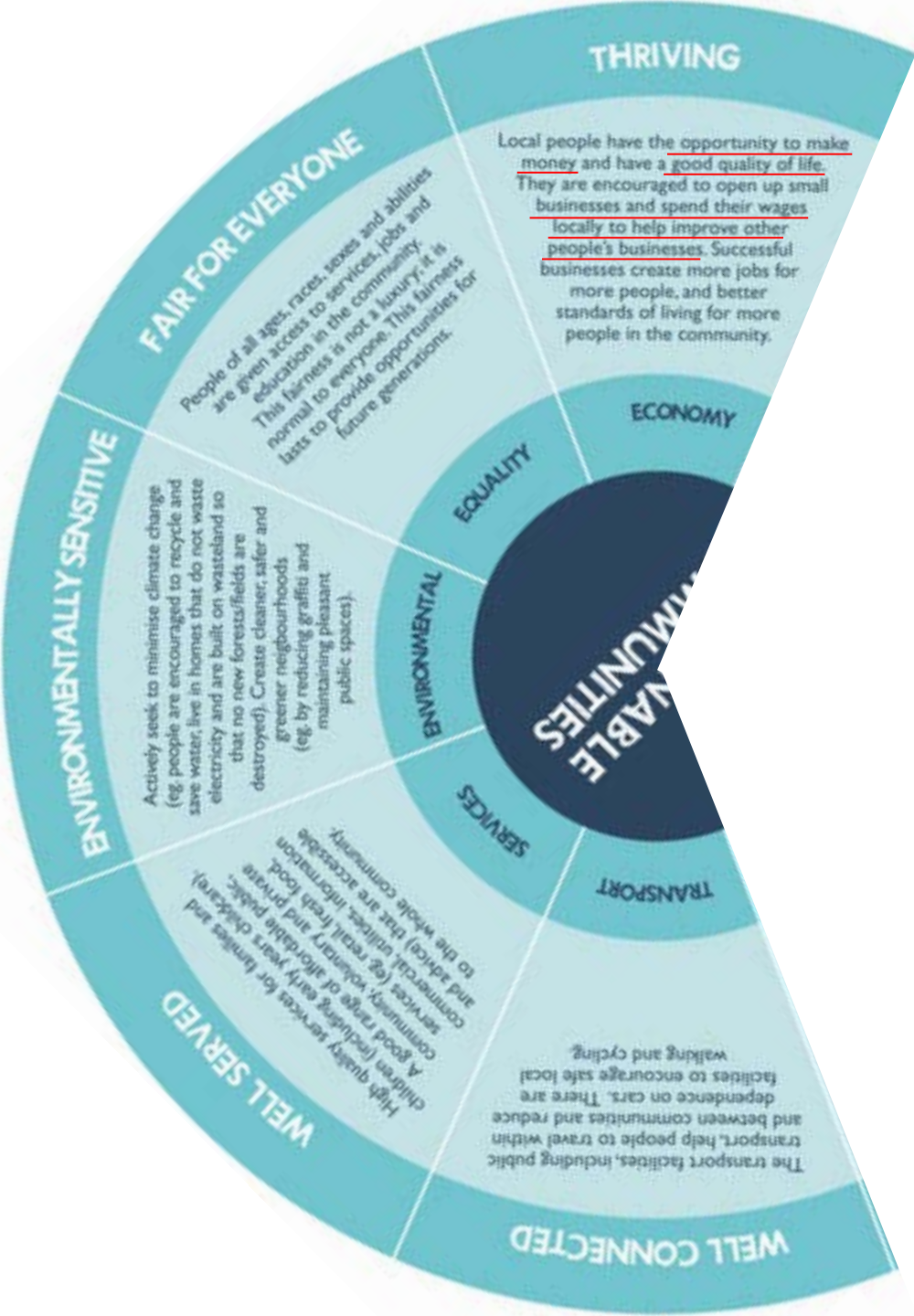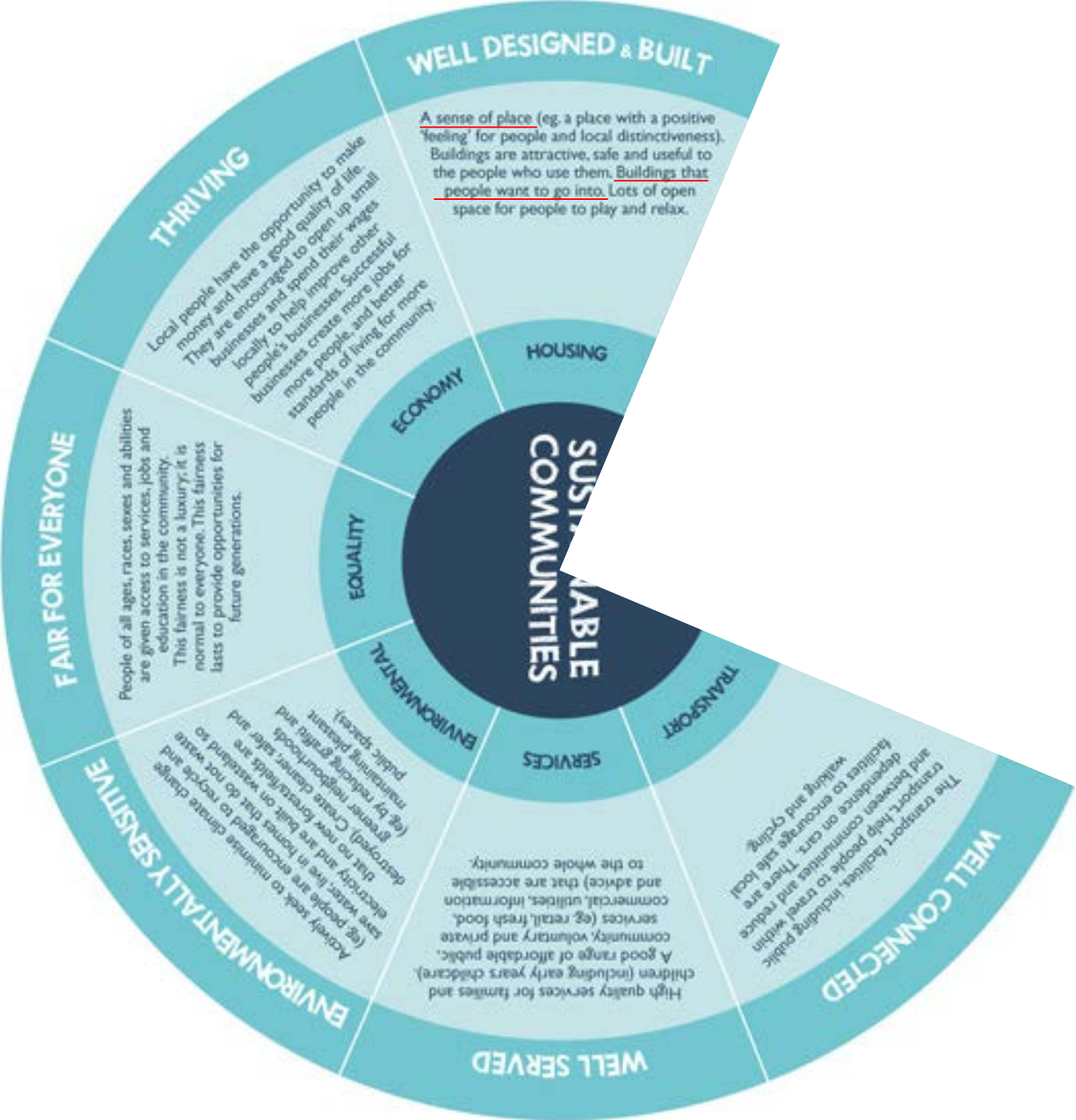
**SUSTAINABLE COMMUNITIES**

**FAIR FOR EVERYONE**

People of all ages, races, sexes and abilities are given access to services, jobs and education in the community. This fairness is not a luxury; it is normal to everyone. This fairness lasts to provide opportunities for future generations.

**EQUALITY**

**ENVIRONMENTALLY SENSITIVE**

Actively seeks to minimise climate change (eg. people are encouraged to recycle and save water, live in homes that do not waste electricity and are built on wasteland so that no new forests/fields are destroyed). Create cleaner, safer and greener neighbourhoods (eg. by reducing graffiti and maintaining pleasant public spaces).

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**SERVICES**

**TRANSPORT**

**WELL CONNECTED**

The transport facilities, including public and between communities to travel within dependence on cars. There are walking and cycling.

THRIVING

Local people have the opportunity to make money and have a good quality of life. They are encouraged to open up small businesses and spend their wages locally to help improve other people's businesses. Successful businesses create more jobs for more people, and better standards of living for more people in the community.

ECONOMY

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ENVIRONMENTAL

SUSTAINABLE COMMUNITIES

SERVICES

WELL SERVED

A good range of early years childcare and children (including) services for families and services (eg. retail, fresh food, commercial, utilities, voluntary and private and advice) that are accessible to the whole community.

TRANSPORT

WELL CONNECTED

The transport facilities, including public transport, help people to travel within and between communities and reduce dependence on cars. There are facilities to encourage safe local walking and cycling
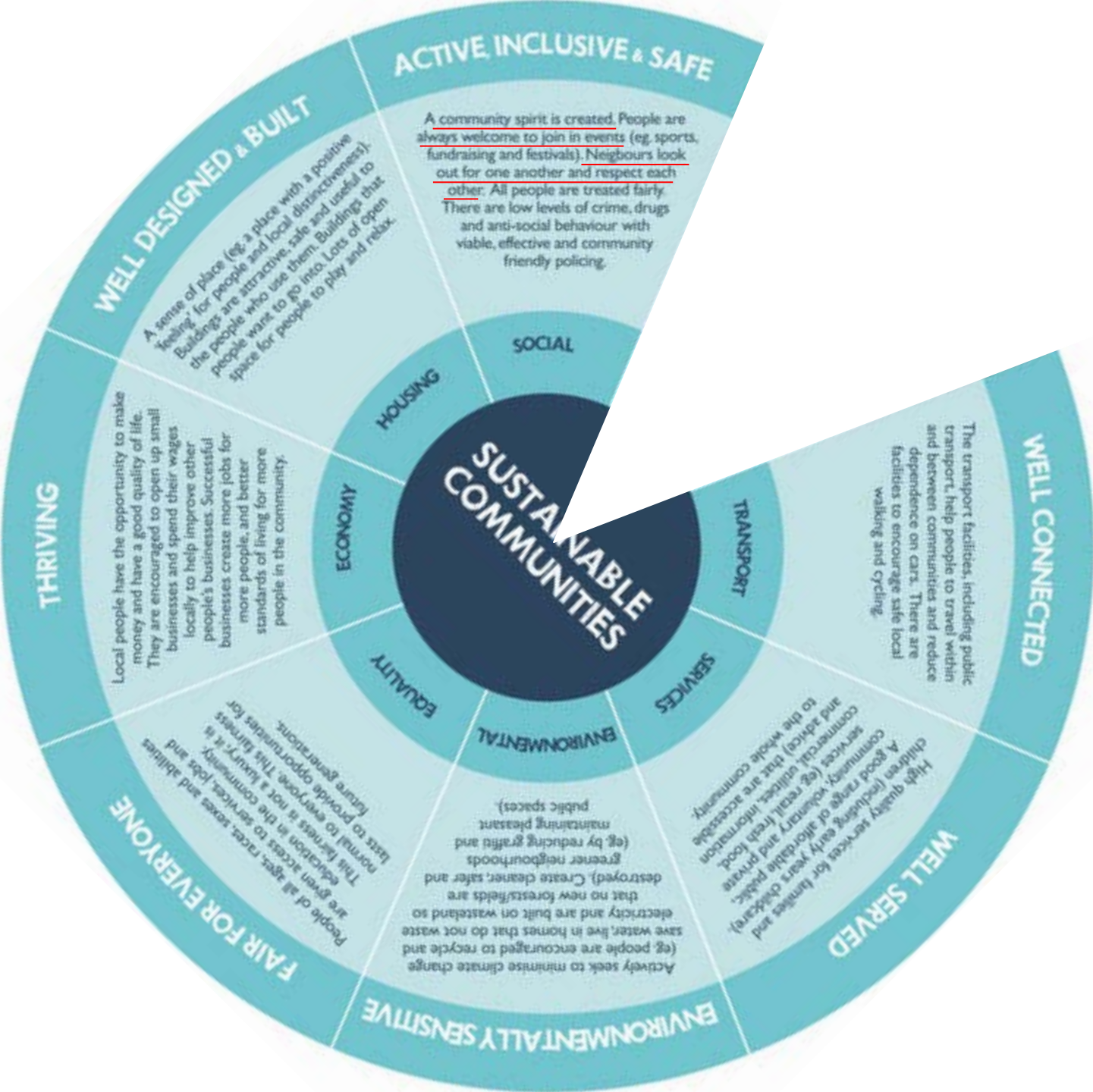
SUSTAINABLE COMMUNITIES

**WELL DESIGNED & BUILT**

A sense of place (eg. a place with a positive 'feeling' for people and local distinctiveness). Buildings are attractive, safe and useful to the people who use them. Buildings that people want to go into. Lots of open space for people to play and relax.

HOUSING

ECONOMY

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ENVIRONMENTAL

**ENVIRONMENTALLY SENSITIVE**

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SERVICES

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High quality services for families and children (including early years childcare). A good range of affordable public, community, voluntary and private services (eg. retail, fresh food, commercial, utilities, information and advice) that are accessible to the whole community.

TRANSPORT

**WELL CONNECTED**

The transport facilities, including public transport, help people to travel within and between communities and reduce dependence on cars. There are facilities to encourage safe local walking and cycling.

SUSTAINABLE COMMUNITIES

**ACTIVE, INCLUSIVE & SAFE**

SOCIAL

A community spirit is created. People are always welcome to join in events (eg. sports, fundraising and festivals). Neigbours look out for one another and respect each other. All people are treated fairly. There are low levels of crime, drugs and anti-social behaviour with viable, effective and community friendly policing.

**WELL DESIGNED & BUILT**

HOUSING

A sense of place (eg. a place with a positive 'feeling' for people and local distinctiveness). Buildings are attractive, safe and useful to the people who use them. Buildings that people want to go into. Lots of open space for people to play and relax.

**THRIVING**

ECONOMY

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ENVIRONMENTAL

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**WELL SERVED**

SERVICES

High quality services for families and children (including early years childcare) and advice) that are accessible to the whole community. A good range of community, voluntary and private commercial (eg. retail, fresh food, information services (eg. retail, fresh food, information

**WELL CONNECTED**

TRANSPORT

The transport facilities, including public transport, help people to travel within and between communities and reduce dependence on cars. There are facilities to encourage safe local walking and cycling.

# SUSTAINABLE COMMUNITIES

**WELL RUN**

When decisions are made about a community, local people are included in the decision-making process. The community enjoys a sense of civic values, responsibility and pride.

**WELL CONNECTED**

The transport facilities, including public transport, help people to travel within and between communities and reduce dependence on cars. There are facilities to encourage safe local walking and cycling.

**WELL SERVED**

High quality services for families and children (including early years childcare). A good range of affordable public, community, voluntary and private services (eg. retail, fresh food, commercial, utilities, information and advice) that are accessible to the whole community.

**ENVIRONMENTALLY SENSITIVE**

Actively seek to minimise climate change (eg. by reducing pollution, and waste and improving recycling) and actively seek to minimise climate change and use of resources so that no new foreshadows are destroyed. Create neighbourhoods that people are encouraged to recycle waste. Greater people live in homes that do not waste electricity and water, that are built on wasteland, so (eg. by reducing pleasant public space).

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**THRIVING**

Local people have the opportunity to make money and have a good quality of life. They are encouraged to open up small businesses and have a good quality of life locally to help improve their wages standards of living and better jobs for more people create more successful businesses in the community.

**WELL DESIGNED & BUILT**

A sense of place (eg. a place with a positive 'feeling' for people and local distinctiveness). Buildings are attractive, safe and useful to the people who use them. Buildings that people want to go into. Lots of open space for people to play and relax.

**ACTIVE INCLUSIVE & SAFE**

A community spirit is created. People are always welcome to join in events (eg. sports, fundraising and festivals). Neighbours look out for one another and respect each other. All people are created fairly. There are low levels of crime, drugs and anti-social behaviour with viable, effective and community friendly policing.

Inner ring: GOVERNANCE · TRANSPORT · SERVICES · ENVIRONMENTAL · EQUALITY · ECONOMY · HOUSING · SOCIAL

# Scope of Sustainable Development as defined by the United Nations

| | | | | | |
|---|---|---|---|---|---|
| Agriculture | Consumption & Production Patterns | Finance | Industry | Land Management | Sanitation |
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| Capacity-Building | Education and Awareness | Human Settlements | International Cooperation for Enabling Environment | Oceans and Seas | Technology |
| Climate Change | Energy | Indicators | Institutional Arrangements | Poverty | Toxic Chemicals |

Trade and Environment, Transport, Waste (Hazardous), Waste (Radioactive), Waste (Solid), Water

# Sustainable Development Goals (2015 – 2030)

# How to decrease the energetic or material consumption?

# Decrease energetic/material consumption

How to reach?

-  4R rule: **Reduce – Reuse – Recover – Recycle**



**ACTION:**

**Reduce consumption**

**ON:**

*Energy* (any type)
- Industrial ecology (4.1.1)
- Procedures for reducing energy
- Policies for reducing energy (2.12.1)
- Improving efficiency in heating 5.2.8.1 - 5.3.2.1 - 5.3.3.1)
- Use of renewable energy sources (5...
- Educational programs (3.9)

*Water*
- Industrial ecology (4.2)
- Procedures for reducing water (Table 2.8)
- Policies for water usage (2.12.2)
- Leaks detection (Table 2.8)
- Educational programs (3.9)
- Industrial integration (4.1.4)

*Raw materials* (any)
- Industrial ecology (4.1.1)
- Materials Flow Analysis (4.1.3)
- Procedures for reducing raw materials (Table 2.8)
- Policies in supply chain (2.12.6)
- Industrial integration (4.1.4)
- Industrial brokerage (4.1.8)

*Transpor-tation*
- Fuel consump. (3.3 - 3.3.1 - 4.2.1 - 4...
- Materials Flow Analysis (4.1.3)

**Reuse**
- Materials (Table 2.5)
- Wastewater into electricity (2.12.3.2)
- Policies on keeping rivers clean (2.12.4)
- Policies on water reuse (2.12.3 - 2.12.3.1 - 2.12...

**Recover**
- Policies to recover energy (2.12.5)
- Elements (3.5.1 - 4.1.4.1 - 4.1.4.2)
- Heat (2.5.1 - 4.1.4.2)

**Recycle**
- Current waste metals treatment (Table 2.5)
- Current waste glass treatment (Table 2.5)
- Current waste plastic treatment (Table 2.5)
- Current waste paper treatment (Table 2.5)
- Solid waste into electricity (2.10.1 - 4.1.4.3)

**STRATEGIES:**

State policy (mandatory or voluntary measures)

# Decrease energetic/material consumption

How to reach?

- 4R rule: **Reduce – Reuse – Recover – Recycle**



**ACTION:**

**Reduce consumption**

**ON:**

*Energy (any type)*
- Use of renewable energy sources (5...)
- Improving efficiency in heating 5.2.8.1 - 5.3.2.1 - 5.3.3.1)
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- Procedures for reducing energy
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*Water*
- Procedures for reducing wa...
- Policies for reducing wa...
- (Table 2.8)
- Leaks detection (Table 2.8)
- Policies for water usage (2.12...)
- Educational programs (3.9)
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- Industrial integration (4.1.4)

*Raw materials (any)*
- Procedures for reducing raw materials (Table 2.7)
- Materials Flow Analysis (4.1...)
- Policies in supply chain (2.12...)
- Industrial ecology (4.1.1)
- Industrial integration (4.1.4)
- Industrial brokerage (4.1.8)

*Transpor-tation*
- Fuel consump. (3.3 - 3.3.1 - 4...)
- Materials Flow Analysis 4.1...

**Reuse**
- Materials (Table 2.5)
- Wastewater into electricity (2.12.5)
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**Recover**
- Policies to recover energy (2.12.5)
- Elements (3.5.1 - 4.1.4.1 - 4.1.4.2)
- Heat (2.5.1 - 4.1.4.2)

**Recycle**
- Solid waste into electricity (2.10.1 - 4.1.4...)
- Current waste paper treatment (Table 2...)
- Current waste plastic treatment (Table 2...)
- Current waste glass treatment (Table 2.5...)
- Current waste metals treatment (Table 2...)

STRATEGIES:

System measures (mandatory or voluntary), and education

State policy (mandatory or voluntary measures)

# Decrease energetic/material consumption

How to reach?

- 4R rule: **Reduce – Reuse – Recover – Recycle**

**ACTION:**

**Reduce consumption**

**ON:**

*Energy* (any type)
- Industrial ecology (4.1.1)
- Procedures for reducing energy (2.12.1)
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- Use of renewable energy sources (5...)
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- Materials Flow Analysis (4.1...)

*Transportation*
- Fuel consump. (3.3 - 3.3.1 - 4...)
- Materials Flow Analysis 4.1

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- Current waste plastic treatment (Table 2...)
- Current waste paper treatment (Table 2...)
- Solid waste into electricity (2.10.1 - 4.1.4...)

**STRATEGIES:**

System measures (mandatory or voluntary), and education

Specific solutions

State policy (mandatory or voluntary measures)

# Reduce

- Reduction of total material consumption while maintaining or increase the product quality.

# How to reduce energy consumption?

# **Reduction of E consumption (legislation x money)**

1) Support a research of renewables
2) Appropriate subsidy support for the use of renewable energy sources in suitable areas (biomass, solar, wind)
3) Support for the nuclear fusion research

4) Regulation of the E intensity of buildings
- in the EU, about 40% of E is spent for heating of buildings!
5) Promote energy-saving lighting, and turning off
6) Install solar panels on public buildings and subsidize its support for private use
7) Sanction the lighting in public buildings overnight or on weekends



PRŮKAZ ENERGETICKÉ NÁROČNOSTI BUDOVY

# How to reduce water consumption?

# **Reduce <span style="color:red">water</span> consumption** (legislation x money)

1) Promote water saving measures
2) Install water meters in households (not flat rate)
3) Determine the limit for water losses in the distribution system

   - Brno 1989 - 25% of drinking water leaked into the ground, 16% now

1) Mulch in parks = retaining moisture without sprinkling
2) Legislative measures for water recycling in industry
3) Recycle „grey water" for flushing in hotels, offices, homes
4) In the case of water transport from remote places, minimize losses by evaporation
5) Use BAT in various productions
6) Saving faucets and shower-heads
7) Reward ideas of employees how to manage water efficiently

Water consumption in stealworks
China – 23-56 $m^3$ /t of steel
USA – 6 $m^3$ /t of steel

Water consumption in paper mills
1900 – 1t water / kg of paper
1990 – 64 kg / kg
1995 – 1.5 kg / kg
     - re-use of „waste" water

# How to reduce raw materials consumption?

# Reduce raw materials consumption

1) Biological waste composting
2) Eliminate the amount of packaging material
3) Replace disposable plastic bags with durable cloth ones
4) Donate usable unnecessary goods to charity
   (clothing, electronics, furniture, building materials, etc.)

# How to reduce a trafic load in the cities?

# Reduction of traffic load



I) <u>Increas the share of people in public transport</u>
- PT must be attractive enough for people
  - clean, accurate, comfortable, financially interesting

**<u>Project CiViTas (CIty-VITAlity-Sustainability)</u>**
**Aims of this EU projects:**
- promote the introduction of clean and energy efficient PT
- promote the development of the industrial sector in the field of PT



**<u>Public transport in Curitiba (Brasil)</u>**
- ***Bus rapid transit***
- improved bus transport combining bus flexibility
and quality of trains/trams with priority in driving
- long buses have special lanes reserved
- frequent ride, uniform fares everywhere
- inspiration for many other South American cities

## II) <u>Taxi, rental shops, carsharing</u>

- basic idea – cars are used on average 1 hour a day, 23 hours stand

- taxi - should be affordable, good quality with a good reputation
- car rental - suitable for ocasional car rental according to our wishes
- carsharing - it is necessary to create a car association, which buys cars and then the cars of the association borrow cars for travel costs
- it is said to pay off for anyone who drives less than 10,000 km a year



autonapůl
první český carsharing

O celé sdružení se stará tříčlenné Prezídium, o jednotlivá auta jejich patroni – členové, kteří za symbolickou odměnu dohlížejí na to, aby vozy byly v pořádku, měly kompletní povinnou výbavu, správné pneumatiky v zimě i v létě...

## III) <u>Cycling, walking</u>

- use of cycling is limited by the passability of cities, lanes for cyclists, parking

# Reuse

- Use an item or material without changing its chemical composition for the purpose for which it was originally intended.

# Reuse of raw materials / products

## Water
- introduction of methods for drying sludge by compression between sieves (WWTP, slurry, industrial) or reverse osmosis

## Resources
- reuse of lead and sulfuric acid from car-acumulators

## Second-hands
- clothes
- toys
- ...

# Recover

- Recover – obtaining material or energy from waste.

# Recovery

## Energy

- cogeneration production of heat and electricity
- incineration of suitable waste (tires) in modern power plants / heating plants or cement plants to obtain heat / electricity
- *eg. Göteborg - 60% energy supplied (electricity and heat) from unconventional sources heat: waste incinerator (largest in Europe) + Shell refinery + heat pumps from WWTP + testing of Volvo engines + from the Chalmers fluidized bed boiler research facility electricity: biofuels and wind farms*

## Materials

- use of gypsum from $SO_2$ from the combustion of fossil fuels
  - production of gypsum boards

# Recycle

- Reuse of material for the same or a similar purpose, or for the manufacture of another product

- Generally, the smallest reduction in materials/E consumption, the recycling process is often expensive.

# MÁ TO SMYSL, TŘIĎTE ODPAD!

## DO PAPÍRU PATŘÍ:

- noviny, časopisy
- kancelářský papír
- reklamní letáky
- knihy, sešity, krabice
- lepenka, kartón
- papírové obaly (např. sáčky)

## DO SKLA PATŘÍ:

- láhve od nápojů
- skleněné nádoby
- skleněné střepy - tabulové sklo

## DO NÁPOJOVÝCH KARTONŮ PATŘÍ:

- nápojové „krabice" od džusů, mléka a mléčných výrobků, vín, rajského protlaku, hotových omáček apod.

## DO PLASTŮ PATŘÍ:

- PET láhve od nápojů (prosím, nezapomeňte je sešlápnout!)
- kelímky, sáčky, fólie
- výrobky a obaly z plastů
- polystyrén

**PAPÍR**

**SKLO**

**NÁPOJOVÉ KARTONY**

**PLASTY**

## Prosím, nevhazujte:

- mokrý, mastný nebo jinak znečištěný papír
- uhlový a voskovaný papír
- použité plenky a hygienické potřeby

## Prosím, nevhazujte:

- keramiku
- porcelán
- autosklo
- drátěné sklo
- zrcadla

## Prosím, nevhazujte:

- nápojové kartony znečištěné zbytky potravin (pokud je vypláchnete vodou a zmáčknete, pak je můžete vhodit do kontejneru na nápojové kartony)

## Prosím, nevhazujte:

- novodurové trubky
- obaly od nebezpečných látek (motorové oleje, chemikálie, barvy apod.)

Při třídění odpadů se řiďte informacemi na nálepkách umístěných na kontejnerech. O konkrétním způsobu systému sběru tříděných odpadů se informujte na vašem obecním nebo městském úřadě

**EKO KOM**

Další informace na www.jaktridit.cz

# Limits of technological solutions

- The technological „solutions" of environmental issues are popular
because it does not require significant changes in people's lifestyles and
is not contrary to the idea of economy growth
- but it is not enough to achieve SD!

## Example - cars
- new cars emit significantly fewer toxic substances and $CO_2$
- according to LCA - much more environmentally friendly

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## Other issues related to motoring persists!!!

- affecting the environment by noise and vibration
- affecting the landscape and organisms by construction and presence of transport infrastructure
- roads (motorways), divide the landscape and complicate/disable movement in the cultural landscape (migrating species, people)
- risk of accidents (wildlife or other road users)
- issues of motoring in cities
→ traffic jams, parking spaces, pedestrian and cycling restrictions



*We have to count all pros x cons*

# Limits of technological solutions
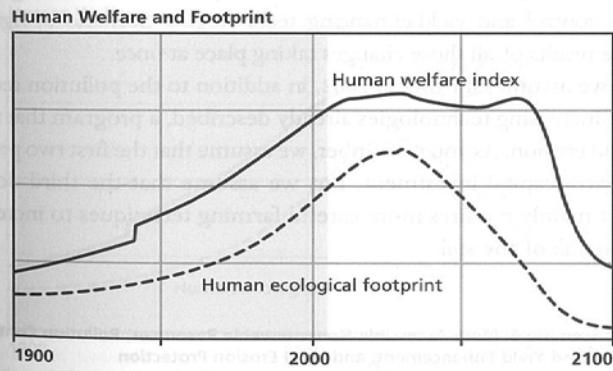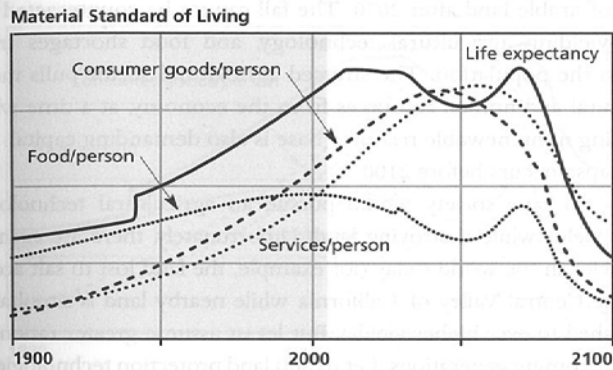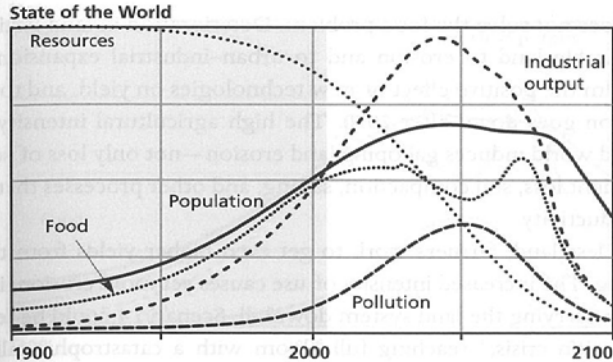


Technologies eliminating pollution
Technologies increasing soil quality

# Limits of technological solutions
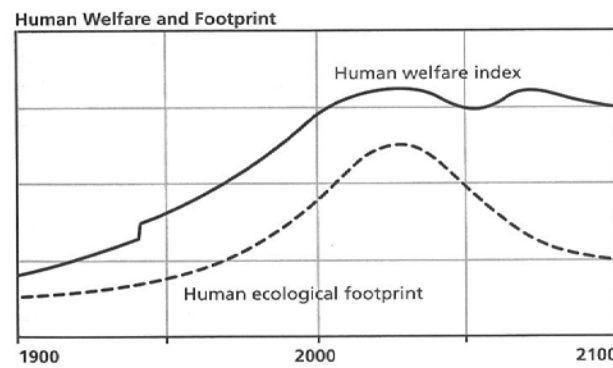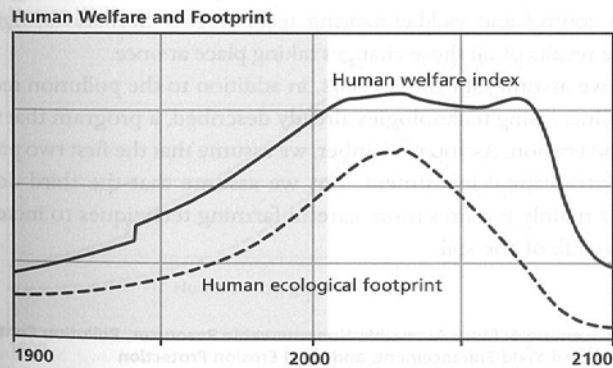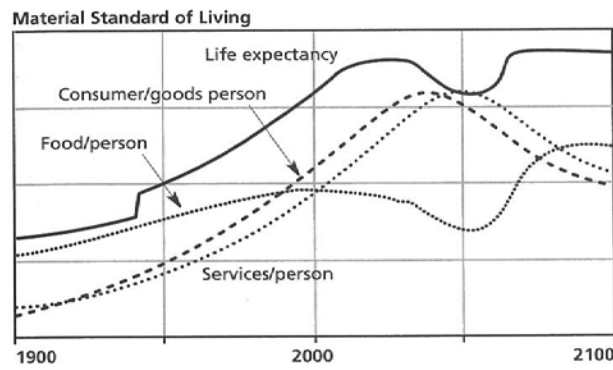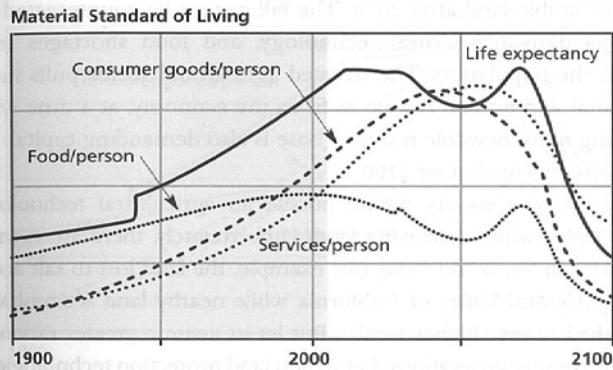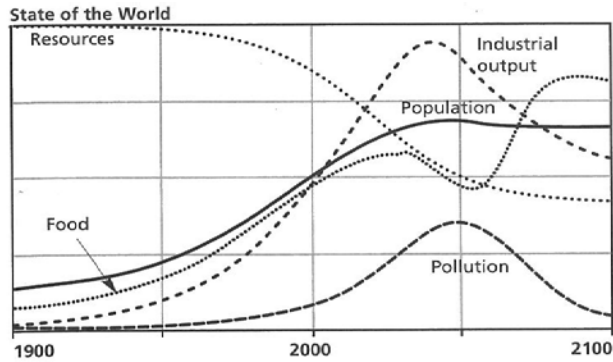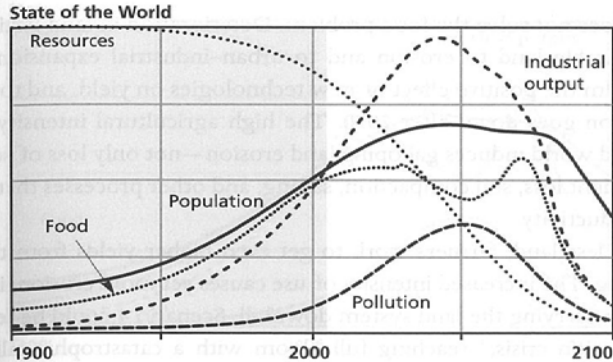


Scenario 4

Scenario 6

+

Technologies eliminating pollution    Technol. for resources extraction
Technologies increasing soil quality  Technol. protecting soil from erosion

# Limits of technological solutions
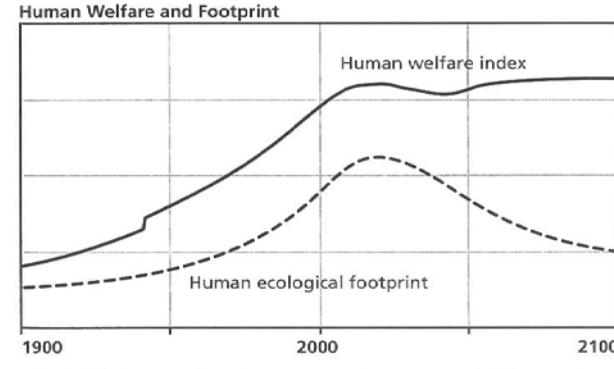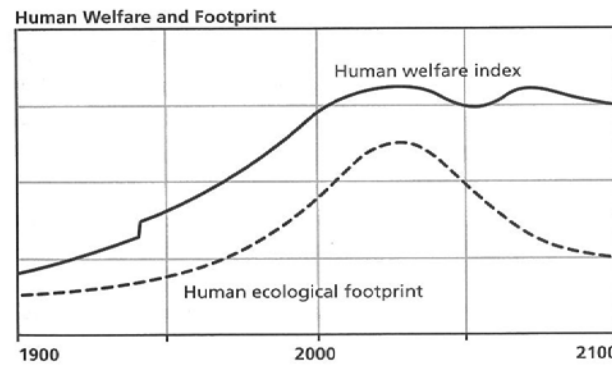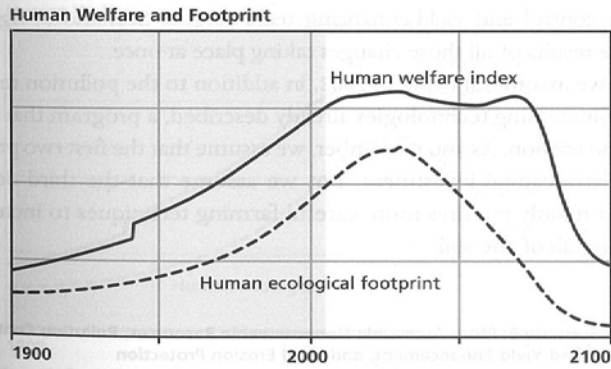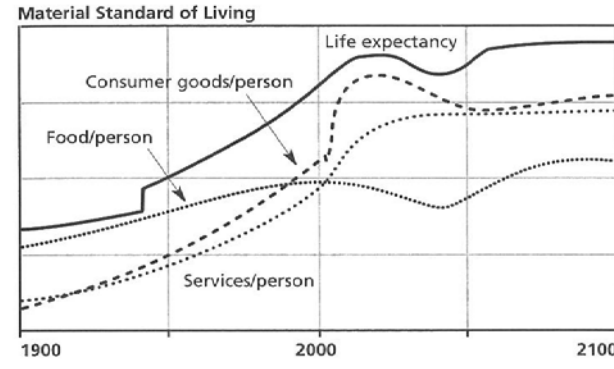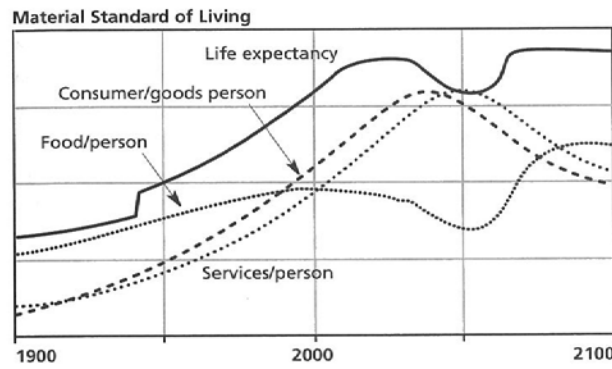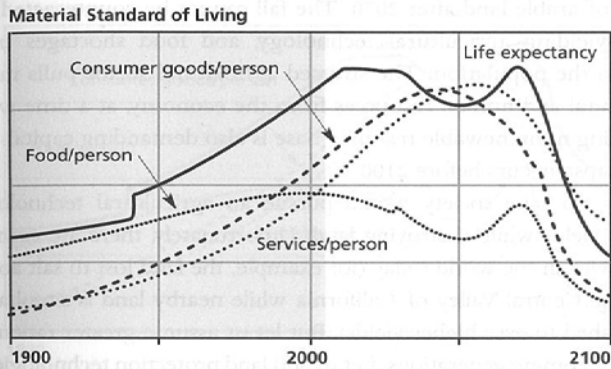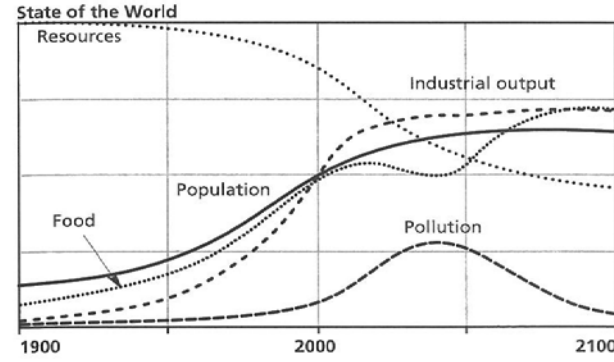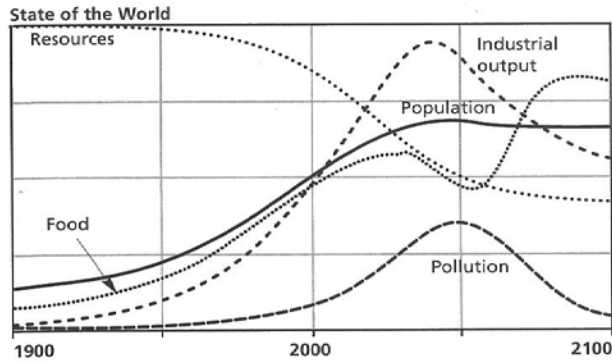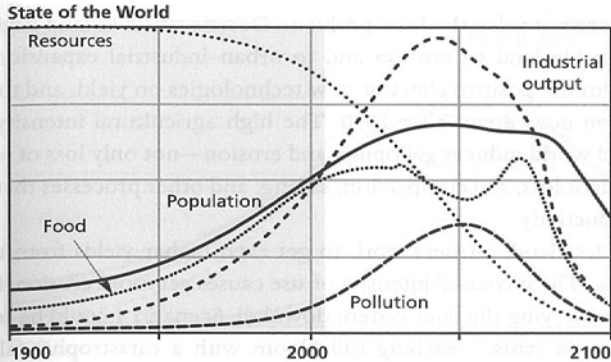


State of the World / Material Standard of Living / Human Welfare and Footprint — Scenario 4, Scenario 6, Scenario 9

Technologies eliminating pollution
Technologies increasing soil quality

+
Technol. for resources extraction
Technol. protecting soil from erosion

+
Stable GDP/person
Stable population

# Consuming → consumer society

- *„A society in which people often buy new goods, especially goods that they do not need, and in which a* high value is placed on owning many things*"*

- the need to acquire "**position goods**" (proof of social position - recognition)
- expresses the situation of social groups or the state (welfare state)

- excessive consumption - a hobby / necessity? ownership of tangible goods or services → typical dynamics of shopping and consumption (=waste)

# Voluntary simlicity x poverty

- **poverty** - low income, low ownership and consumption, feeling deprived, social exclusion, low social status, minimal share of political power
- **voluntary simplicity** - voluntariness, self-sufficiency, diverse interpersonal relationships, active participation in public affairs (municipalities ...)

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## Voluntary Simplicity

By Duane Elgin and Arnold Mitchell

The *Co-Evolution Quarterly*, Summer 1977

### I. Introduction

For the past several years the popular press has paid occasional attention to stories of people returning to the simple life—of people moving back to the country or making their own bread or building their own solar-heated home, and so on. Beneath this popular image of simple living we think there is a major social movement afoot which has the potential of touching the Unites States and other developed nations to their cores. This is

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## Modesty as a part of the social prestige/status

- eg. Dutch doctors - modesty and ecological luxury is a prestigious matter, consumption is rejected as unethical, majority and vulgar

- env. favorable behavior of the rich is a question of social prestige, but also of personal attitudes → orientation outside material values

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- society is no longer stratified into classes, but according to lifestyle

  → the poorer strives to imitate (looks up to) the richer people
  → imitation can be more effective than environmental upbringing
  → spreading under the influence of fashion is faster and more efficient
  → social elites → influence on legislation, politics and economy

## **Selective demand/consumption**

- different perspective of voluntary simplicity
- a person is <span style="color:red">demanding, but for certain things</span>
    - → eg. on water quality, environment, public transport, joy of life
- it is <span style="color:red">not about austerity, but about the joy of life</span> instead of joy of property

# Fighting climate change is opportunity to improve public health



Switching to public transport could boost global health *(Image: Andrew T. B. Tan/Getty)*

Driving cars and eating too much red meat damage more than your carbon footprint. Curbing our carbon habit

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## Postmaterialism

- changes in values in some rich western countries,  the Netherlands, Germany, Denmark x the USA and Canada

- transition from materialistic values: material well-being and security, orientation towards economic prosperity, observance of social order, to postmaterialist values: free self-realization, participation in the administration of public affairs, creation of a more humane society, creation of the environment

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- the change in values is taking place especially in the younger generations, who grew up in a larger economic and societal security (not during the war)
→ economic prosperity contributes to the spread of postmat. values and vice versa (oil crisis in the 1970s - decline in postmaterialism)

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## Postmaterialism



Obrázek 2. Vývoj postmaterialismu v ČR 1991-1999
PDI index (podíl postmaterialistů mínus podíl materialistů)
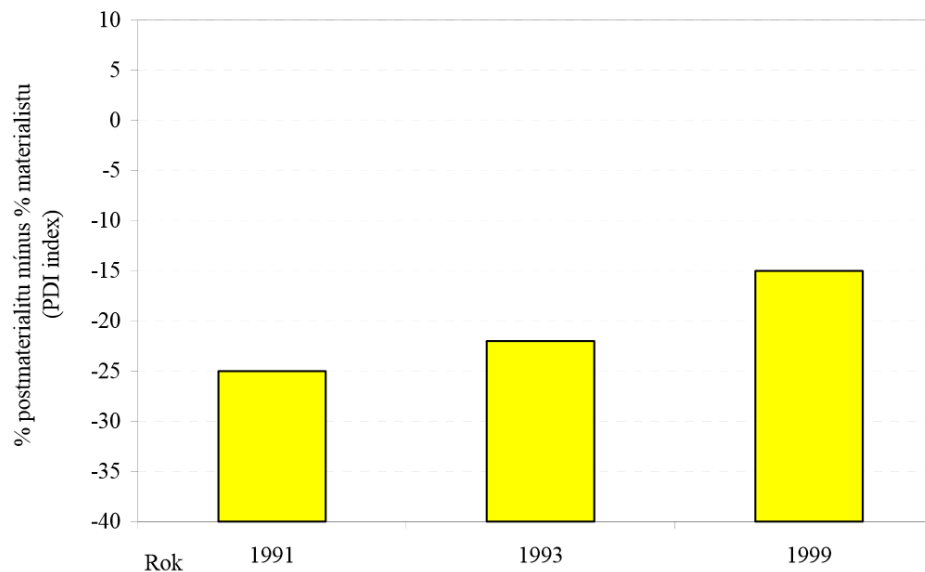
## Essentials to reach a SD

**To decide for it, and long lasting will**

= necessary to re-evaluate our life-style

- **difficult, lengthy, but feasible**

## Successes, once unthinkable

- abolition of slavery

- smoking restrictions

- recycling

- relations between France and Germany

- etc.

# SINO-SINGAPORE
# TIANJIN ECO-CITY
## A MODEL FOR SUSTAINABLE DEVELOPMENT

Singapore **Government**
Integrity · Service · Excellence

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The Sino-Singapore Tianjin Eco-city's vision is to be **a thriving city which is socially harmonious, environmentally-friendly and resource-efficient.**

It is a flagship cooperation project between the governments of Singapore and China.

## LATEST DEVELOPMENTS

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13th Joint Council for Bilateral Cooperation (JCBC) Meetings in Beijing, The People's Republic of China

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## COLLABORATION IN THE ECO-CITY

## GALLERY HIGHLIGHTS

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# THE VENUS PROJECT
## BEYOND POLITICS POVERTY AND WAR

The Venus Project proposes an alternative vision of what the future can be if we apply what we already know in order to achieve a sustainable new world civilization. It calls for a straightforward redesign of our culture in which the age-old inadequacies of war, poverty, hunger, debt and unnecessary human suffering are viewed not only as avoidable, but as totally unacceptable. Anything less will result in a continuation of the same catalog of problems inherent in today's world.

## HIGHLIGHTS

The solutions certainly won't be one-size-fits-all. It's possible to have a sustainable London and a sustainable Amazonia, but they will function very differently. "A renewable world depends on what you have close to hand," says McKibben.

So living sustainably need not be a step backwards. Some things will change, though. Meat will become a luxury, as its cost is pushed up thanks to the huge amounts of energy and water needed to farm livestock. And while we'll still be able to take holidays, those weekend jaunts on budget airlines are likely to be a thing of the past because there is currently no tax on aircraft fuel.

Porritt believes that doing away with such counterproductive subsidies and tax havens is essential. A global carbon tax and a tax on financial transactions would help to fund ecosystem restoration, public health, education and other crucial steps towards sustainability. "Tax is such a powerful instrument to promote sustainability," he says. "It's absolutely fundamental to the transformation we're talking about."

Porritt and Sanderson are buoyant about the quality of life in a more equitable and sustainable world, without denying the difficulties ahead. "One of the reasons why I think we have failed is that we haven't given a sense of just how good a world it would be," admits Porritt.

All of which adds up to a vision of a sustainable world that is significantly different from the one that critics envisage. It might mean a leaner and slower way of life for some, but also a healthier, happier and more peaceful world for us and future generations to enjoy. We have the tools. What we do with them remains to be seen.