MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

CHERNIHIV POLYTECHNIC NATIONAL UNIVERSITY

SUSTAINABLE DEVELOPMENT OF SOCIETY

METHODICAL GUIDELINES
to practical classes and independent work
for training Masters
specialty 231 Social Work

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CONTENT

Preface

Sustainable development of society is an essential and difficult challenge. It means to create a proper balance between economic, social, cultural and ecological development and needs of society. Successful sustainable development is development that, based on preserved and healthy ecosystems, facilitates human well-being and safety and can therefore create a sound economy. For this reason sustainable development is not only a political and scientific concept. It is also a value.

The purpose of the course is to provide students with knowledge of the various socio-economic and technical issues involved in sustainable development and to give a broad set of instruments in order to bridge the science and the practice of the application and enhancement of sustainable development.

The primary studying goals of the discipline: acquaintance with the basic concepts, models, practices and policies of sustainable pathways to development; studying of current international policy landscape for the Sustainable Development Goals; studying of basic components of sustainability (environmental, economic and social); studying of the methods and functions of the education for sustainable development; practical mastering of making and implementation of the strategies for sustainable development; practical mastering of the social action projects design for sustainable development on the community level.

The practical sessions cover theoretical principles according to thematic lesson plan, detailed examples and practical problems. Each practice session contains the necessary theoretical information, the order of execution of work and the sample solution that facilitates the perception of the new material, contributes to a better assimilation of the theoretical material that is of interest to students more in-depth study of the course.

This course is adapted after the Sustainable Development Course as a part of University`s membership in Baltic University Programme.

Topic 1
Introduction to Key Concepts and Challenges of Sustainable Development

Learning Objectives:
1. Explain a brief historical background to sustainable development.
2. Understand the concept of sustainable development.
3. Explain connection between sustainable development and social values.
4. Describe connection between sustainable development and social work.

Sustainable development can be perceived from different points of view. Some people see it as a journey or an ongoing process within an environmental framework. The long-term goal of this journey is to have the best possible life without harming other people or living beings.

Historical background to sustainable development

A brief historical background to sustainable development represent in table 1.1.

Table 1.1

A Brief Historical Background to Sustainable Development

Period of time	Event	Features
1	2	3
the 1960s	A wide social debate relating to the environment	Society felt the need to do something about the existing environmental problems. Technology was introduced to clean chimneys and sewage pipes, for example
1962	Rachael Carson's book "Silent Spring"	A wake-up call
1972	The first international environmental conference was organised by the UN and held in Stockholm	The western world's environmental problems were discussed. The conclusion was that scientists, experts and technology would solve these problems. It was not something that ordinary people needed to worry about

1	2	3
the 1970s	People started to get more and more involved in environmental organisations and pressure groups	People became very concerned and active and put pressure on the politicians to do something
1987	Publication "Our Common Future" by the World Commission on Environment and Development	The concept Sustainable Development: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs"
1992	The UN conference on Environment and Development held in Rio de Janeiro resulted in Agenda 21	Chapter 36 directly addresses education. In many countries schools and universities now have to include education for sustainable development in their educational curricula
2000	United Nations Millennium Summit in New York	Eight Millennium Development Goals (MDGs) set for 2015
2002	Johannesburg World Summit on Sustainable Development	Promotion of Education for Sustainable Development
2005-2014	The UN Decade of Education for Sustainable Development	The aim of the decade is to ensure that «education for sustainable development» is practiced in schools and other educational establishments in order to highlight the central role that education and learning play in the common pursuit of sustainable development
20-22 June 2012	The United Nations Conference on Sustainable Development - Rio+20 (Rio de Janeiro, Brazil)	Member States adopted the outcome document "The Future We Want" in which they decided to launch a process to develop a set of SDGs to build upon the MDGs and to establish the UN High-level Political Forum on Sustainable Development

1	2	3
24 September 2013	The First United Nations High-level Political Forum on Sustainable Development (HLPF)	The HLPF is the main United Nations platform on sustainable development and it has a central role in the follow-up and review of the 2030 Agenda for Sustainable Development the Sustainable Development Goals (SDGs) at the global level
September 2015	UN Sustainable Development Summit in New York	Transforming our world: the 2030 Agenda for Sustainable Development with its 17 SDGs was adopted
2019	Sustainable Development Goals Report 2019	Four years since the adoption of the Sustainable Development Goals the report notes progress in some areas, such as on extreme poverty reduction, widespread immunization, decrease in child mortality rates and increase in people's access to electricity, but warns that global response has not been ambitious enough, leaving the most vulnerable people and countries to suffer the most

The concept of sustainable development

There are different interpretations of what is most important in order for development to be sustainable. Important to note, that sustainable development is to create a proper balance between economic, social and environmental spheres.

The environmental sphere is concerned with the protection of a well-functioning ecosystem with great biological diversity - the life support system that forms the basis of everything.

The economic sphere is about being economical with human and material resources. A sustainable economy uses the interest of global productivity rather than the capital.

The social sphere is about maintaining the good parts of life and includes standard of living, education, community, equal opportunity (fig 1.1).
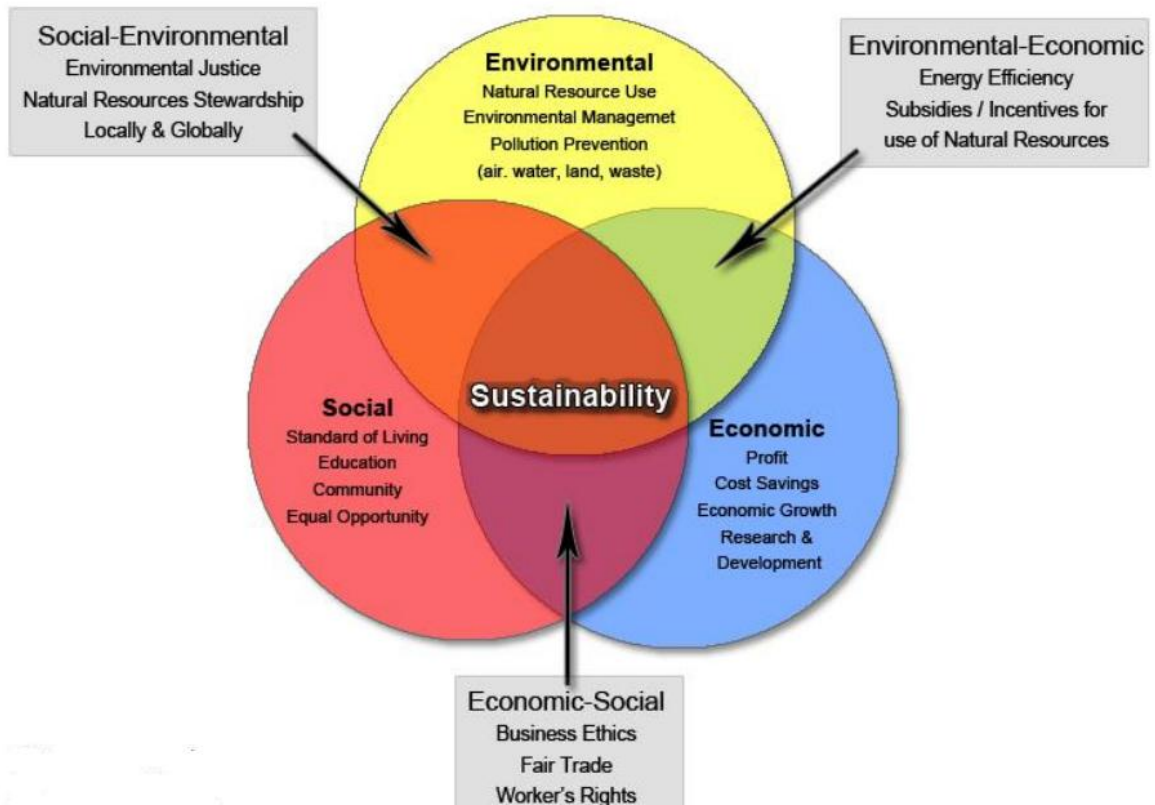
Figure 1.1. Spheres of Sustainability

Source: adopted from the 2002 University of Michigan Sustainability Assessment

Sustainable development and social values

Significant to note, that sustainable development is not only a scientific and political concept. It is also a value. The Brundtland commission highlight that sustainability is an ethics for our future. In the 1987 report they write: "We have attempted to demonstrate how human survival and well-being may be dependent on our capacity to successfully transform the principles behind sustainable development into global ethics." There are several parts in this ethics. The value dimension of sustainable development may be expressed in terms of justice.

According to this, sustainable development is about:

- respect for the needs of coming generations (*inter-generational justice*);

- sharing resources of our planet, not only between us and coming generations, but also between us living here and now (*intra-generational justice*);

- obligations towards other life forms of the world, the animals, the plants and the Nature in general (*bio-centric ethics or justice*).

Sustainable development and social work

Sustainable development, as noted Brundtland Report "Our Common Future", is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

According to IFSW General Meeting and IASSW General Assembly (July 2014), social work is a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. Principles of social justice, human rights, collective responsibility and respect for diversities are central to social work. Underpinned by theories of social work, social sciences, humanities and indigenous knowledge, social work engages people and structures to address life challenges and enhance wellbeing.

Review & Discussion Questions

1. Describe the evolution of the sustainable development.
2. How would you describe and explain the concepts of sustainable development and sustainability?
3. Why do we need sustainable development?
4. Which spheres include sustainability?
5. Explain "The Chair of Sustainable Development" and their elements.
6. What does sustainable development mean for you, your lifestyle, your city and your community?
7. Explain two concepts of sustainable development: "needs" and "limitations".
8. What practical sustainable development requires?
9. Explain the Swedish concept of lagom.
10. Outline «social» tasks of sustainable development for Ukraine.

Topics for essay

1. Why is sustainable development so important right now?

2. It is said that in most cases unsustainable development is the result of the way people live their lives and that problems and conflicts are not always noticed or locally visible, but are usually based on a combination of local and global agreements. Do you agree with this? Think of some practical examples as proof of this.

3. How can we get people to change their lifestyles and live more sustainably?

4. Why do we need sustainable development? Why do we talk about it so much today?

5. What makes development sustainable? Which keywords are the most important for you? Will your keywords keep the chair stable and comfortable? Will all the circles be the same size?

6. What does sustainable development mean for you, your lifestyle, your city and your community?

Topics for presentation
1. The Chair of Sustainable Development: economic, social, cultural and ecological sustainability.
2. A. Atkisson's model of sustainable development.
3. Poverty and "Culture of Poverty" reduction as a «social» tasks of sustainable development for Ukraine.
4. Sustainable Society Index.

Watch the videos and be ready for discussion
1. An interview with Gro Harlem Brundtland Sustainable Development and Political Change http://www.youtube.com/watch?v=ogrcy8AY95I
2. An interview with Prof William Hatcher http://www.youtube.com/watch?v=kBerPxbP74k
3. An interview with Erwin Lazlo http://www.youtube.com/watch?v=AkK1co3ajgE
4. Alan AtKisson's TEDx talk https://www.youtube.com/watch?v=ZR1Dn1HdSpA and prepare information report (use pictures) "Amoeba model of Sustainable Development"

Read the article and prepare short report
Introducing Pyramid: A Versatile Process and Planning Tool for Accelerating Sustainable Development By Alan AtKisson, R. Lee Hatcher, and Sydney Green http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.521.595&rep=rep1&type=pdf
1. "The concept of pyramid of sustainability by Alan AtKisson".
2. "The Compass of Sustainability".
3. "The ISIS Method".

Topic 2
Sustainable Development Goals (SDGs): From Idea to Action

Learning Objectives:
1. Describe the preconditions for new Sustainable Development Goals (SDGs) agenda.
2. Explain the process of implementation of SDGs in Ukraine.

The preconditions for new Sustainable Development Goals (SDGs) agenda

In September 2015 the Heads of State and Government agreed to set the world on a path towards sustainable development through the adoption of the 2030 Agenda for Sustainable Development. This agenda includes 17 Sustainable Development Goals, or SDGs, which set out quantitative objectives across the social, economic, and environmental dimensions of sustainable development — all to be achieved by 2030 (fig. 2.1).

The 17 goals include 169 targets, which set out quantitative and qualitative objectives for the next 15 years.

Figure 2.1. Sustainable Development Goals

The SDGs are achieving the Millennium Development Goals (MDGs) and guiding the global path of sustainable development after 2015.

The MDGs, which conclude at the end of 2015, focus on the most vulnerable populations, and address extreme poverty, hunger, disease, gender equality, education, and environmental sustainability (fig. 2.2).

It should be noted, that the eight MDGs were adopted in 2002 as a framework to operationalize the Millennium Declaration. The Declaration, adopted by Member States of the UN General Assembly in the year 2000, to

eradicate the world's most extreme and deplorable conditions, including poverty and destitution.

Figure 2.2. Millennium Development Goals

The key words from each SDG are highlighted in colour and clustered under relevant areas (economy, society and biosphere) to demonstrate multisectoral working. The three core pillars represent an old concept of sustainable development (fig. 2.3).
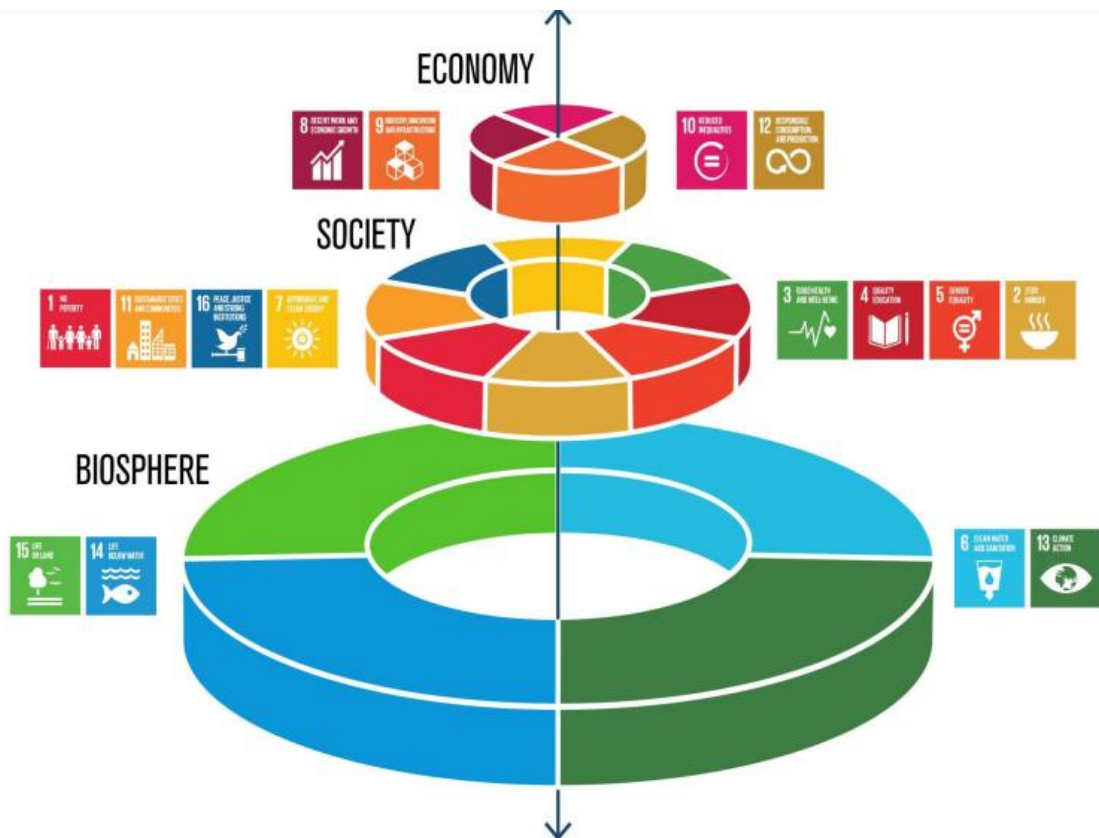

Figure 2.3. Relevant areas of Sustainable Development Goals

The 2030 Agenda is moving towards the integration of three pillars (spheres) and takes into account the interdependence of environmental (biosphere), economic and social factors, recognizing the realities of different national needs and opportunities.

Ukraine's development challenges: from the MDGs to the SDGs (2000–2015)

At the beginning of the millennium, Ukraine's economy demonstrated relatively steady growth, which improved the social situation in the country and had a positive effect on the achievement of the MDGs. The average growth rate for the country's gross domestic product (GDP) for 2000–2007 was about 7.5 percent.

To build the State and introduce new tools for the market regulation of social and economic processes, Ukraine needed a clearly defined and socially acceptable strategy to achieve its development goals. The economy has changed significantly since independence, requiring new approaches to the strategic planning system. After adapting the MDGs in 2003, Ukraine started changing its approach to development planning and monitoring. To summarize Ukraine's progress against the MDGs, we can note some positive changes before 2013, which were, however, offset by the events of recent years.

A participatory and inclusive process to identify SDG targets occurred in four areas in 2016: equitable social development; sustainable economic growth and employment; effective management; and ecological balance and building resilience.

The social vision of Ukraine's development up to 2030 covers such targets as public welfare and health being supported by innovative economic development built on the sustainable use of natural resources. It is envisaged to change the structure of exports and switch from raw materials and primary processing products to products and services high added value. Economic growth will be based on a 'green' economic model. Energy efficiency measures and energy-efficient practices will help significantly reduce energy consumption per unit of GDP.

Review & Discussion Questions
1. Why do we need Sustainable Development Goals?
2. What is new and different about the 17 SDGS compared to the MDGs?
3. Explain the role of civil society in implementation of SDGs.
4. Describe the UN role in the achieving of SDGs.
5. How business can contribute to the achieving of SDGs?
6. Explain the role of government in the achieving of SDGs.
7. Is cooperation between stakeholders important to achieve the SDGs? Why?

Topics for presentation

1. Choose one of the SDG's as your topic and prepare interesting presentation:

- about your SDG (use pictures, video);

- how you believe society can influence, help, support and contribute towards achieving these goals (use examples of countries)

2. SDGs in Ukraine.

3. The UN role in the achieving of SDGs.

4. SDGs and civil society.

5. The role of government in the achieving of SDGs.

Watch the videos and be ready for discussion

1. The Sustainable Development Goals – Action Towards 2030 https://www.youtube.com/watch?v=9-xdy1Jr2eg

2. Bringing the SDGs to life: real change for′ real people https://www.youtube.com/watch?v=hhKIIQIyI6s

3. What are the 17 Sustainable Development′ Goals of United Nations? https://www.youtube.com/watch?v=a6B-DbE8FYE

4. The United Nations Sustainable Development′ Summit: 17 Goals to Transform Our World https://www.youtube.com/watch?v=89tInECFdQ4

5. Small smurfs – big goals′ https://www.youtube.com/watch?v=4oB89nvdrdA&fe ature=youtu.be

Read the publications and prepare short report

- *Lazy person`s guide to save the world* *https://www.un.org/sustainabledevelopment/takeaction/*

- *170 daily actions* *https://drive.google.com/file/d/1iMdE6DLLuCqwq3K9UDaTUWB6KyMa8Q G/view*

In groups (4 persons) make poster "Student`s guide to achieve SDG's"

- *Study Sustainable Development Goals Report* *https://www.un.org/sustainabledevelopment/progress-report/*

Define key findings of the report

Topic 3
Ecological Sphere of Sustainable Development. The Ecological Footprint

Learning Objectives:
1. Explain what an Ecological Footprint is.
2. Describe the methodology for calculation of Ecological Footprint.
3. Explain what the Ecological Overshoot is.
4. Describe four major areas for improving sustainability: food, cities, population, and energy.

What is the Ecological Footprint?

The Ecological Footprint is a resource accounting tool that measures how much biologically productive land and sea is used by a given population or activity, and compares this to how much land and sea is available. Important to note, that Ecological Footprint accounting measures the demand on and supply of nature. The Ecological Footprint tracks the use of six elements of productive surface areas: carbon demand on land, forest area, fishing grounds, built-up land, grazing land and cropland (fig. 3.1).

Figure 3.1 The elements of Ecological Footprint

The Ecological Footprint is the only metric that measures how much nature we have and how much nature we use.

The Footprint helps:
− COUNTRIES improve sustainability and well-being.
− LOCAL LEADERS optimize public project investments.
− INDIVIDUALS understand their impact on the planet.

The methodology for calculation of Ecological Footprint

The Ecological Footprints can be calculated for individual people, groups of people (such as a nation), and activities (such as manufacturing a product).

The Ecological Footprint of a person is calculated by considering all of the biological materials consumed, and all of the biological wastes generated, by that person in a given year. These materials and wastes each demand ecologically productive areas, such as cropland to grow potatoes, or forest to sequester fossil carbon dioxide emissions. All of these materials and wastes are then individually translated into an equivalent number of global hectares. To accomplish this, an amount of material consumed by that person (tons per year) is divided by the yield of the specific land or sea area (annual tons per hectare) from which it was harvested, or where its waste material was absorbed. The number of hectares that result from this calculation are then converted to global hectares using yield and equivalence factors. The sum of the global hectares needed to support the resource consumption and waste generation of the person gives that person's total Ecological Footprint.

Take the free quiz *at www.footprintcalculator.org to find out your Ecological Footprint and personal Earth Overshoot Day (write down your results to be ready for group discussion). Learn about solutions to help us all tread more lightly on the Earth.*

The Ecological Footprint is derived by tracking how much biologically productive area it takes to absorb a population's carbon dioxide emissions and to generate all the resources it consumes. A country's consumption is calculated by adding imports to and subtracting exports from its national production.

Today, more than 80 percent of the world's population lives in countries that are running ecological deficits, using more resources than what their ecosystems can renew (fig. 3.2).

Moreover, most countries, and the world as a whole, are running ecological deficits. The world's ecological deficit is referred to as global ecological overshoot.
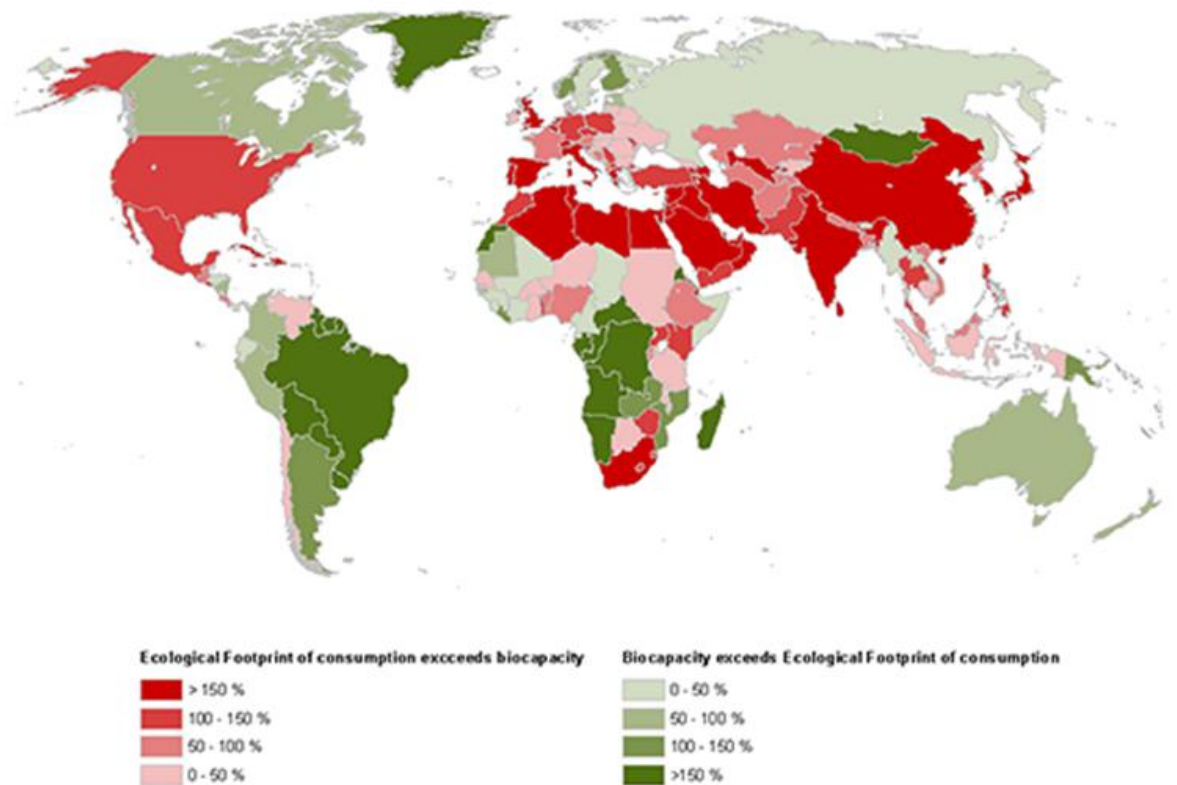
Ecological Footprint of consumption excceeds biocapacity
- \> 150 %
- 100 - 150 %
- 50 - 100 %
- 0 - 50 %

Biocapacity exceeds Ecological Footprint of consumption
- 0 - 50 %
- 50 - 100 %
- 100 - 150 %
- \>150 %

Figure 3.2 World map of countries by Ecological Footprint

Ecological Overshoot

When the entire planet is running an ecological deficit, we call it "overshoot." At the global level, ecological deficit and overshoot are the same, since there is no net import of resources to the planet.

Overshoot occurs when:

HUMANITY'S ECOLOGICAL FOOTPRINT > EARTH'S BIOCAPACITY

The date of Earth Overshoot Day is calculated by comparing humanity's total yearly consumption (Ecological Footprint) with Earth's capacity to regenerate renewable natural resources in that year (biocapacity). Global Ecological Footprint and biocapacity′ metrics, in turn, are calculated each year with National Footprint Accounts. Using UN statistics, these accounts incorporate the latest data and the most updated accounting methodology.

Every year Global Footprint Network raises awareness about global ecological overshoot with our Earth Overshoot Day campaign, which attracts media attention around the world. Earth Overshoot Day is the day on the calendar when humanity has used the resources that it takes the planet the full year to regenerate. Earth Overshoot Day has moved from early October in 2000 to July 29 in 2021.

Solutions in four major areas for improving sustainability: food, cities, population, and energy

Food is a Major Ecological Footprint Driver. If we cut food waste in half worldwide, we would move Overshoot Day by 11 days. Food demand makes up 26% of the global Ecological Footprint.

Two major issues when addressing food sufficiency, malnutrition, and hunger (UN Sustainable Development Goal 2) are:

1. Resource inefficiency in food production.

Animal calories are significantly more resource intensive than plant calories to produce. In fact, China's government is committed to reducing meat consumption by 50% by 2030. This would reduce the Ecological Footprint by more than 126 million global hectares and move the date of Overshoot Day back 1.5 days (according to China's current Ecological Footprint figures).

2. Food waste.

About one third of the food produced in the world for human consumption — 1.3 billion tonnes every year — gets lost or wasted, with high and low-income countries dissipating roughly the same quantities of food, according to the UN Food and Agriculture Organisation. That's equivalent to 9% of humanity's Ecological Footprint.

If we reduce driving by 50% around the world and opt for walking, biking or taking public transit instead, Earth Overshoot Day would move back 10 days. Cities shape the size and growth of the Ecological Footprint, as our recent report on the Mediterranean region showed. This trend will continue, as 70% to 80% of all people is expected to live in urban areas by 2050.

UN Sustainable Development Goal 11 Sustainable Cities and Communities features several 2030 targets, including:
– reduce the adverse per capita environmental impact of cities;
– provide access to safe, affordable, accessible and sustainable transport systems for all, notably;
– by expanding public transport. enhance inclusive and sustainable urbanization and capacity for participatory, integrated;
– sustainable human settlement planning and management in all countries.

Empowering women and girls results in greater gender equality and stabilizes population. If every other family in the world had one less child, we would move Overshoot Day 30 days by 2050.

Review & Discussion Questions
1. What is an ecological footprint?
2. What does the Ecological Footprint measure?
3. What does biocapacity measure?
4. How does a footprint calculator work?
5. What is Ecological Overshoot?
6. Has the increase of the global ecological deficit been accelerating or slowing down over the past few years?

Topics for essay

1. What can Ecological Footprint Analysis tell us about the future of the planet?

2. What are the ways to minimize your personal Ecological Footprint in your daily lives?

3. In what ways can we increase public awareness of our Ecological Footprints?

4. Why is it important to reduce Ecological Footprints?

Topics for presentation

1. Ecological Footprint of European countries.

2. Ecological Footprint of Ukraine.

3. Moving the Earth Overshoot Date: new solutions.

4. Footprint education for kids.

5. An awareness campaign to motivate others to minimize their ecological Footprints.

Watch the videos and be ready for discussion

1. The Ecological Footprint Explained https://www.youtube.com/watch?v=fACkb2u1ULY

2. The Ecological Footprint: Accounting for a Small Planet (Bullfrog Films clip) https://www.youtube.com/watch?v=EjyrAHzthTo&t=12s

3. National Footprint Accounts – Ecological Balance Sheets for 180+ Countries https://www.youtube.com/watch?v=_T5M3MiPfW4

4. Dennis Meadows - Perspectives on the Limits of Growth: It is too late for sustainable development https://www.youtube.com/watch?v=f2oyU0RusiA

5. Dennis Meadows - Economics and Limits to Growth https://www.youtube.com/watch?v=4iHr9mzLEZU

Read the article and prepare short report

1. Ecological Footprint of European countries https://www.eea.europa.eu/data-and-maps/indicators/ecological-footprint-of-european-countries-2/assessment

Topic 4
Economic Dimension of Sustainable Development

Learning Objectives:
1. Describe economy and ecology as a single system.
2. Describe connection between Green Economy and Economic Growth.
3. Explain the tools for approaching a sustainable economy.

Economy and ecology as a single system

Economy is regularly defined as one of the (three) pillars, or dimensions, of sustainable development - Environmental, Social and Economic - all of which need to work to achieve a sustainable society. Important to emphasize that economy is connected to environmental development but also it influences the social situation of a country.

It is noted that economy depends on natural resources and those in turn depends on how the economy - e.g. forestry or agriculture or industrial production, which may lead to pollution - is conducted.

Many environmental goods are traded on a market just as any other goods. Agricultural products, timber, mined metals and fossil resources are traded and have prices, and are thus part of the economy. When this trade has negative effects, which are not paid for - it may be both environmental and social negative effects - these are called *externalities*.

Typical externalities include pollution by factories, roads that intrude in the landscape, and carbon dioxide emissions from transport e.g. air traffic. Pollution may decrease the health of the people leading to higher medical costs, or reduce the production of nature and thus lower the income from forests, fields and the sea.

When the price of a product does not represent its true costs we have a market failure. Market economy does not automatically take care of the environmental costs of the economy. Thus, it never does as "free" ecosystems services are supporting all activities in the system Nature Economy.

The value of all ecosystems services on Earth has been estimated and the result is much larger than the value of the total economy, that is, the world *Gross Domestic Product* (GDP) (fig. 4.1). One way to deal with this is that the State introduces an *environmental tax*.

The collected value of all goods and services sold and bought in a nation is traditionally expressed as Gross National Product (GNP). The weakness is that it includes transactions, which are not understood as wealth, such as health services, and excludes others, which are percieved as wealth, such as natural resources. These are included in a *green GNP* and *green budgets*.

Countries by nominal GDP in 2019

■ >$20 trillion	■ $750 billion–$1 trillion	■ $50–$100 billion
■ $10–$20 trillion	■ $500–$750 billion	■ $25–$50 billion
■ $5–$10 trillion	■ $250–$500 billion	■ $5–$25 billion
■ $1–$5 trillion	■ $100–$250 billion	□ <$5 billion
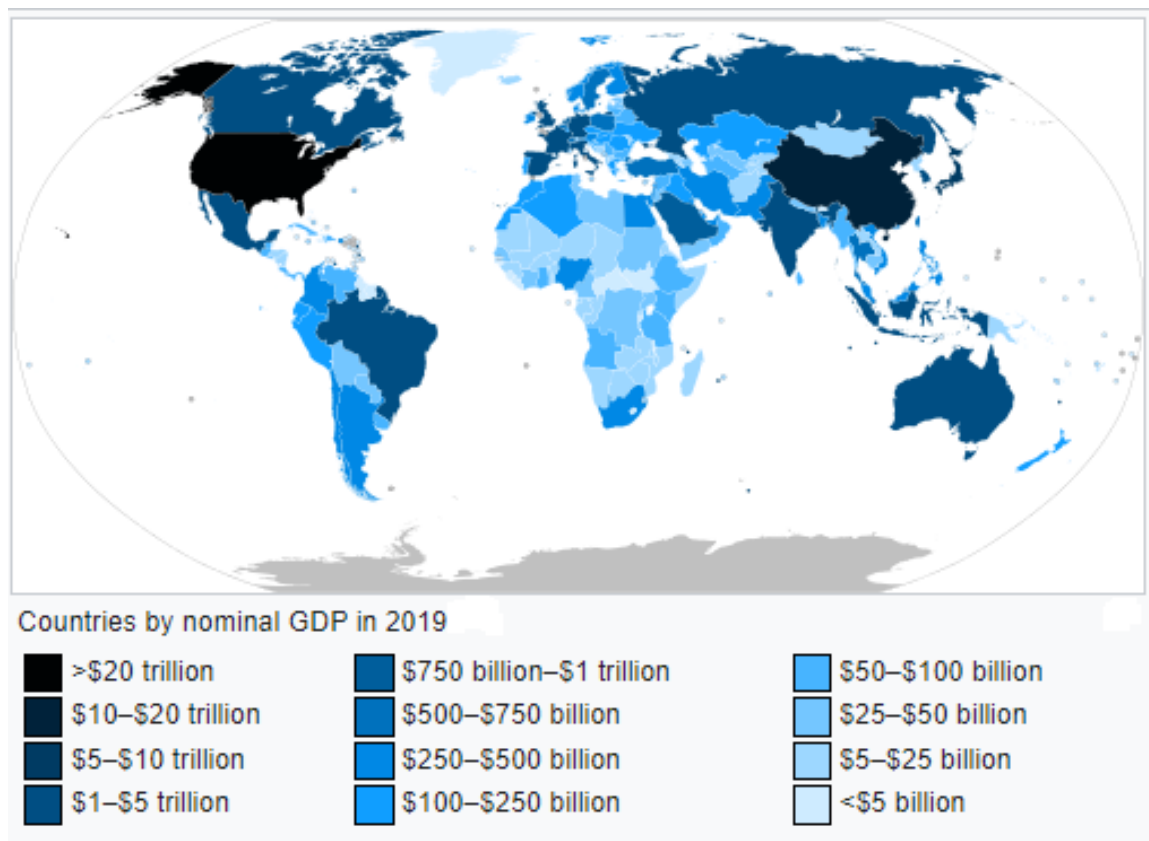
Figure 4.1 World map of countries by nominal GDP in 2019

The absolute value of a green GNP is not possible to establish. The large value of working with a green budget or green GNP is rather to follow the changes from one year to the next. Green budgets include traditional statistics (production values, processing value, employment), but also adds positive items (energy as biomass etc, and natural resources such as forests, fisheries etc) and subtract negative ones, such as emissions.

Green Economy and Economic Growth

The term 'Green Economy' means improving human well-being and social equity, while significantly reducing environmental risks and ecological deficits (fig. 4.2).
However, based on the results of Rio+20, the United Nations system views Green Economy as a means for achieving sustainable development and eradicating poverty.

Figure 4.2 The meaning of Green Economy

Greening an economy can be achieved through action in its dominant economic sectors as well as in education and health.

Nevertheless, we live in a society in which economic growth has become a mantra for all politicians and business people. Even if the overwhelming focus on growth is only some 30 years the history of economic growth is long.

It is clear that economic growth is crucial up to a point for quality of life, happiness, prosperity, education, health etc. But after that it appears that economic growth is not so important.

The tools for approaching a sustainable economy

How can we turn the growth-economy so that it does not cause resource destruction and environmental damage but still contributes to the welfare of our societies and inhabitants?

There are a number of *economic instruments* to address this question. Some of these are used by the state, the public sector, and some by the private sector.

Most important is the Ecological tax reform, also called green tax shift. This refers to the transfer of taxation on incomes (salaries) towards taxation of resource flows. The simple logic is that what is scarce has to be used carefully should be taxed, that is natural resources, while what is not limited in this sense, i.e. human work or work opportunities, should not be limited by taxation.

Societies also have opportunity to use positive economic instruments, i.e. subsidies to support investments promoting sustainable development. Typical

subsidies are carbon funds, which are given to support transition to a fossil fuel free economy, such as insulation of houses, green cars, energy efficiency measures, etc.

Many states have a strong economic policy to stimulate steps towards a greener business in the private sector. Investing in energy efficiencies, local production of energy and similar steps thus become increasingly profitable with higher prices for fossil energy, trade support better markets etc. Green technologies or green business have become a large sector in the economy of several countries and an important export market. Similarly we see local authorities greening their cities or towns, both for economic as well as ethical reasons, and individual households are also in the same manner greening their lives.

Review & Discussion Questions
1. Explain externalities of trade.
2. What is Gross Domestic Product (GDP)?
3. Explain what environmental taxes are and the need to implement them.
4. What Green Gross National Product and Green Budgets are?
5. How can we achieve the transition to Green Economy?
6. Who is to make the transition to Green Economy?
7. What are the relationships between economic growth and resource use?
8. What kind of instruments can make economy sustainable?

Topics for presentation
1. The Tragedy of the Commons as an economic theory.
2. Green Gross National Product and Green Budgets.
3. The possibilities of Green Growth.
4. Green Economy in Europe.
5. World Business Council for Sustainable Development and their role in Green Growth.
6. Green Growth in Ukraine.
7. Circular Economy.
8. Agitating through an Alternate Economy: Social Work, Sustainability, and the Circular Economy.

Watch the videos and be ready for discussion
1. Growing Green Economies https://www.youtube.com/watch?v=m9AS6KT7a5Y&t=3s
2. Sustainable development and the tragedy of commons by Elinor Ostrom https://www.youtube.com/watch?v=ByXM47Ri1Kc
3. The Story of Agriculture and the Green Economy https://www.youtube.com/watch?v=twGev010Zwc&t=43s
4. Green Economy in Europe https://www.youtube.com/watch?v=tIgMRYJuKnY&t=9s

Read the articles and prepare short report

1. Raymond De Young's Tragedy of the Commons https://localizationpapers.org/averting-the-tragedy-of-the-commons/

2. Prosperity without growth? The transition to a sustainable economy. http://www.sd-commission.org.uk/data/files/publications/prosperity_without_growth_report.pdf

3. Green Budgeting Practices in the EU: A First Review https://ec.europa.eu/info/sites/default/files/economy-finance/dp140_en.pdf

4. Circular economy action plan https://ec.europa.eu/environment/strategy/circular-economy-action-plan_en

Topic 5
Poverty and Human Development as Key Indicators of Social Sustainable Development

Learning Objectives:
1. Describe the nature of poverty.
2. Identifying the socioeconomic factors of poverty.
3. Explain the ways of measuring poverty.
4. Identifying the relationship between human development and poverty.

The nature of poverty

Poverty has different meaning for different people in the world. For one, poverty means working 18 hours a day and still not earning enough to feed oneself, one's family and children. For another person, poverty is walking 6 km a day to collect water and not have the chance to go to school.

According to World Development Report (1990), poverty is not only material deprivation (measured by an appropriate concept of income or consumption) but also low achievements in education and health.

In compliance with data of United Nations, the number of people in the world living in extreme poverty declined from 36 per cent in 1990 to 10 per cent in 2015. But the pace of change is decelerating and the COVID-19 crisis risks reversing decades of progress in the fight against poverty. New research published by the UNU World Institute for Development Economics Research warns that the economic fallout from the global pandemic could increase global poverty by as much as half a billion people, or 8% of the total human population. This would be the first time that poverty has increased globally in thirty years, since 1990.

The socioeconomic factors of poverty

If we told about socioeconomic factors of poverty, first of all, we should say about average monthly salary.

In 2018 in Switzerland average monthly salary was 4370 euro, that in 11 time more than in Albania and in 16 time more than in Georgia. However, the average monthly wages in Ukraine was significantly lower than in other European countries only 236 euro (fig. 5.1).
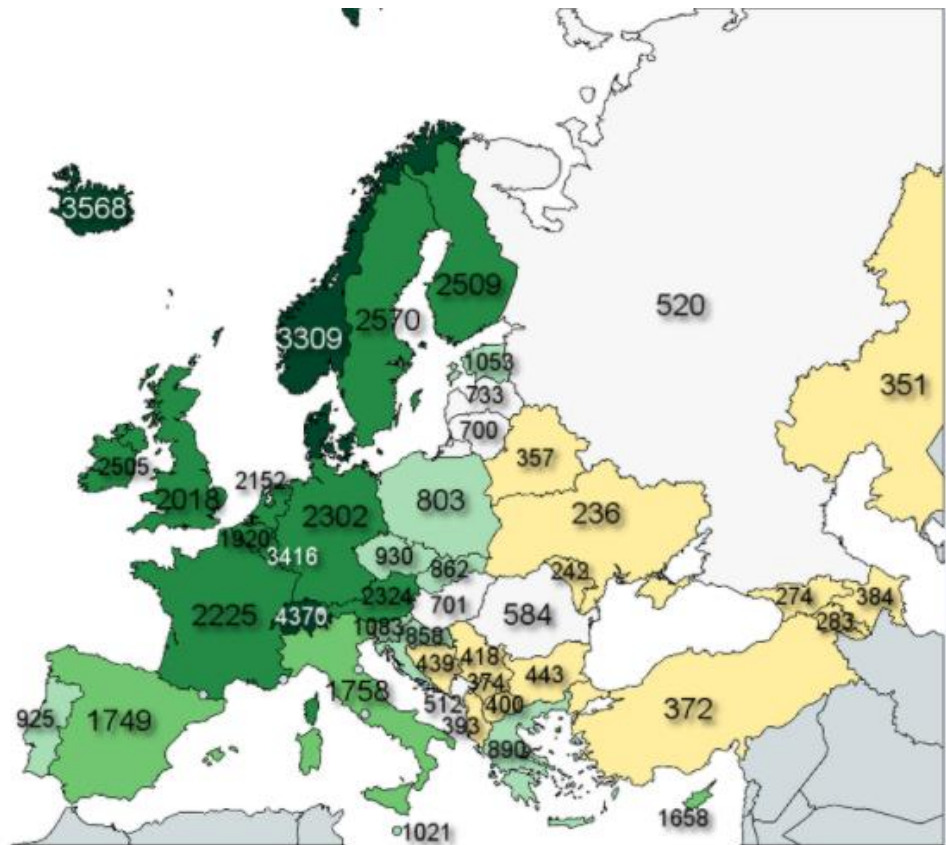
Figure 5.1 Net Average Monthly Salary in Europe in 2018 （€ ）

Important to note, that another socioeconomic factors, which have negative influence on poverty, are unemployment rate, income level, corruption etc.

The ways of measuring poverty

Measuring poverty correctly is important. Since the 19th century, different approaches to measuring poverty have developed as a basis for international and comparative work. Poverty measurement includes unidimantional and multidimantional approaches (tabl. 5.1).

Table 5.1

Approaches of poverty measurement

Unidimensional — Monetary — Income based	Absolute poverty lines	National thresholds specific for individual countries, in the national currency	1. Cost of basic needs
			2. Subsistence minimum
		Internationally comparable thresholds	3. Severely poor with income below 1.9 PPP$
			4. "Just poor" with income below 3.1 PPP$
	Relative poverty lines	Share of the median (or mean) income	5. Relative low income (example: below 50% or 60% of the contemporary median equivalised income in each country)
			6. Relative low income anchored at a fixed point in time
			7. Weakly relative poverty line
Monetary — Expenditure based	Absolute poverty lines	National thresholds specific for individual countries, in national currency	8. Cost of basic needs
			9. Subsistence minimum
		Internationally comparable thresholds	10. Severely poor with expenditures below PPP$1.90/day
			11. "Just poor" with expenditures below PPP$3.10/day
	Relative poverty lines	Share of the median (or mean) expenditure	12. Relative low expenditure (example: below 50% or 60% of the current median equivalised expenditure in each country)
			13. Relative low expenditure anchored at a fixed point in time
			14. Weakly relative poverty line
Food energy intake (FEI)			15. Nationally specific FEI-based poverty rates (varies by climate conditions, rural/ urban distribution, type of occupation, etc.)
Multidimensional — Deprivations			16. Indicator dashboards
			17. Indices of multiple deprivation, including material deprivation
Multidimensional poverty estimates – internationally comparable (following the methodology developed by OPHI and used for international comparisons and in the Global HDRs published by UNDP)			18. Multidimensional poverty index (thresholds for the various dimensions)
Official national multidimensional poverty indices, following the methodology developed by OPHI			19. Severely poor
			20. Moderately poor

Important to note, that one of the way of measuring poverty is to measure the value of goods or products and services produced (the Gross Domestic Product or GDP). This can be divided by the total population to see the GDP per capita.

The relationship between human development and poverty

According to Human Development Report (1997), human potential represents different combinations of functional human qualities that someone can provide, and reflects the freedom of gaining these functional merits. At

the same time, functional human qualities reflect useful features that the man provides himself, for example, to eat well, to live long or to participate in the life of the society.

Within the United Nations Development Programme (UNDP) since 1990, annually publishes a World Report on the Human Development and calculates the Human Development Index.

This is a way of measuring poverty around the world and includes health (Do the people have a long and healthy life?), education (Do the people have access to knowledge and learning?) and wealth (Do the people have a decent standard of living?) (Fig. 5.2).

Together, these measures give an indication of what life is like for people in different parts of the world.
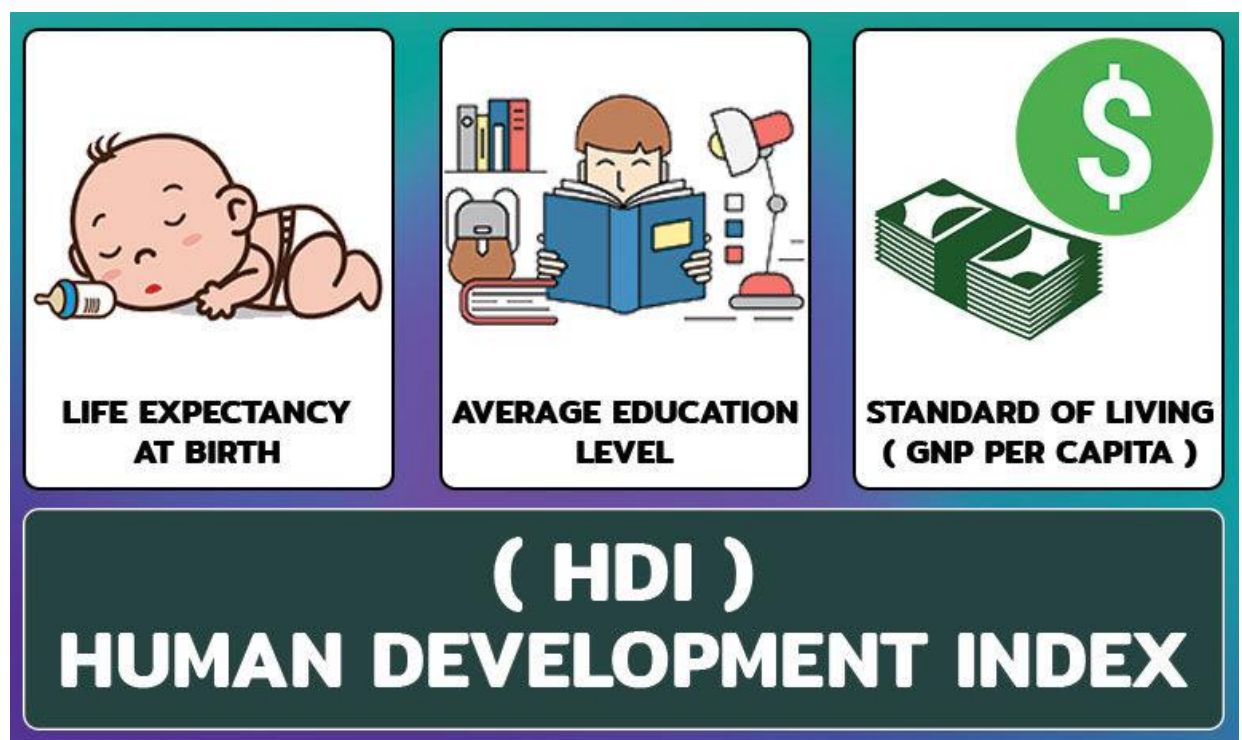

Figure 5.2 The following components of Human Development Index

Overall, extreme poverty rates tend to be higher in low human development countries, but poor people can be found in countries at all levels of development (fig. 5.3).

Poverty has negative influence on human development.

World map representing Human Development Index categories (based on 2019 data, published in 2020).

- Very high (≥ 0.800)
- High (0.700–0.799)
- Medium (0.550–0.699)
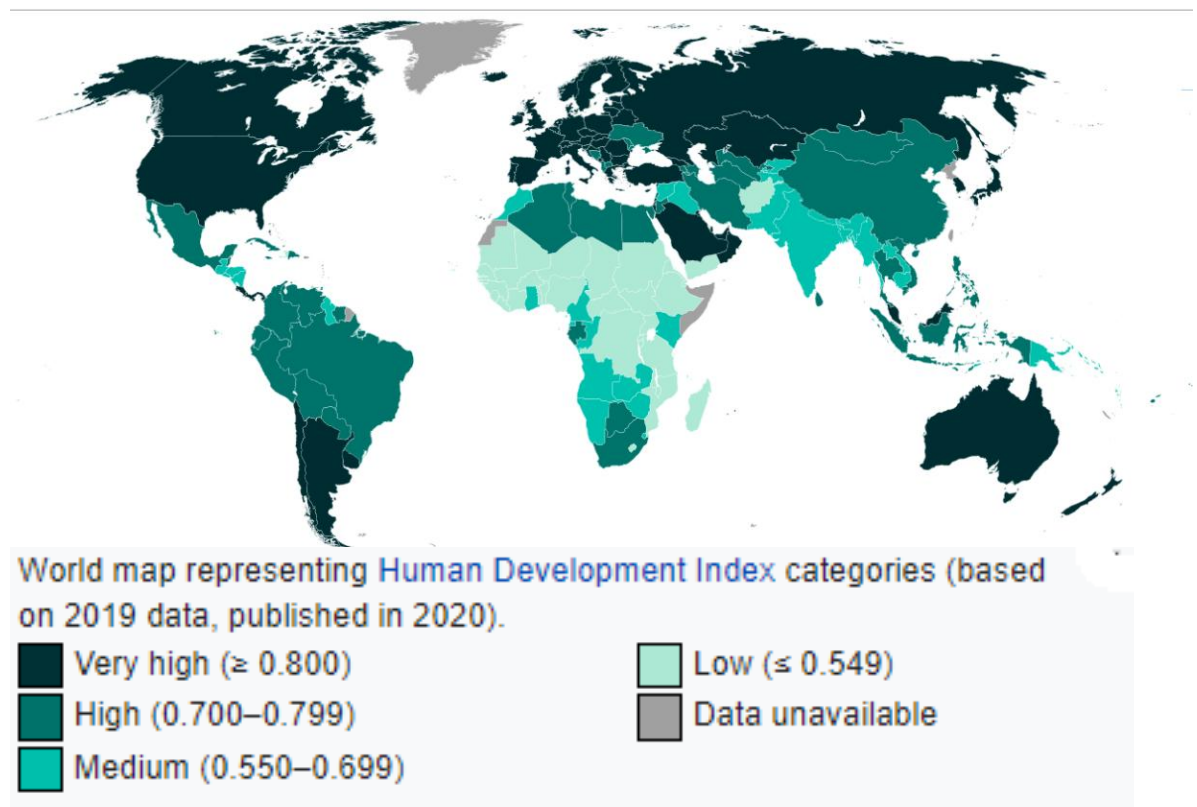- Low (≤ 0.549)
- Data unavailable

Figure 5.3 World map of Human Development Index in 2019

The World Happiness Report is a landmark survey of the state of global happiness that ranks 156 countries by how happy their citizens perceive themselves to be. It is an annual publication of the United Nations Sustainable Development Solutions Network (SDSN) and contains articles, and rankings of national happiness based on respondent ratings of their own lives, which the report also correlates with various life factors.

The first World Happiness Report was released on April 1, 2012. As of March 2021, Finland was ranked the happiest country in the world four times in a row. These variables currently include:
- real GDP per capita;
- social support;
- healthy life expectancy;
- freedom to make life choices;
- generosity;
- perceptions of corruption.

Review & Discussion Questions
1. What is poverty?
2. What indicators can tell us about poverty?
3. How do we measure poverty?
4. Who is doing research on Social Sustainability?

5. What is human development (or human potential)?
6. How is poverty related to human development?
7. Can poor people be happy? What is happiness?

Topics for presentation
1. The Social Pillar of Sustainable Development.
2. Key factors that determine or impede advancement of the social pillar of Sustainable Development.
3. Four dimensions and principles of Social Sustainability.
4. The Culture of Poverty
5. Poverty and the Sustainable Development Goals.
6. Poverty and equal opportunities in Ukraine.
7. Unidimantional and multidimantional approaches of poverty measurement.
8. The relationship between human development and poverty.
9. Global Multidimensional Poverty Index.
10.   World Happiness Report.

Watch the videos and be ready for discussion
1. MTG: What's   social   sustainability? https://www.youtube.com/watch?v=MhEwzMOUgDc&t=1s
2. 5 Principles for Social Sustainability (facing unpredictable change together) https://www.youtube.com/watch?v=o6lSuwJw0pk
3. Social   sustainability: Satisfying   human   needs https://www.youtube.com/watch?v=FyT9TMlzC6s
4. How   do   we   measure   poverty? https://www.youtube.com/watch?v=w5wORaWcWPY

Read the articles and prepare short report
1. Thilo J. Ketschau. (2017). Social Sustainable Development or Sustainable Social Development - Two Sides of the Same Coin? The Structure of Social Justice as a Normative Basis for the Social Dimension of Sustainability. T. J. Ketschau, Int. J. of Design & Nature and Ecodynamics. Vol.   12,   No.   3.   Pp.   338-347.   URL: https://www.witpress.com/Secure/ejournals/papers/DNE120306f.pdf
2. Esuna Dugarova (2015). Social Inclusion, Poverty Eradication and the 2030 Agenda for Sustainable Development. https://socialprotection-humanrights.org/resource/social-inclusion-poverty-eradication-and-the-2030-agenda-for-sustainable-development/
3. Jubril Olakitan Atanda and Ayşe Öztürk (2018). Social Sustainable Assessment   Tool   Development   Approach. https://www.preprints.org/manuscript/201801.0121/v1

Topic 6
Sustainable Production, Consumption and Waste

Learning Objectives:
1. Describe the Sustainable production.
2. Explain the Sustainable consumption.
3. Describe the Sustainable waste.

Sustainable production

To begin with, it is important to understand what sustainable production means. Sustainable production is the improvement and management of production in a way that is resource efficient, does not pollute the environment and produces products that are themselves environmentally friendly and sustainable.

The importance of developing sustainable production and consumption patterns cannot be overstated. It was singled out in the 1992 UNCED Rio conference as the main reason for the global environmental crisis and in the Plan of Implementation at the Johannesburg conference it was a main concern. In Agenda 21 we read: *The major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries.*

Production is part of a system. It needs to be seen together with the resources extracted, the products produced and how they are used, and finally the waste, which all products eventually will become. This is the ***life-cycle of a product***. To become sustainable production needs to be much more like what we see in nature: in nature resources are recycled, energy is based on sun, and products are extremely efficient.

Life-cycle chains from extraction - through production - to consumption and waste (fig. 6.1).

Environmental impact along the life cycle is calculated according to well-established methods in a so-called ***Life Cycle Assessment, LCA***. LCA is much used to compare different production methods or products. A classical question to be answered by an LCA is "Is it better to use a reusable glass or a through-away plastic bottle for drinks?" The comparison needs to take into account the resource used for producing the glass bottle including energy, transporting it back to the factory, cleaning it, while the plastic bottle only uses the oil to make plastic. In a classical analysis it turned out that the glass bottle needs to be reused 11 times to be better.
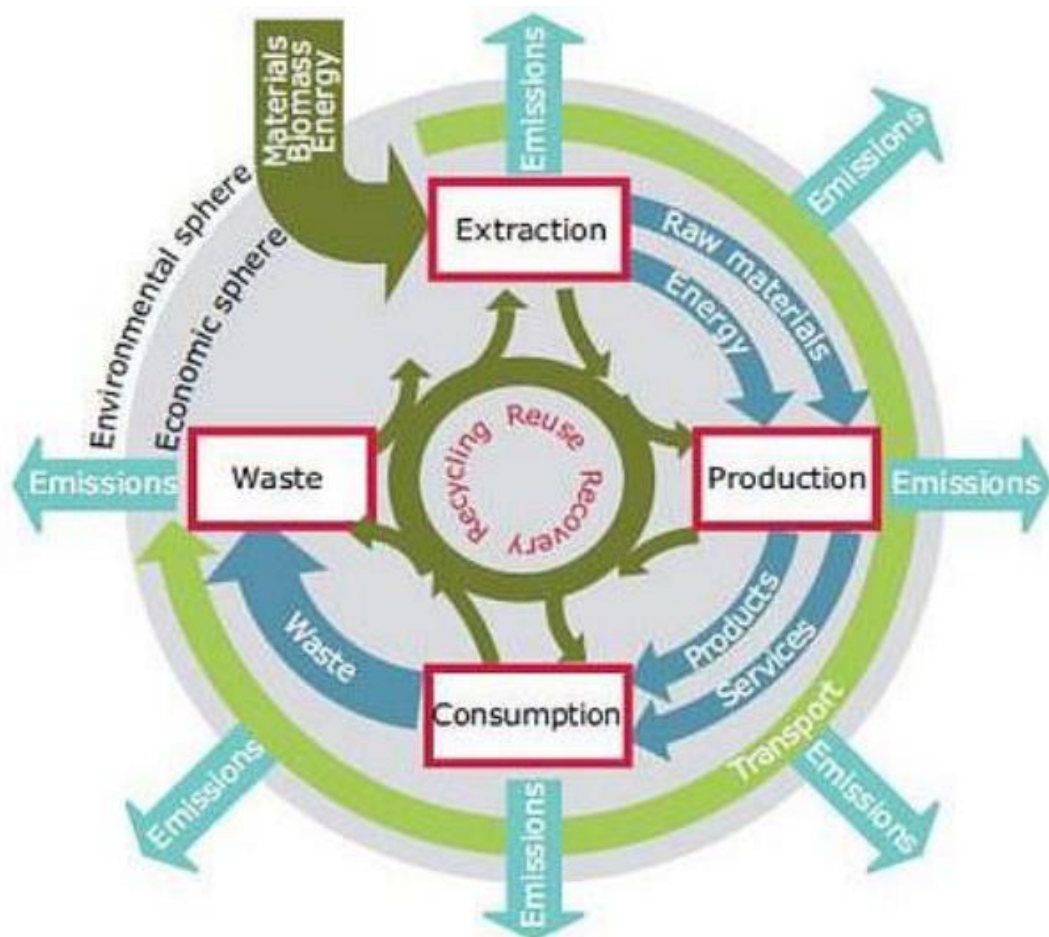
Figure 6.1 Life-cycle of a product

Sustainable consumption

The affluence and easy access to all kinds of commodities in our societies is certainly part of our welfare. But there is also a downside to this. Industrialised societies are consumption societies; consumption may even become a meaning of life. The flow of resources is enormous. Counted per capita it is today larger than the carrying capacity of the Earth. We are living in an era of overshoot and over-consumption, which is not sustainable. The use of resources is expressed by **the ecological footprint**.

Product design can make much to reduce footprints. **Ecodesign** is a systematic method to design products not only according to form, color or material, but also desirable environmental properties. Ecodesigned products may be *dematerialised*, that is have less material, be more compact, than ordinary products; they may have *less toxic* materials; they may *have longer lives* for example by being easy to repair; be more *energy efficient* during use; and they may have a *better end-of-life*, e.g. be easier to recycle.

A very important aspect is a **product's end-of-life**. The waste management hierarchy tells us that best is *reduce* (less products, e.g. by sharing resources), next best *reuse* (repairable products) and then *recycle*,

32

which means that the material in the product can be reused.

Environmentally friendly products are often called **green products**. There are a number of organisations, which provide green products with an **eco-label** to indicate that they meet set standards for that label. Well known labels include that European Union flower and the Nordic Swan, developed by the Nordic Council.

Sustainable waste

In the 1970s countries in Europe became alarmed by **rapidly growing piles of waste**. Landfills were expanding in many countries both by household waste and waste from industries. This was propelled by non-recyclable products from bars, kitchens etc. as well as the increasing number of packages used for all kinds of products in the shops.

Here is a list of things we throw away and how long it takes for this garbage to decompose:

- *Banana peel* - 2-5 weeks;
- *Newspaper* - 2 months;
- *Cardboard* - 2 months;
- *Cotton gloves* - 3 months;
- *Rope* - 3-14 months;
- *Plywood* - 1-3 years;
- *Cigarette butts* - 1-5 years;
- *Woolen clothes* - 1-5 years;
- *Cardboard packaging from milk* - 5 years;
- *Painted boards* - 13 years;
- *Plastic bag* - 10-20 years;
- *Leather shoes* - 25-40 years;
- *Nylon fabric* - 30-40 years;
- *Plastic cup* - 50 years;
- *Tin can* - 50 years;
- *Batteries* - 100 years;
- *Plastic tube* - 200 years;
- *Disposable diaper* - 450 years;
- *Plastic bottle* - 400-500 years;
- *Aluminum bank* - 500 years;
- *Fishing line* - 600 years;
- *Glass bottle* - 1000 years.

The European Union has listed the different options to deal with waste into a waste hierarchy going from best to worst (fig. 6.2).

Reduce, or waste reduction, reducing the product flow.

Reuse, make products more repairable and with longer lives, or give to next user

Recycle, this most often refers to the materials in the products.

Composing, for organic waste, the resulting compost may be used.

Fermentation to biogas, also an option for organic waste, and biogas used for energy.

Incineration, organic waste may be burned and heat taken care of, e.g. in district heating.

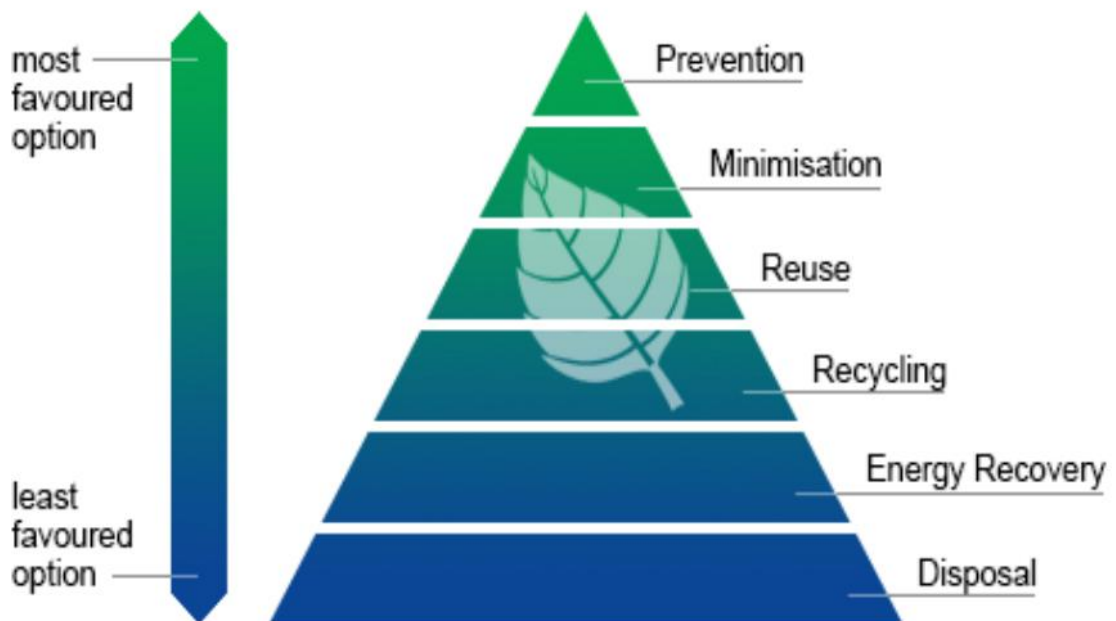Incineration, without recovery of the heat produced.

Figure 6.2 The hierarchy of waste management

During the last decade in EU the number of landfills has decreased and those remaining are strictly regulated and are subject to the IPPC Directive (Integrated Pollution Prevention and Control). Instead waste stream are managed according to increasingly more careful legal control. Recycling is increasing and material which cannot be recycled are more often sent to waste incineration in power plants for energy recovery. Still, amounts of household solid waste per capita continue to increase.

Review & Discussion Questions
1. What is Sustainable production?
2. Explain the Life-cycle of a product.
3. Describe method Life Cycle Assessment, LCA.
4. What is Sustainable consumption?
5. Explain what is Ecodesign?
6. Give examples of ecodesign products in Ukraine and in the world.
7. Explain the hierarchy of waste management.
8. Give examples of European best waste recycling practices.

Topics for presentation
1. The Environmental Management Systems.
2. Green engineering.
3. Cleaner Production and Technologies.
4. Strategies for ecodesign.
5. Eco-buildings - European projects for ecological building.

6. Waste management and product design.

7. European Union environmental legislation.

Watch the videos and be ready for discussion

1. Cleantech investments in Eastern Europe - NEFCO https://www.youtube.com/watch?v=5IM8__eSkSk

2. Sustainable consumption & production: a greener world https://www.youtube.com/watch?v=dWEaVywlKrY

3. Promotion of sustainable production practices in Northern Thailand https://www.youtube.com/watch?v=9YcwfzYtiu4&t=38s

4. Sustainable Consumption: Definition and Complexities https://study.com/academy/lesson/sustainable-consumption-definition-and-complexities.html

5. Waste generation and management- Sustainability | ACCIONA https://www.youtube.com/watch?v=DmFGsxLcT6k

Read the articles and prepare short report

1. Andrea Keszi Szeremlei, Robert Magda (2015). Sustainable Production And Consumption. https://www.researchgate.net/publication/324917077_Sustainable_Production_And_Consumption

2. Farzana Quoquab, Jihad Mohammad (2020). A Review of Sustainable Consumption (2000 to 2020): What We Know and What We Need to Know. https://www.researchgate.net/publication/344431869_A_Review_of_Sustainable_Consumption_2000_to_2020_What_We_Know_and_What_We_Need_to_Know

3. Sami Gören, Ulaş Akküçük (2014). Sustainable Waste Management. DOI: 10.4018/978-1-4666-6635-1.ch009. https://www.researchgate.net/publication/270051287_Sustainable_Waste_Management

Topic 7
Sustainable Communities. Connection Between Local and Global Community

Learning Objectives:
1. Describe the concept of sustainable city.
2. Understand what urban sustainability policies, strategies and management systems are.
3. Explain the concept of Sustainable Community.
4. Describe the role of Active citizenship in social development projects.
5. Understand the process of planning social action

The concept of sustainable city

A city may be regarded as an ecosystem. Just as any ecosystem the city needs energy, there is a flow of resources into the system, such as food and other resources, and there is waste to be taken care of. All these aspects need to be made in sustainable way, that is, to use the physical and biological conditions for sustainability (fig. 7.1).
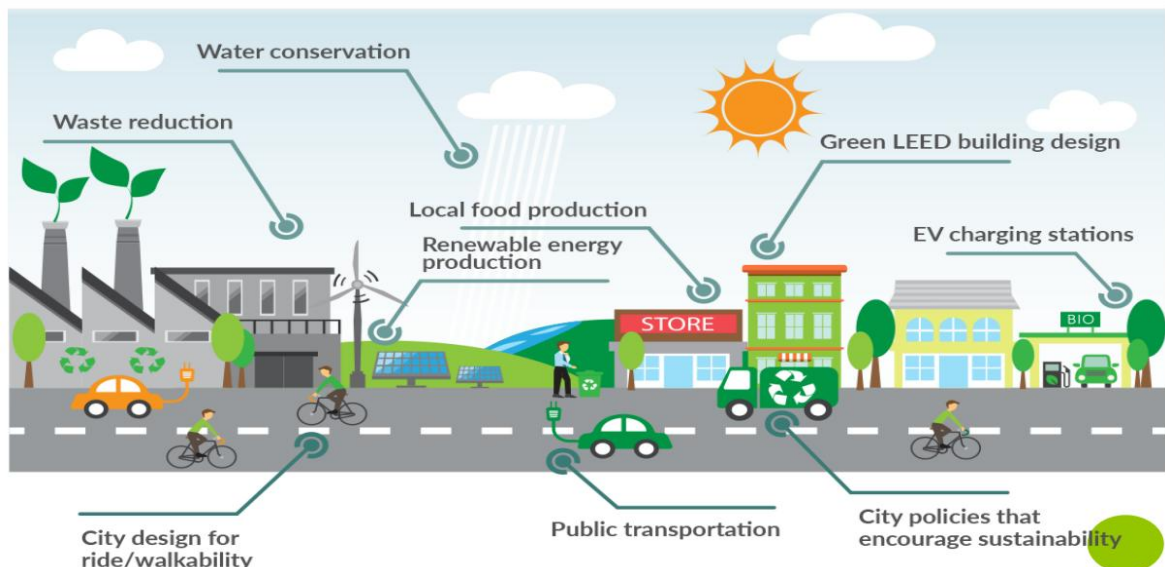
Figure 7.1 Sustainable city

A central issue in cities is *the buildings*. These are not only the homes of the inhabitants and therefore a key issue for social sustainability, but they are also key components in the resource flow of a city.

Cities are the highest consumers of energy and responsible for 70 percent of greenhouse gas emissions.

For cities a well functioning *traffic and transport system*, consisting of a clever mix of modes, is a key to improved sustainability. *Greenery in cities* plays an important role as they provide a number of ecosystem services.

In the Agenda 21 document from the Rio UNCED 1992 Conference the local perspective is considered essential to achieve sustainability. On this basis local authorities all over the world were encouraged to set up long-term action plans for sustainable development, the so-called ***Local Agenda 21*** (LA21). Such action plans were adopted by thousands of local authorities around the world in the following years. Today 6400 municipalities in 113 countries have done so.

A number of organisations were created to support ***the local sustainability work***. ICLEI, Local Governments for Sustainability, was formed in 1990 as the 'International Council for Local Environmental Initiatives', presently with 1220 local government members. Within the European Union The Sustainable Cities and Towns Campaign was founded in 1994 as an umbrella organisation of associations of local authorities working with sustainability issues. It is supported by the European Commission and has an office in Brussels. Through its member organisations, such as ICLEI, more than 2500 local and region governments with more than 500 million inhabitants are included in the Campaign. In the Baltic Sea region the Union of Baltic Cities, UBC, with 106 member cities is a key actor.

Among the policy documents for ***local sustainability work*** Chapter 28 in Agenda 21 forms the base. Soon after the Rio conference the Aalborg charter was written as a founding statement for the European Sustainable Cities and Towns campaign. It includes commitments in 10 areas to be signed by members. On the global scale the United Nations Human Settlements Programme, UN-HABITAT, was established in 1978 by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. At the Habitat II conference in Istanbul, Turkey, 1996 171 countries adopted the Habitat Agenda with over 100 commitments and 600 recommendations.

Within ***the European Union*** a main actor is CEMR, the Council of European Municipalities & Regions. CEMR has within EU the same legal status as the European Parliament and thus may influence all decision in the Union. The European Union adopted in 2006 a thematic strategy on the urban environment to contribute to a better implementation of existing EU environment policies and legislation. The strategy encourages local authorities to adopt a more integrated approach to urban management.

The concept of Sustainable Community

The most common use of the word **'community'** is a group that share a geographic locality and have shared interests in the quality and opportunities of that locality. It can also mean a group of people who have a shared set of values and interests.

Some communities are *'elective'* or *'intentional'* meaning that members have made a conscious decision to be part of the community, and others are based on circumstance and history.

Important to note, that a community can be understood in several ways e.g. in terms of interests, in terms of power, as a protective system. The way in which a community is organised to protect its own interests can be seen as a system. For these reasons understanding community from different perspectives is an important part of sustainable problem solving and agenda setting.

A *sustainable community* is one that is economically, environmentally, and socially healthy and resilient. It meets challenges through integrated solutions rather than through fragmented approaches that meet one of those goals at the expense of the others. And it takes a longterm perspective – one that's focused on both the present and future, well beyond the next budget or election cycle.

The sustainability of a community depends on creating and maintaining its economic and environmental health, promoting social equity, and fostering broad-based citizen participation in planning and implementation. Communities that engage citizens and institutions to develop sustainability principles and a collective vision for the future and that apply an integrative approach to environmental, economic, and social goals are generally likely to be more successful.

Active citizenship in social development projects

Citizens are members of an organised state or country. Their **'citizenship'** can describe their status and by implication the rights and duties they have in relation to their country. For example, a citizen may have the right to have a passport issued by the state and the duty to pay taxes to the state.

'Active citizens' are those people who look beyond basic legal duties and are further engaged voluntarily in activities that somehow affect the public life of their locality or communities. This might be through 'civil' society (citizens using their freedom to join together - usually for the purpose of managing social change in their locality) or 'civic' society (relating to the ruling powers or decision makers of the community).

Understand concept of community and connection between local and global community - one's own community.

What is *social action*? This is action to enhance community life locally involving groups of people working together, on a voluntary or not-for-profit

basis. It is action that is principled, well organised and done in consultation and collaboration with others in the community and those affected by the initiative. Even though the project is fundamentally local in focus participants should ideally choose a social development theme that has global resonance ie an issue of relevance to communities across the world. For example:

- Youth empowerment.
- Gender equality.
- Advocacy for education.
- Children's literacy.
- Conflict prevention and peace-building.
- Environmental protection.

Planning social action: instruments and good practices

There are many approaches to planning social action. Different approaches suit projects which are different in scale, nature and geographical focus. Positive social action is informed by the diverse needs and perspectives of the local community and surrounding communities which may be affected. For this reason community projects should incorporate intercultural dialogue and coalition building.

- Examples of how this may be achieved are provided in training but examples are listed below:
- Identifying interests of other stakeholder through a surveys, focus groups and open meetings.
- Advocating publicly.
- Entering into dialogue online to find out about global campaigns and perspectives on the same issue.
- Carrying out project in partnership with others in the local community or the global community network (example of Global dimension).

Here are some key things for the group to take into account when planning social action:

- Practice the learning.
- Identify personal (small actions) you can undertake.
- Identify strategic opportunities for group social action (tweaks for big results).
- Use the skills and interests of the group, build a team ethic and support each other.
- Use an appreciative approach. Build on success.
- Take into account your principles.
- Engage in dialogue with others.
- Build alliances.
- Involve community members in decision-making and delivery.

Review & Discussion Questions

1. What does your city mean to you?
2. What are the reasons for urbanisation?
3. Why people prefer living in cities?
4. What is sustainable city?
5. Give examples of sustainable city in the world.
6. Which strategies have cities adopted to achieve sustainable development?
7. What is a Sustainable Community?
8. Explain what is global citizenship?
9. What are the small changes which could bring lasting change to benefit our wider communities?
10. Describe what is social action?

Topic for essay

What is sustainable community become for you? What characteristics should it have?

Topics for presentation

1. The examples of sustainable city in the world.
2. Urban Green Structure.
3. Policy Measures for Sustainable Urban Transport.
4. Urban growth and long term planning.
5. Global Platform for Sustainable Cities.
6. The city as a sustainable living system.
7. Smart Cities.
8. Urban-rural cooperation for improving the sustainability of cities.
9. City administrative cultures in the focus of sustainability.
10. Urban floods development dialogue.
11. Urban Environmental Management.

Watch the videos and be ready for discussion

1. Three Ways Cities Can Build Sustainable Communities for All https://www.youtube.com/watch?v=nFn6Eucdq9E
2. What makes a city sustainable? https://ru.coursera.org/lecture/sustainable-development/what-makes-a-city-sustainable-1wUit
3. Global citizenship is… https://www.youtube.com/watch?v=XVSgbU6WVSk
4. Creating Sustainable Communities by JBA Consulting https://www.youtube.com/watch?v=fWdUuvpBtLc
5. Güssing as a Model for regional Economic Improvement https://www.youtube.com/watch?v=H1WsbQQNsV0
6. Sustainable Cities, 6 Parts https://www.youtube.com/user/jkellyx6

Read the articles and prepare short report

1. Sustainable Cities Hubs of Innovation, Low Carbon Industrialization and Climate Action https://www.unido.org/sites/default/files/2017-03/CITIES_22.06.2016_WEB_0.PDF

2. Pamela A. Mischen, George C. Homsy, Carl P. Lipo and all (2019). A Foundation for Measuring Community Sustainability. *Sustainability*, 11, 1903; doi:10.3390/su11071903. URL: https://www.mdpi.com/2071-1050/11/7/1903/pdf

3. Thomas J.M. Mattijssen, Arjen A.E. Buijs and all (2019). The Transformative Potential of Active Citizenship: Understanding Changes in Local Governance Practices. *Sustainability*, 11, 5781; doi:10.3390/su11205781. URL: https://www.mdpi.com/2071-1050/11/20/5781/pdf

4. JOIN THE CONVERSATION! A collection of simple ideas for planning social action in your community. https://youngfoundation.org/wp-content/uploads/2018/05/Join_the_conversation_For_Digital_17.4.18.pdf

Topic 8
Management of Social Change Towards Sustainability. Sustainable Development and Political Change

Learning Objectives:
1. Describe the processes of individual change.
2. Explain the meaning of social change and their transitions of societies.
3. Understand what managing change is.

The processes of individual change

On the individual level change is dependent on our understanding, of attitudes and behavior. Theories of **individual change** have been advanced in the fields of psychology and education, in areas of culture, of medicine and health, and in environmental science.

Ability — Motivation — Opportunity (AMO) is a high-level framework that reflects the likely reality that our behavior is influenced by a variety of factors. This theory helps us to understand why people "who know perfectly well" how to do something, still may not do it.

Researchers define the aspects of this model differently, but to keep it simple you can think about them in this way:
- *Ability*: Information, skills, or capability necessary to perform the behavior.
- *Motivation*: Drive to act or perform the behavior.
- *Opportunity*: Contextual or situational constraints or enablers that affect performance of the behavior

Change or lack of change is also connected to *the perception of risk*. This is mostly very irrational and depends on other factors than on carefully calculated data. Risk may be ignored, e.g. when it comes to car driving or bad habits for health. Risks may also be exaggerated. For example air travel is perceived as dangerous by many although it is far safer that the car trip to the airport. Risk of climate change has been calculated by the IPCC as very high, about 50% risk of more than 2 degrees global warming (and probably more in most recent estimations). This risk is seldom well understood.

Social change and transitions of societies

It is clear that large *social transformations* occur repeatedly in history. We have the large *civilisation changes* – from an agricultural society to an industrial society and then to a service oriented society. These transitions occurred as different sectors, which provided resources to society changed

fundamentally.

Social change refers to a change in the social order or organisation of society. Changes of social order include the transition from authoritarian to democratic government, from feudalism to capitalism and market economy, and the development of the welfare state; to the rise of the civil rights movement and the acceptance of human rights; the development of the environmental protection movements; and not the least globalisation, and large-scale use of information technologies. All these changes may be included in modernisation, the processes that take a society from traditional to a modern.

Finally social change may also refer to *political changes*. These include de-colonisation, increased global cooperation and trade, less concern with military power, to economic growth as a primary political goal. A dramatic, unexpected and rapid political change was the end of the Cold War, when Central and Eastern European states changed political system as they left the communist block to become "states in transition" towards democracy and market economy. First a majority of inhabitants were all positive to the changes, but very soon sentiments changed and many missed the old system. It has taken close to a generation to adapt to the new social order, an adaptation still going on.

Managing change

For an organisation, such as a company or a local authority, it is important that the **leadership supports a change** process if it should occur at all. In a study on the success of sustainable development in European cities it was clear that the most successful local authorities had implemented clear work strategies.

First it is crucial that the head of the city administration as well as the politicians were concerned about sustainable development so the whole organization had strong support from the leadership. The same is true for companies.

Change management when implemented becomes project work, with all the classical components of successful project management, including monitoring, innovations, follow up and evaluation, and new management cycles. The system to be managed, it may be a company or a city, is identified using a frame, that is, one need to frame the system or structure it in a clear way (fig. 8.1).

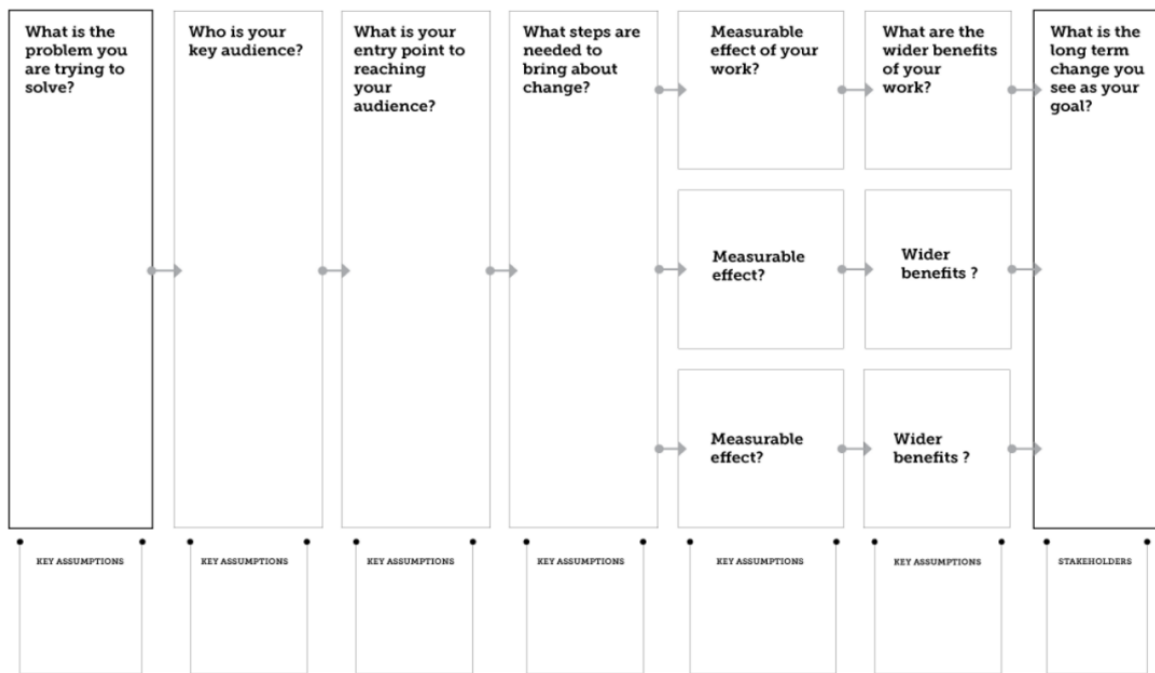| What is the problem you are trying to solve?	Who is your key audience?	What is your entry point to reaching your audience?	What steps are needed to bring about change?	Measurable effect of your work?	What are the wider benefits of your work?	What is the long term change you see as your goal?
				Measurable effect?	Wider benefits ?	
				Measurable effect?	Wider benefits ?	
KEY ASSUMPTIONS	KEY ASSUMPTIONS	KEY ASSUMPTIONS	KEY ASSUMPTIONS	KEY ASSUMPTIONS	KEY ASSUMPTIONS	STAKEHOLDERS

Figure 8.1 Managing change

Among general methods for managing a change process to increase sustainability in a company, a city or even a country the most important may be Alan AtKisson's ISIS method. The core of the ISIS process is Indicators, System, Innovations, and Strategies. The full process consists of 9 consecutive steps, in short Systems understanding; Sustainability understanding; Development vs. growth; Indicators; Systems Analysis; Innovation; Strategy; Agreements and Actions; and Strategic Evaluation.

The procedure is used in so-called pyramid workshops where the participants work together for learning about and designing change in a system. The workshop consists of building a pyramid of four sides and five layers. The layers correspond to the steps in the ISIS methods, the four sides to the frames of the system using the compass.

Review & Discussion Questions

1. What are the factors for the change on individual level?

2. Which factors impact individual behaviour change?

3. If knowledge does not lead to behaviour change, what then may initiate a change process?

4. Which are then the factors, the incentives, which lead to behaviour change?

5. What is social change and what is not social change?

6. How many are needed to achieve a change?

7. Which are the actors in social change processes?

8. Is it possible to stimulate, help and even manage the process of change to a more sustainable society?

Topics for presentation

1. The role of leader in sustainable development.
2. The role of NGOs in sustainable development.
3. Key stakeholders in the community. Power and decision making.
4. Motivation to act for sustainable development.
5. Good Governance for sustainable development.
6. International cooperation to achieve sustainable development.
7. National Strategies for Sustainable Development: challenges, approaches and innovations.
8. DPSIR framework for working with impacts on society.

Watch an interview and be ready for discussion

1. DIY Toolkit | Theory Of Change https://www.youtube.com/watch?v=6zRre_gB6A4
2. How NGO's Can Get Involved in the Rio+20 Summit Process. https://www.youtube.com/watch?v=5wujIKzFXMc

Answer the questions:
- What is Jan-Gustav Strandenaes responsible for and why?
- What are the main 5 things where NGOs can contribute in achieving RIO+20 Summit Goals?
- Which 9 major groups in civil society should be engaged into sustainable development process?

3. Sustainable Development and Political Change https://www.youtube.com/watch?v=ogrcy8AY95I
4. Ideology and Authentic Human Relationships https://www.youtube.com/watch?v=kBerPxbP74k

Read the articles and prepare short report

1. Non-governmental Organizations on Development Issues https://www.globalissues.org/article/25/non-governmental-organizations-on-development-issues
2. Maccarini, A. (2019). Deep change and emergent structures in global society: explorations in social morphogenesis *Springer International* Publishing. URL: https://www.springer.com/gp/book/9783030136239.
3. Sushanta Maiti (2021). What is Change Management: Types, Principles & Importance. URL: https://educationleaves.com/change-management/

Topic 9
Corporate Social Responsibility

Learning Objectives:
1. Understand the essence of corporate social responsibility.
2. Describe major categories of stakeholders by Newbould and Luffman.
3. Explain forms and levels of corporate social responsibility.
4. Understand what Greenwashing is.

The essence of corporate social responsibility

To begin with, it is important to understand the essence of corporate social responsibility. Corporate social responsibility (CSR) is a self-regulating business model that helps a company be socially accountable - to itself, its stakeholders, and the public (fig. 9.1).

Figure 9.1 The essence of corporate social responsibility

By practicing corporate social responsibility, also called ***corporate citizenship***, companies can be conscious of the kind of impact they are having on all aspects of society, including economic, social, and environmental.

Social responsibility is an ethical theory in which individuals are accountable for fulfilling their civic duty, and the actions of an individual must benefit the whole of society. In this way, there must be a balance

between economic growth and the welfare of society and the environment. If this equilibrium is maintained, then social responsibility is accomplished.

The theory of social responsibility is built on a *system of ethics*, in which decisions and actions must be ethically validated before proceeding. If the action or decision causes harm to society or the environment, then it would be considered to be socially irresponsible.

Principles of Social Responsibility:

1. Accountability.
2. Transparency.
3. Ethical behavior.
4. Respect for stakeholders' interest.
5. Respect for the rule of law.
6. Respect for international norms of behavior.
7. Respect for human rights.

The major categories of stakeholders by Newbould and Luffman

A stakeholder is a party that has an interest in a company and can either affect or be affected by the business (fig. 9.2).

Newbould and Luffman (1979) divide the major stakeholders into four groups, arguing that their individual objectives suggest seperate criteria for assessing the viability of particular strategies.

The four groups are the shareholders who finance the business, the managers who manage it, the employees who work for it, and the economy (buyers, suppliers, and the groups represent the wider economic interests of the country).

Figure 9.2 The major categories of stakeholders

Forms and levels of corporate social responsibility

According Carroll, there are four levels of corporate responsibility (fig. 9.3).

1. Economic responsibility is the practice of a firm backing all of its financial decisions in its commitment to do good in the areas listed above.

Figure 9.3 Carroll's pyramid of corporate responsibility

2. ***Legal Responsibility:*** The second level of the pyramid is the business's legal obligation to obey the law. This is the most important responsibility out of the four levels as this will show how companies conduct their business in the marketplace. Employment laws, competition with other companies, tax regulations and health and safety of employees are some examples of the legal responsibilities a company should adhere to.

3. ***Ethical responsibility*** is concerned with ensuring an organization is operating in a fair and ethical manner. Organizations that embrace ethical responsibility aim to achieve fair treatment of all stakeholders, including leadership, investors, employees, suppliers, and customers.

4. ***Philanthropic responsibility***. At the top of the pyramid, occupying the smallest space is philanthropy. Businesses have long been criticized for their carbon footprint, their part in pollution, using natural resources and more. To counterbalance these negatives, they should "give back" to the community they take from.

According to Carroll's pyramid, responsible business is one which qualifies all the levels of responsibilities before taking up philanthropy. Without fulfilling the other responsibilities, a business cannot sustain.

Greenwashing

Greenwashing is where a firm spends time and money advertising and marketing that their goods or services are environmentally friendly when, in fact, they are not. In other words, greenwashing is the act of making false or misleading claims about the environmental benefits of a product, service, technology, etc.

With the belief that consumer demand for sustainability is the frontier of our transition to a greener, fairer and smarter global economy, Futerra's 2015 Selling Sustainability Report outlines 10 basic brand marketing tactics to avoid (fig. 9.4).

1. Fluffy language
Words or terms with no clear meaning, e.g. 'eco-friendly'

2. Green products V dirty company
Such as efficient light bulbs made in a factory which pollutes rivers

3. Suggestive pictures
Green images that indicate a (un-justified) green impact e.g. flowers blooming from exhaust pipes

4. Irrelevant claims
Emphasizing one tiny green attribute when everything else is un-green

5. Best in class?
Declaring you are slightly greener than the rest, even if the rest are pretty terrible

6. Just not credible
'Eco friendly' cigarettes anyone? 'Greening' a dangerous product doesn't make it safe

7. Gobbledygook
Jargon and information that only a scientist could check or understand

8. Imaginary friends
A 'label' that looks like third party endorsement... except it's made up

9. No proof
It could be right, but where's the evidence?

10. Out-right lying
Totally fabricated claims or data

Figure 9.4 10 basic brand marketing tactics to avoid

Review & Discussion Questions
1. What is Corporate Social Responsibility?
2. Describe the Principles of Social Responsibility.
3. Who are stakeholders of Corporate Social Responsibility?
4. Explain the Carroll's pyramid of corporate responsibility.
5. Give examples of Corporate Social Responsibility companies in Ukraine.

6. Give examples of Corporate Social Responsibility companies in the world.

7. What is greenwashing and why is it a problem?

Topics for presentation

1. Example of Corporate Social Responsibility companies.
2. Benefits of corporate social responsibility
3. Principles of social responsibility.
4. Models of state regulation of corporate social responsibility.
5. European Commission strategy on CSR.
6. Concepts and forms of Greenwashing.
7. Difference between green marketing and greenwashing.

Watch the videos and prepare questions to the videos

1. History of CSR https://www.smartsimple.com/blog/2019/3/29/a-brief-history-of-csr

2. Understanding Corporate Social Responsibility (CSR) https://www.investopedia.com/terms/c/corp-social-responsibility.asp

3. Understanding Stakeholders https://www.investopedia.com/terms/s/stakeholder.asp

4. How to develop a Corporate Social Responsibility Program https://benevity.com/resources/corporate-social-responsibility-advocacy

Read the articles and prepare short report

1. Sebastião Vieira de Freitas Netto, Marcos Felipe Falcão Sobral, Ana Regina Bezerra Ribeiro & Gleibson Robert da Luz Soares (2020). Concepts and Forms of Greenwashing: a Systematic Review. *Environmental Sciences Europe.* Volume 32, Article number: 19. URL: https://enveurope.springeropen.com/articles/10.1186/s12302-020-0300-3

2. Valerie Chort & Hamoon Ekhtiari (Winter 2018). A New Model for CSR. URL: https://ssir.org/articles/entry/a_new_model_for_csr

Topic 10
Education for Sustainable Development

Learning Objectives:
1. Understand the politics of Education for Sustainable Development.
2. Describe teaching aspects for sustainable development
3. Explain learning concept for sustainable development.

The politics of Education for Sustainable Development

According to UNESCO, ***education for sustainable development (ESD)*** is focused on the development of knowledge, skills, attitudes and values necessary in creating a sustainable future.

Education for Sustainable Development, ESD, has since the 1990s become a concept both in the world of education and the world of politics. Education has been recognised as the golden way to approach sustainability and is meant to be available to all parts of society and integrated in all kinds of schools.

In the meantime a number of ***NGOs*** became very important actors in environmental education and their number of members increased. These groups were concerned about the state of the environment and acted to protect and conserve it. Some members of the environmental movement became extremely skilled, while others had a less scientific approach and were mostly concerned with a particular problem or site, which were threatened by pollution. NGOs in these years were - and still are - important political actors.

UNECE (United Nations Economic Commission for Europe, the USA and Canada) have been very active to promote ESD. Already the conference for ministers of environment in Kiev in 2003 drew up preliminary lines for an UNECE strategy for ESD. The strategy was developed and accepted at a conference for ministers of environment and education in Vilnius in 2005, thus marking the start of the Decade. The strategy has since been revised and the most recent version was published in 2011.

Teaching sustainable development

Education increases human welfare and is a decisive factor in enabling people to become productive and responsible members of society. Even in countries with strong education systems, there is a need to re-orientate education, awareness and training so as to promote widespread public understanding, critical analysis and support for sustainable development. (Earth Summit + 5 is the UN conference held in New York in 1997 to assess the implementation of Agenda 21, the global plan for sustainable

development signed in Rio in 1992, 1997, p.74).

The main objective of education for sustainable development is that everybody should acquire the relevant knowledge and be motivated to work for and practice sustainable development. Education for sustainable development can be seen as an overall perspective and an ongoing process in a changable world. The long-range goal is that we live as good a life as possible without harming others or the surrounding nature and society in both time and space. For the individual person this demands a developed capability to act for a sustainable society, that is to say having the relevant knowledge, the right opportunities and sufficient motivation.

Sustainability may be included in all or almost all subjects. It seems rather easy to include SD in natural sciences. For example in biology many aspects of resource flows and environmental impact can be included, and in physics energy use is easy to include.

In social sciences it is not too difficult to discuss aspects of participation and democracy and the UN process. Some teachers believe that humanities, e.g. history, is not part of it, but in fact on the contrary, it is very much so. The process towards unsustainable situations (resource use, demographic development etc) are part of world history. Probably all subjects could easily relate to SD as we are dealing with a systems study where nature, society and humans are parts.

The teacher should know the map rather than the detailed landscape on each part of the map. The teacher for this reason becomes a guide for the learners, to travel through the landscape of sustainable development. The teacher becomes a facilitator for the learners, a person who helps the students in the process of education for sustainable development. Facilitation is a skill in itself; some are very good facilitators and it is important to learn from them.

Learning sustainable development

Learning about the future ***is not the same as studying other subjects***. It includes much of developing and expressing your own opinion on many topics.

A few ***basic prerequisites*** are important to look at critically and come to grips with before going into detail in one of the many aspects of sustainability. Four such basic concepts are listed below. You may come back to them many times during your studies.

First, get a basic idea of what sustainable development is in general and what it is for you. The first idea may change many times during the study of the subject.

Secondly, one needs to understand the difference between growth and development. This appears simple, but is difficult to convey in today's growth economies.

Thirdly, one needs to have some idea about systems. Sustainable development is about systems most dramatically about the largest system: our Planet and all there is on it, not only humans but all of nature and environment and all other living beings.

Studying sustainable development also means that you most likely are included in the growing group of people who see the necessity of change. It is not quite possible just to sit down and expect "the others" to actually make this change happen. The change will be in different levels.

Finally, one should not forget that sustainability is about values, what we value in life, about justice and solidarity, how to be just to others and other parts of our world. You need to find out in which way your life influences others and make up your mind about if this is OK or not.

Review & Discussion Questions

1. What is education for sustainable development (ESD)?
2. Why is education for sustainable development important?
3. Explain the role of NGOs in education for sustainable development.
4. Which teaching methods are more available for education for sustainable development?
5. Describe teaching aspects for sustainable development
6. Explain learning concept for sustainable development.

Topics for presentation

1. The politics of ESD
2. Issues and trends in Education for Sustainable Development
3. Global Action Programme on Education for Sustainable Development
4. UNESCO activities on Education for Sustainable Development

Practical task
Creation of ESD videos for schoolchildren

Watch the videos and prepare questions to the videos

1. Shaping the Future We Want https://www.youtube.com/watch?v=zQ9ETC8bk70

2. Learning to change the world! What is Education for Sustainable Development? https://www.youtube.com/watch?v=YUFqamr78Xk

Read the articles and prepare short report

1. Education for Sustainable Development in Action https://sustainabledevelopment.un.org/content/documents/926unesco9.pdf

2. Education for Sustainable Development A roadmap https://www.gcedclearinghouse.org/sites/default/files/resources/200782eng.pdf

Recommended literature

1. Allen, C. , Metternicht, G. , & Wiedmann, T. (2018). Prioritising SDG targets: Assessing baselines, gaps and interlinkages. Sustainability Science, 14 (2), 421–438. doi: 10.1007/s11625-018-0596-81

2. Anna Bernaciak, **Alona Revko**, Arnold Bernaciak. Does the Educational Path Matter in the Approach to the Environment and Its Protection? Міжнародна науково-практична конференція у Львові «Виклики та перспективи розвитку міжнародного бізнесу та вищої освіти» : тези доп. Львів : СПОЛОМ, 2021. С. 16-18.

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11. Katila, P., Colfer, C. J. P., De Jong, W., Galloway, G., Pacheco, P., & Winkel, G. (Eds.). (2019). Sustainable Development Goals. Cambridge University Press.

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health expenditure, logistics, and environmental performance on sustainable economic growth. Sustainable development, 28(4), 833-843.

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24.   Зінчук, Т. О., & Левківський, Є. В. (2019). Корпоративна соціальна відповідальність вертикально інтегрованих структур аграрного бізнесу як умова сталого розвитку. Економіка АПК, (1), 39-49.

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Information resources

1. Система дистанційного навчання Національного університету «Чернігівська політехніка». Курс: Sustainable Development of Soceity. URL: https://eln.stu.cn.ua/course/view.php?id=2440#section-0

2. Центр "Розвиток корпоративної соціальної відповідальності (CSR Europe)"URL: https://csr-ukraine.org/

3. Інформаційний простір сталого розвитку «Responsible Future». URL: https://responsiblefuture.com.ua/

4. Програма розвитку Організації Об'єднаних Націй. URL:https://www.ua.undp.org/content/ukraine/uk/home.html

5. Побутові відходи – дій зараз! Prometheus.URL: https://courses.prometheus.org.ua

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7. The Responsible Marketing Blog. URL: http://responsiblemarketing.com/

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9. Мережа глобального екологічного сліду: http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_data_and_results/

10. Фонд народонаселення ООН, статистична інформація: http://www.unfpa.org/world-population-trends

11. Освіта для сталого розвитку: https://en.unesco.org/themes/education- sustainable-development

12. World Economic Forum. URL: https://www.weforum.org/