TO4TO

SUSTAINABLE MANAGEMENT: TOOLS FOR TOMORROW

With the support of the Erasmus+ Programme of the European Union

PROJECT NUMBER 2020-1-PL01-KA203-082076

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TOO4TO MODULE 1

Introduction to Sustainability and Sustainable Management
Part 1

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Introduction to Sustainability and Sustainable Management – Part 1

Definitions; Background and History; Actors

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Definitions (1/2)

Sustainability

The word *sustainability* can be defined as “the quality of being able to continue over a period of time” (Cambridge Dictionary, link)

Rising global challenges, ranging from environmental crisis to social problems, have led the discussions on *sustainability* of our planet and well-being of living beings intensified over the course of the last decades.

In that context, the concept of *sustainability* is mostly used to include social, environmental and economic dimensions and closely linked to *sustainable development*.

Sustainable Development

The Brundtland Commission’s definition of *sustainable development* from 1987 is the most commonly accepted definition of the concept and defines it as the development that “meets the needs of the present without compromising the ability of future generations to meet their own needs.” (link).

Short Video: What is Sustainability

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Definitions (2/2)

Although in certain cases these two concepts are used interchangeably, it is important to understand what distinguishes them.

“Sustainability is often thought of as a long-term goal (i.e. a more sustainable world), while sustainable development refers to the many processes and pathways to achieve it (e.g. sustainable agriculture and forestry, sustainable production and consumption, good government, research and technology transfer, education and training, etc.)” (UNESCO, link).

Short Read: Sustainability and Sustainable Development - What is Sustainability and What is Sustainable Development?

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Global Challenges (1/4)

Sustainability is not a new concept, but the gravity of global challenges, impact of which has been multiplied over the past decades, has made sustainability become at the core agenda of all kinds of institutions around the world. These challenges have environmental, social and economic implications and transcend borders. While it is not possible to present *one ultimate list of global sustainability challenges*, examples presented below give an overview of the severe problems that humanity experiences today.

Short Read: 15 Global Challenges

Short Read: Sustainability Challenges

Short Video: 10 years to transform the future of humanity -- or destabilize the planet

Short Video: Causes and Effects of Climate Change | National Geographic

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Global Challenges (2/4)

Climate Change
"Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas. Burning fossil fuels generates greenhouse gas emissions that act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures. Examples of greenhouse gas emissions that are causing climate change include carbon dioxide and methane. These come from using gasoline for driving a car or coal for heating a building, for example. Clearing land and forests can also release carbon dioxide. Landfills for garbage are a major source of methane emissions. Energy, industry, transport, buildings, agriculture and land use are among the main emitters." (UN, link)

Air Pollution
"Air pollution, which kills an estimated 7 million people every year, is the biggest environmental health risk of our time. Airborne pollutants are responsible for about one third of deaths from stroke, chronic respiratory disease, and lung cancer, as well as one quarter of deaths from heart attack. Air pollution is also fundamentally altering our climate, with profound impacts on the health of the planet. Air pollution comes from many sources – from cookstoves and kerosene lamps to coal-fired power plants, vehicle emissions, industrial furnaces, wildfires, and sand and dust storms. The problem is most acute in urban areas, particularly in Africa and Asia. In low- and middle-income countries, 98 per cent of cities with more than 100,000 inhabitants fail to meet the World Health Organization's air quality guidelines." (UNEP, link)

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Global Challenges (3/4)

Water Pollution
"[…]Today, 80 per cent of global wastewater goes untreated, containing everything from human waste to highly toxic industrial discharges. The nature and amount of pollutants in freshwater determines the suitability of water for many human uses such as drinking, bathing, and agriculture. In addition, pollution of freshwater ecosystems can impact the habitat and quality of life of fish and other wildlife. Pollution in freshwater ecosystems can include pathogens (largely from human and animal waste), organic matter (including plant nutrients from agricultural run-off such as nitrogen or phosphorus), chemical pollution and salinity (from irrigation, domestic wastewater and runoff of mines into rivers). Plastic pollution, and emerging pollutants such as pharmaceuticals, also increasingly put our world's waterways at risk, but the extent and impacts of their presence in our freshwater is largely unknown." (UNEP, link)

Ecosystem Degradation
"Nature is critical to our survival: nature provides us with our oxygen, regulates our weather patterns, pollinates our crops, produces our food, feed and fibre. But it is under increasing stress. Human activity has altered almost 75 per cent of the earth's surface, squeezing wildlife and nature into an ever-smaller corner of the planet. Around 1 million animal and plant species are threatened with extinction – many within decades – according to the 2019 Global Assessment Report on Biodiversity and Ecosystem Service. The report called for transformative changes to restore and protect nature. It found that the health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever, affecting the very foundations of our economies, livelihoods, food security, health and quality of life worldwide." (UN, link)

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Global Challenges (4/4)

Rapid Industrialization and Economic Growth
"Economic growth is closely linked to increases in production, consumption and resource use and has detrimental effects on the natural environment and human health. It is unlikely that a long-lasting, absolute decoupling of economic growth from environmental pressures and impacts can be achieved at the global scale; therefore, societies need to rethink what is meant by growth and progress and their meaning for global sustainability." (EEA, link)

Poverty and Inequality
"Poverty entails more than the lack of income and productive resources to ensure sustainable livelihoods. Its manifestations include hunger and malnutrition, limited access to education and other basic services, social discrimination and exclusion as well as the lack of participation in decision-making. Various social groups bear disproportionate burden of poverty." (UN, link)

"Extraordinary economic growth and widespread improvements in well-being have failed to close the deep divides across countries and within societies. More than 70 per cent of the world population now live in countries where income inequality has increased in the last three decades. Inequalities between social groups, including those based on age, gender, race, ethnicity, migrant status and disability, are pervasive in developed and developing countries alike.." (UN, link)

Responses to Global Challenges (1/2)

The emergence of the concept of *sustainability* can be traced back as early as to 18th century (Grober, U., 2007, link)

The discussions around the concept intensified during the 20th century, when the negative impacts of the industrial revolution (e.g. air and water pollution, soil contamination), as well as environmental disasters caused by human activities, started to become more and more clear to people. Environmental issues began to be in the focus of scientists, activists and policy-makers; and there have emerged several movements, initiatives and organizations which aim to tackle the global sustainability challenges.

Major developments include:

- Publication of *Silent Spring* by Rachel Carson (1962) (link)
- Publication of *Limits to Growth by the Club of Rome* (1972) (link)
- United Nations Conference on the Environment in Stockholm (1972) (link)
- Publication of *Our Common Future by* Brundtland Commission (1987) (link)

Short Read: Environmental History Timelines

Short Read: The History of Sustainability

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Responses to Global Challenges (2/2)

"Taking action for *sustainable development*" became to be a crucial agenda item for major governmental and non-governmental organizations in the last two decades and various action plans and calls for actions emerged to reach sustainable development in national / transnational / international levels.

Strategies presented by the United Nations and the European Commission currently appear to be among the most comprehensive and influential ones:

- UN SDGs
- UN Global Compact
- European Commission: Green Deal / Taxonomy

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Responses to Global Challenges / UN SDGs

The United Nations Sustainable Development Goals (UN SDGs) “are a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. The 17 Goals were adopted by all UN Member States in 2015, as part of the 2030 Agenda for Sustainable Development which set out a 15-year plan to achieve the Goals.” (UN, link)

Short Video: Do you know all 17 SDGs?| United Nations

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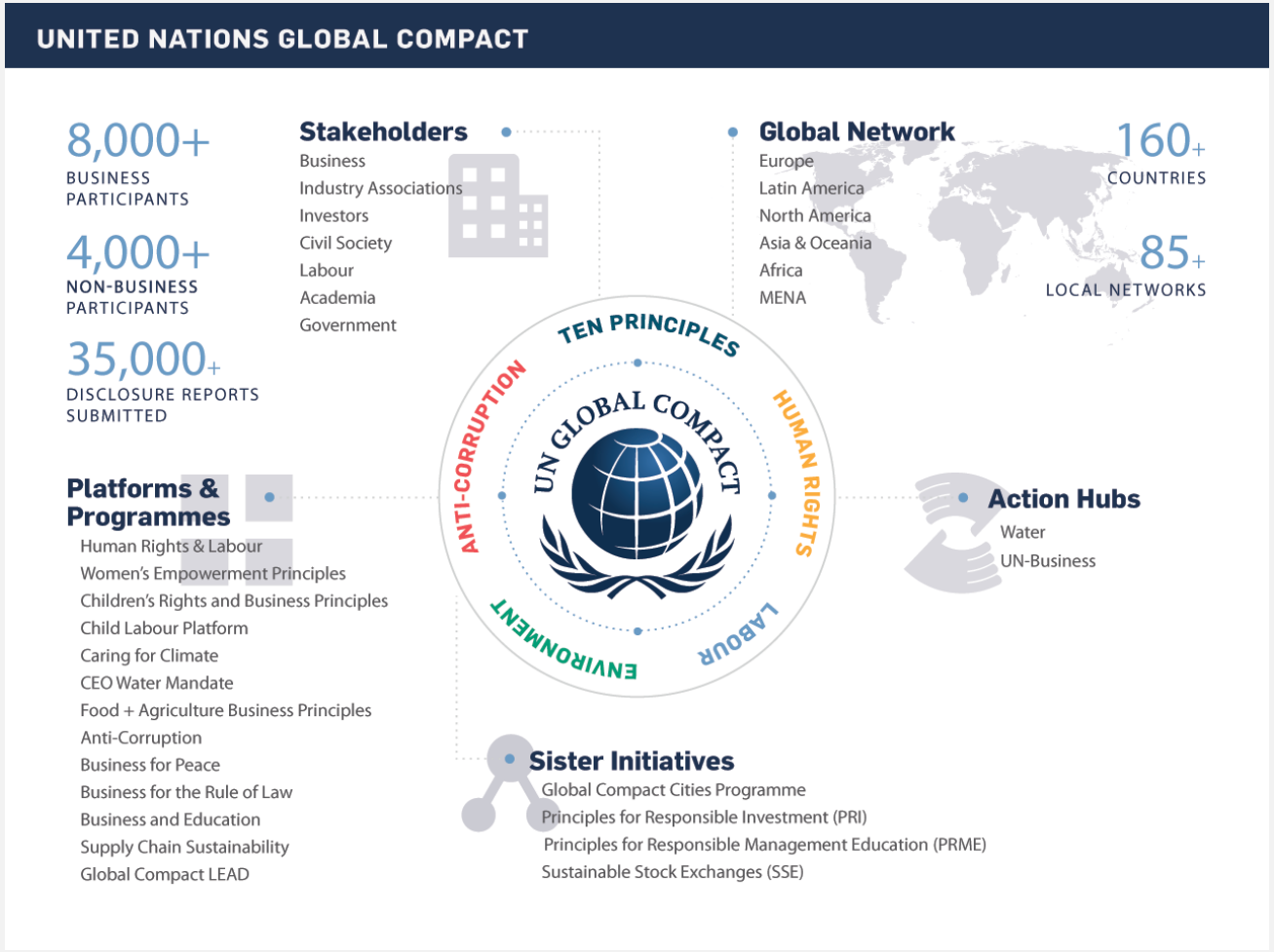
Responses to Global Challenges / UN Global Compact

The United Nations Global Compact is “a voluntary initiative based on CEO commitments to implement universal sustainability principles and to take steps to support UN goals.” (Global Compact, link)

Global Compact principles call corporations “to align strategies and operations with universal principles on human rights, labour, environment and anti-corruption, and take actions that advance societal goals” (Global Compact, link)



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Responses to Global Challenges / European Commission

A European Green Deal

European Green Deal stands as an action plan to "transform the EU into a modern, resource-efficient and competitive economy, ensuring: no net emissions of greenhouse gases by 2050; economic growth decoupled from resource use; no person and no place left behind." (EC, link)

Short Video: The European Green Deal explained in 3 minutes

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To reach the objectives set by the Green Deal, it is crucial to enable cash flow to sustainable business activities and projects. In order to identify what is *sustainable*, a classification system has also been developed and adopted by the EU, the EU Taxonomy.

EU Taxonomy

EU Taxonomy is "a classification system, establishing a list of environmentally sustainable economic activities. It could play an important role helping the EU scale up sustainable investment and implement the European green deal. The EU taxonomy would provide companies, investors and policymakers with appropriate definitions for which economic activities can be considered environmentally sustainable." (EC, link)

EU Taxonomy is to have a great impact on activities of financial sector practitioners, as well as sustainability reporting of corporations (Please see Part 3 of this presentation for *sustainability reporting*).

Short Read: Six Things Business Should Know About the EU Taxonomy

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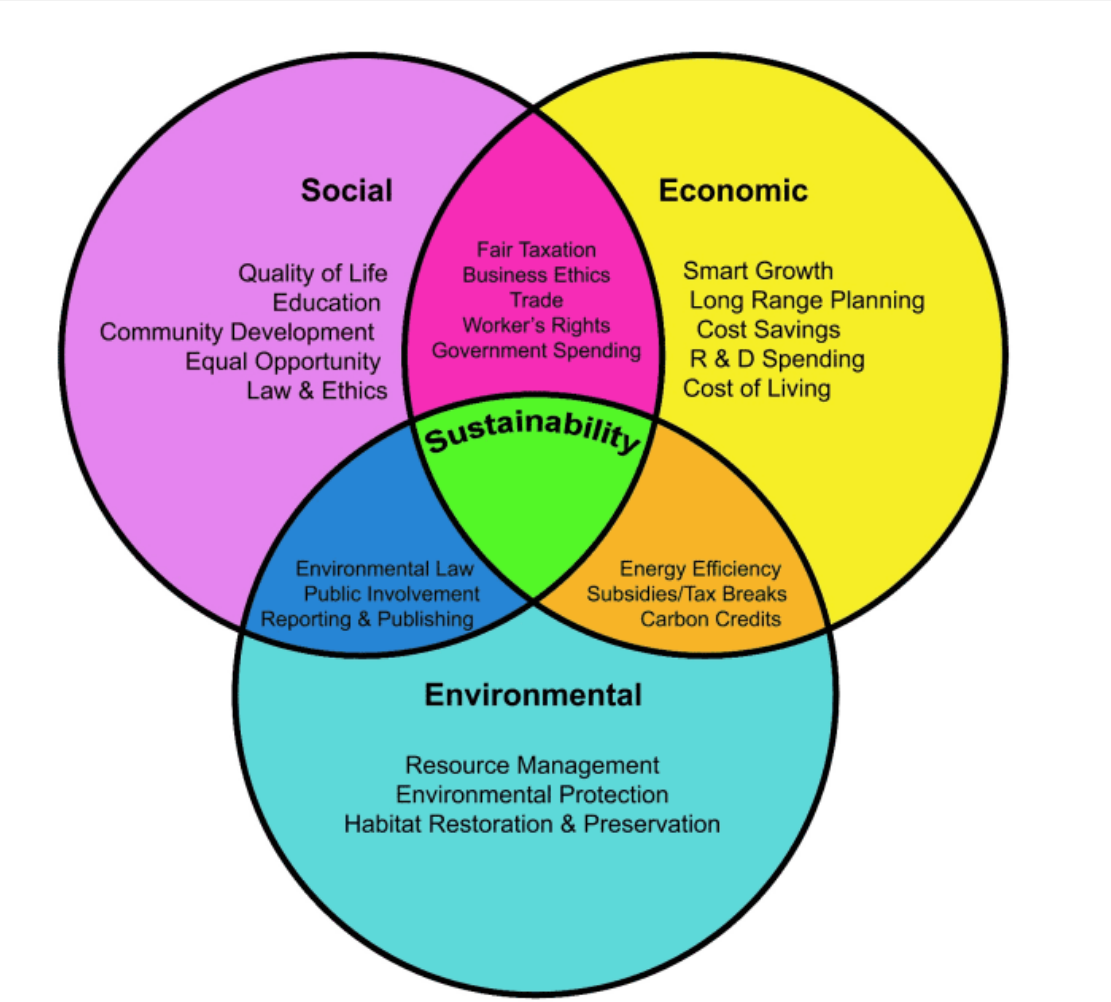
Dimensions of Sustainable Development (1/3)

It is generally accepted in common literature that sustainable development has three dimensions, or pillars:

- environmental
- social
- economic

For an activity to be fully sustainable, it must have a balanced impact in all these spheres.



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Dimensions of Sustainable Development (2/3)

One important *sustainability* concept that has this three dimensions of society, environment and economy in its core is the ***Tipple Bottom Line*** (TBL) framework coined by John Elkington in 1994. The framework suggests that organizations should care for their impact on 3 P's - **people**, **planet** and **prosperity**.

Short Read: The Triple Bottom Line

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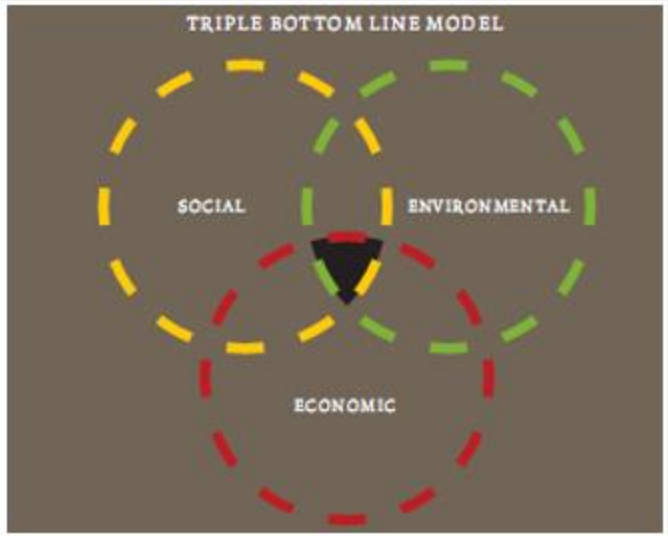
Another important term, ***strong sustainability***, suggests, on the other hand, that all societal activities (including economy, or '**econosphere**') depend on existing of a society (or '**sociosphere**'), which can only exist if the earth (or '**biosphere**') is sustained.

Short Read: What is strong sustainability?



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Dimensions of Sustainable Development (3/3)

A more comprehensive approach can be seen in the United Nations Sustainable Development Goals, where sustainable development actions are to cover five areas: people, planet, prosperity, peace, and partnership.

Short Video: [Understanding the Dimensions of Sustainable Development]

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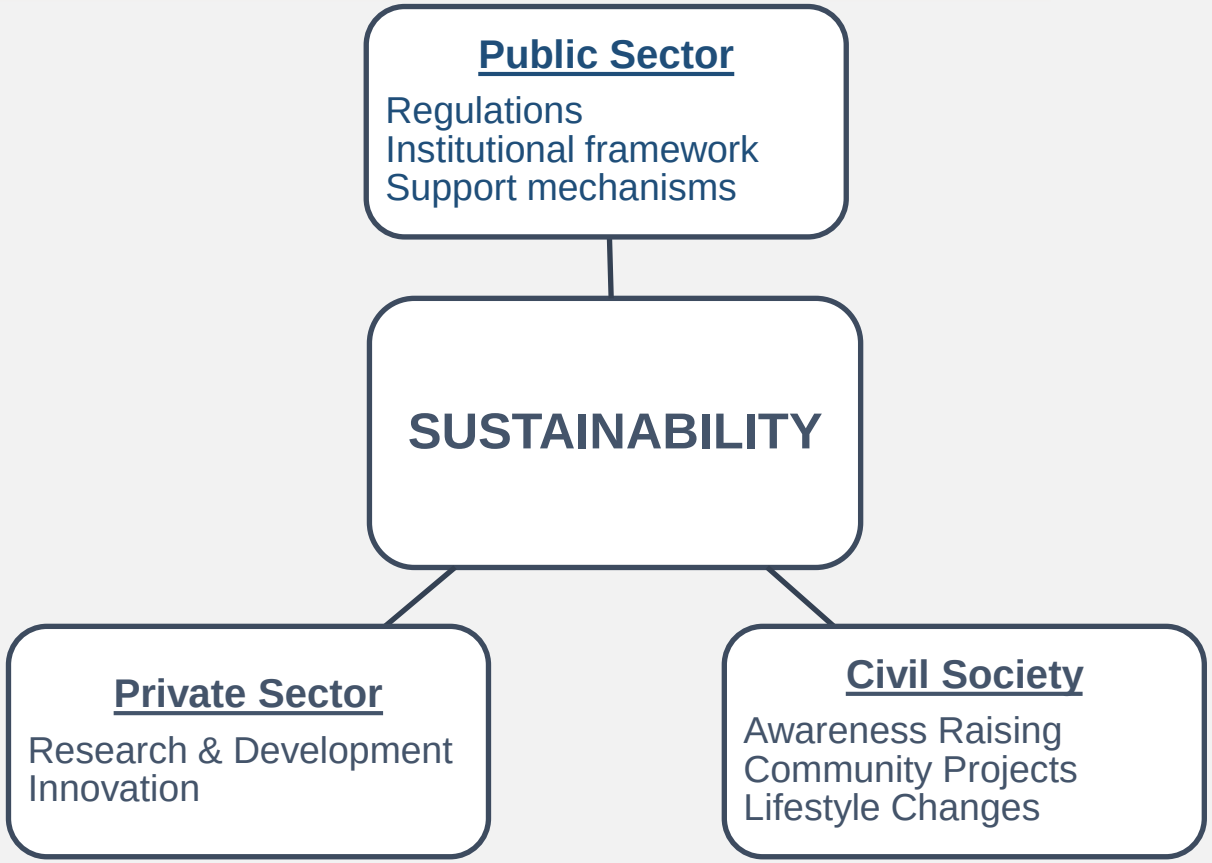
Sectoral Roles in Sustainable Development

Actors from the public sector, private sector and civil society can take on various roles in contributing to sustainable development.

While the **governmental organizations** can support transformation towards sustainability by providing regulations, institutional frameworks and support mechanisms (e.g. subsidies and tax breaks); the **private sector** can contribute to solving of sustainability challenges through research and development, and innovation. **Civil society** can help mainstreaming of sustainability principles by raising awareness and engaging in community projects in organizational level; and through lifestyle changes in individual level.

Short Video: CSR, SDGs, Business And Government



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Further Study Material Recommendations for Part 1 (1/3)

Books

- *Understanding Sustainable Development*, John Blewitt (2018)
- *The Age of Sustainable Development*, Jeffry D. Sacs, & Ban Ki-Moon 2015)
- *An Introduction to Sustainable Development*, Jennifer A. Elliott (2006)
- *Rebalancing Society*, Henry Mintzberg (2015)

Academic Articles

- *Environment, economy and society: fitting them together into sustainable development*
  B. Giddings, B. Hopwood and G. O'Brien (2002) [link]
- *Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review*
  J. Mensah (2019) [link]
- *Reinvigorating the sustainable development research agenda: the role of the sustainable development goals (SDG)*
  W. Leal Filho and U. Azeiteiro et. Al. (2017) [link]
- *Translating Sustainable Development Goal (SDG) Interdependencies into Policy Advice*
  A. Breuer, H. Janetschek and D. Malerba (2019) [link]
- *Roles of Actors in Promoting Sustainable Development*
  P. Nițoaia and G. Camară (2018) [link]
- *From fighting COVID-19 pandemic to tackling sustainable development goals: An opportunity for responsible information systems research*
  S.L. Pan and S. Zhang (2020) [link]

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Further Study Material Recommendations for Part 1 (2/3)

Documents / Reports
(These grey literature materials are for users' reference, and it is recommended to skim & scan them)

- Global Risk Report 2022
  (Please check the website of World Economic Forum for updated documents for coming years)
- The 2030 Agenda for Sustainable Development
- The Sustainable Development Goals Report 2021
  (Please check the website of UN for updated documents for coming years)
- UN Global Compact Strategy 2021 – 2023
  (Please check the website of Global Compact for updated documents for coming years)
- A Guide to SDG Interactions: From Science to Implementation
- Paris Agreement
- Exploring connections between the Paris Agreement and the 2030 Agenda for Sustainable Development

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Further Study Material Recommendations for Part 1 (3/3)

Videos (Lectures / Presentations)

- Final Warning Limits to Growth - ca. 40 min.
- MOOC | Jeffrey Sachs - The Age of Sustainable Development | Lecture 1
  "What is Sustainable Development" (Chapters 1-5) – ca. 60 min. total
- Bill Gates on Global Inequality, Climate Change and Big Tech – ca. 30 min.
- UN SDG Toolkit – series of 15 videos, ca. 5-10 min. each
- UN Sustainable Development Goals (SDGs): What They Are & Why They're Important – ca. 17 min.
- TED Talk: How we can make the world a better place by 2030 – ca. 15 min.

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