AMBASADORI ODRŽIVOG RAZVOJA I ŽIVOTNE SREDINE

ENVIRONMENTAL AMBASSADORS FOR SUSTAINABLE DEVELOPMENT

INFORMATION PAPER

regarding climate change and energy

2021

Information paper regarding climate change and energy

Energy and climate change are planned in a coordinated manner, while respecting environmental regulations

The accent is on integrating climate change strategic goals into energy planning as a holistic approach to planning. If planning is not harmonized, the uncertainty risk will be high. It needs to be highlighted that environmental legislation implementation is mandatory (Strategic Impact Assessment, Environmental Impact Assessment, other related assessments).

Climate science has made it clear that a deep transformation is needed to achieve the climate goals, and that such a transformation must start early and result in extensive emission reductions even before 2030[1]. As noted[2], it is necessary to avoid "climate-blind" decisions, including those in the energy sector.

Basics for understanding the meaning of climate change

A possible definition of climate change is: „a sweeping change in global climate conditions, including weather phenomena, temperature and sea levels. It is caused by an influx of greenhouse gases, mostly from fossil fuel emissions around the world. These gases trap heat in the atmosphere and change weather patterns, warming many areas of the globe and causing erratic season and weather events"[3]. For a further understanding of the meaning, consult the portal [4] (in Serbian) and a national version of an innovative, interactive textbook on climate change called "Climate Box"[5] (in Serbian, English, Russian, etc.).

When it comes to tackling climate change in order to prevent the impacts it causes in the different systems of the planet, human beings apply two types of measures**: mitigation and adaptation**. Mitigation attends to the causes of climate change, while adaptation addresses its impacts.

Mitigation	Adaptation
measures **to reduce the causes of climate change**: curbing greenhouse gas emissions (and ozone-depleting substances)	measures based on **reducing vulnerability[6] to the effects of climate change**, i.e. adaptation to climate changes and projections, including the increase in temperatures, reduction of annual precipitation, increase in consecutive dry days and increase in the total precipitation of extreme-rainfall days
Causes of climate change: Humans are increasingly influencing the climate and the earth's temperature by **burning fossil fuels,** cutting down rainforests and farming livestock. This adds amounts of greenhouse gases to those naturally occurring in the atmosphere, thus increasing the greenhouse effect and global warming.	**Key climate impacts:** Human Health Energy and Infrastructure Agriculture Ecosystems Water Resources

1 *https://unfccc.int/news/climate-commitments-not-on-track-to-meet-paris-agreement-goals-as-ndc-synthesis-report-is-published*

2 *https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/eu_strategy_2021.pdf*

3 *https://www.dictionary.com/browse/climate-change*

4 *https://klima101.rs/category/sta-su-klimatske-promene/*

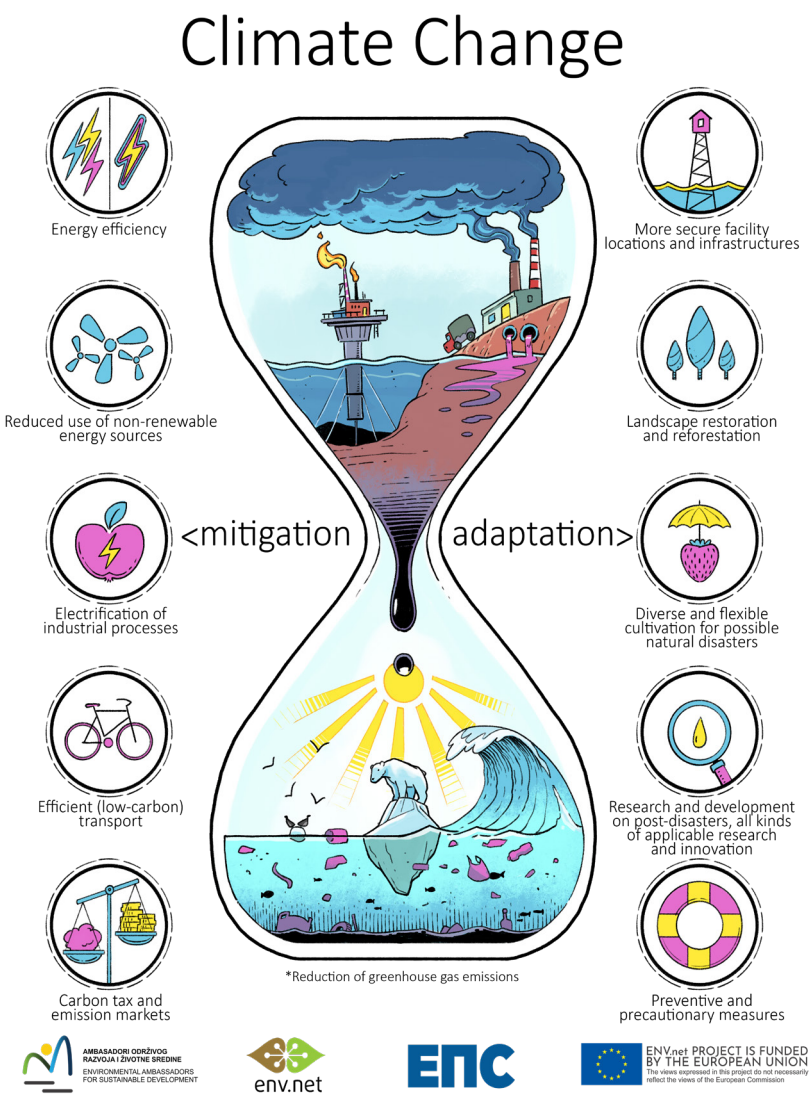
5 *https://climate-box.com; https://www.klimatskepromene.rs/en/news/climate-box-available-soon-in-serbian-language; ambassadors-env.com/en/project/adaptation-of-the-innovative-interactive-learning-toolkit-on-climate-change-the-climate-box/*

6 *Vulnerability includes the lack of education.*

Climate Stressors and Climate Risks in ENERGY AND INRASTRUCTURE	
Stressors	**Risks**
More frequent heat waves	Increased power outages
Changes in the seasonality of precipitation	Disruption to electricity supply
Increased droughts	Damage to electricity distribution systems
Increased storms	Damage to infrastructure

Main energy sources and the ambiguous connection with climate change

An illustration is provided[7] relating to climate change measures and the ambiguous connection with main energy sources. Fighting climate change and achieving the transition to a climate-neutral society will require significant investments, research and innovation, new ways of producing and consuming and changes in the way we work, use transport and live.

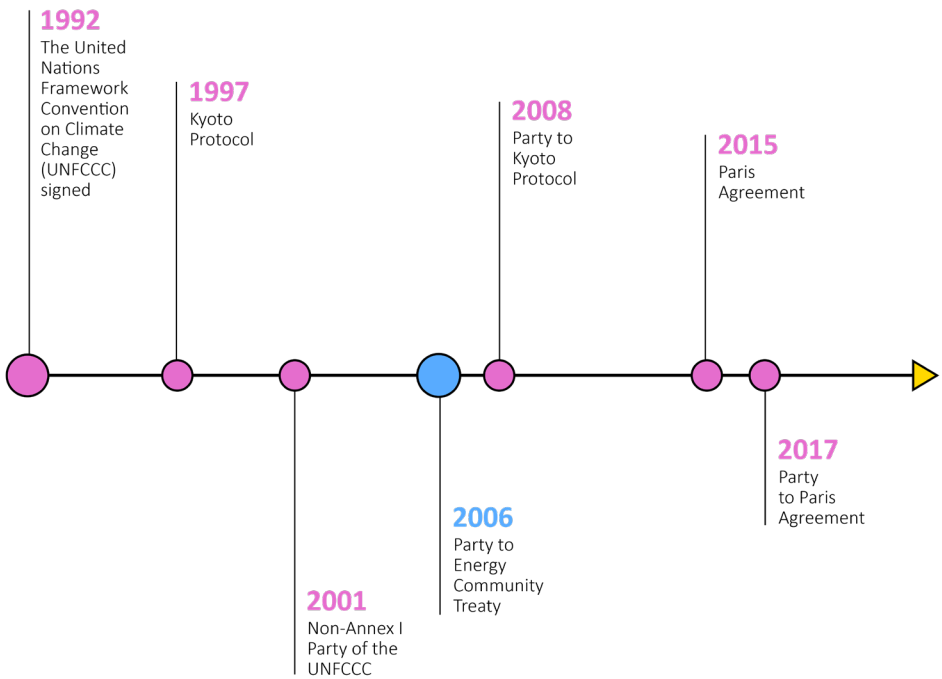


Main natural sources of energy			
Non-renewable			Renewable
Radioactive metals	Hydrocarbons/Fossil fuels		Hydro energy
		Crude oil	Tidal energy
		Natural gas	Geothermal energy
		Brown coal and stone coal	Wind energy
		Peat	Solar energy
			Biomass

Some of the challenges for Serbia

Serbia, as a Party of the UNFCC, Paris Agreement and Energy Community Treaty, has an obligation towards a harmonized planning of energy and climate change measures. It needs to be emphasized that these obligations have already been accepted by our country.

Global/International level



The development of a *National Energy and Climate Plan* is in line with the Energy Community[8] obligations[9]. According to climate indicators[10] in 2019/20, Serbia is implementing its obligations to an overall extent of less than 25%; thus, Serbia is still at an early stage of implementation.

Serbia is implementing the UNFCCC (as a Party). Climate-change related activities were mostly implemented under the national communications and biannual updated reports, as reporting obligations to the United Nations Framework Convention on Climate Change (UNFCCC). The

8 According to Ministerial Council Decision 2013/03/MC-EnC on extending the duration of the Energy Community Treaty, the duration of the Treaty is extended for a period of 10 years.

9 https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/serbia_report_2020.pdf

10 https://www.energy-community.org/implementation/Serbia.html

NDCs (Nationally Determined Contributions) under the Paris Climate Agreement (ratified by Serbia) are increasingly linked with the longer-term goals or aspirations for achieving carbon neutrality around mid-century. Under the Paris Agreement, Serbia is committed to reducing its greenhouse gas (GHG) emissions by 9.8% by 2030 compared to the 1990 levels[11] (and its Draft Strategy on Low Carbon Development drives this further by aiming for a 33% reduction compared to the 1990 levels by 2030).

In order to meet the EU's energy and climate targets for 2030, EU countries (but also candidate countries for membership to the EU, such as Serbia) need to establish a *ten-year integrated national energy and climate plan (NECP)* for the period from 2021 to 2030[12]. The 2021 new EU Strategy on Adaptation to Climate Change[13] supports the implementation of the National Energy and Climate Plans, for instance in the protection of the security of the EU's energy supply against climate impacts. While waiting for the EC's response to the Negotiation Position for Environment and Climate Change (Chapter 27) (submitted to the EC in January, 2020), as noted in the 2020 EC Progress Report on Serbia[14], what needs to become a priority is advancing on a green energy transition, away from coal and including upgrading outdated infrastructure, and a part of Serbia redoubling its efforts to fight air pollution, as well as providing adequate political attention for the environment and climate change; this ultimately translates into better coordination, stronger institutions, more financing and mainstreaming across all sectors of the economy.

11 . Intended Nationally Determined Contribution (NDC) of the Republic of Serbia, UNFCC (2015)

12 Introduced under the Regulation on the governance of the energy union and climate action (EU/2018/1999),

13 COM(2021) 82 final ; https://ec.europa.eu/clima/sites/clima/files/adaptation/what/docs/eu_strategy_2021.pdf

14 https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/serbia_report_2020.pdf

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