



YOUNG EUROPEANS: HOW TO ACT ON THE CLIMATE CRISIS?

**Consciousness, Commitment, Co-deciding – three Cs for
combating climate crisis**

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INTRODUCTION

Climate change is a serious challenge. This phenomenon already affects lives of millions of people around the world¹ and it is going to shape our well-being and safety in the future. We have solid scientific evidence that climate change is caused due to humans' activity: burning of fossil fuels for generations such as coal or oil causes putting extra amount of carbon dioxide (CO₂) to the atmosphere². Why then we do not react at once, collectively and fiercely?

The issue is that climate change is not a zero-one problem. It is a complex challenge, which needs to be understood and tackle in many ways: on political (internal and global), community and individual level. What we need in the first place is spreading the facts that 1) climate change is happening, it is not a myth, or ungrounded story; 2) climate change is caused by humans; 3) climate change can be challenged; 4) there are recognized solutions on each of the abovementioned levels which can help mitigating climate change; 5) fortunately as technologies are developing, there is a hope for finding newer and more effective solutions in the future.

Recently collective awareness that climate change is a serious problem, caused by humans' actions is rising. There is a lot of debate in the public sphere regarding climate change presented as a crisis which requires swift actions on the regulatory level. Young generation raises its justified concerns and is anxious about lack of speed in politics' reaction and enforcing political proposals which could alleviate the humans' impact on climate change.

Unfortunately climate change will not be combated with enforcing one clear-cut solution. It is a long battle, a process in which we all need to be involved. Following actions on several levels need to be enforced:

¹ The recent example of climate change affecting lives of whole cities is catastrophic scope of wildfires in California. As a result of wildfires at least 185 000 people have been evacuated. Around 2 million people had their electricity cut off. The wildfires are hard to defeat because of very strong wind and conditions of weather making trees, plants and bushes extremely dry. According to the experts such weather's conditions were influenced by climate change which increases the risk of extreme weather's occurrence – **J. Cowan, Are Wildfires caused by utilities or climate change? Yes., source available at:** <https://www.nytimes.com/2019/10/23/us/wildfires-utilities-climate-change.html>.

² In the process of burning fuels carbon is combined with oxygen in the atmosphere which created CO₂. Agriculture, mining, transport, industry, aviation, all these sectors affect a balance of substances in the atmosphere and contributes to climate change – **The causes of climate change, source available at:** <https://climate.nasa.gov/causes/>.

- 1) It should be clear as sun to everybody that climate change affects our planet but that at the same time we are able to mitigate this impact - we need to fight with confusion and misunderstanding regarding climate change – we need to raise **consciousness**;
- 2) Climate change is everybody's concern, not only because it affects us all but also because all of us and each of us has a possibility to fight with it every day, by making aware choices, taking responsible actions – care for our planet should be ingrained in us, and subsequently in politics on global and local level, we need to raise everybody's **commitment** to tackle climate change;
- 3) Climate change is a complex and global problem, it needs to be fought with on regulatory level. It can be done by decisions of politicians, by enforcing legislative proposals but also by involvement of individuals and communities in the political **co-deciding** on the matter.

Should we raise the level of 3 Cs: consciousness, commitment and co-deciding, we should be better prepared to combat climate change.

In this paper I will shortly present the definition of climate change and its possible causes. Then I will show how until now the EU shapes its climate policies on EU and international level. Finally I will present several initiatives which implementation can strengthen the EU battle on the climate crisis.

DEFINITION

Definition of climate change assumes its monitoring – it is a change in mean and/or variability of climate's properties, which can be observed for some longer, counted in years, period of time, identified with a help of e.g. statistical tests³. This change might be attributable to natural causes such as eruptions of volcanoes, changes in the solar cycles as well as anthropogenic changes in land use or atmosphere⁴. All of aforementioned factors influence climate change.

³ Fact sheet: Climate change science - the status of climate change science today, United Nations Framework Convention on Climate Change, February 2011.

⁴ IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)]. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Portner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Pean, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

What is also affecting climate change and makes it more rapid than ever before is human impact on the planet⁵.

It is undeniable that climate change is happening and that this change “can be firmly attributed to human activity⁶”. What is more the speed of climate change is faster and faster. It can be noticed while comparing certain periods of time: e.g. between 2000 and 2010 the temperature around the globe has been 0,45⁰C higher than between 1961 and 1990⁷. It is also undeniable that general effect of climate change on the planet is its warming up, even if the rising of temperature is not even in different parts of the world, e.g. oceans are getting warm slower than land parts, whereas on some continents like Africa or Arctic temperature is rising quicker than somewhere else.⁸

The symptom of rising temperature is not the only issue connected to climate change. What can be also observed is gaining energy by the planet, which results in changes in the form of warming up of whole climate system.⁹ This extra energy (almost 90 % of it) concentrates in the oceans which leads to many consequences¹⁰, among them rising of sea levels because of gaining volume coming from melting glaciers.¹¹ To visualize how serious and invasive these changes are the case of the Arctic can serve: it is said that if the recent level of greenhouse gas emissions would not be reduced, almost all ice in the Arctic would be gone before the middle of the 21st century.¹²

⁵ Fact sheet: Climate change (...), *op.cit.*

⁶ *Ibid.*

⁷ J. Delbeke, P. Vis (editors), G. Klaassen, J. Lefevere, D. Meadows, Y. Slingenberg, A. Runge-Metzger, S. Vergote, J. Werksman, P. Zapfel, EU Climate Policy Explained, European Union 2016, p. 5.

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ Estimation on how many households are threaten by rising of sea levels is frightening. According to the most recent research it may affect around 300 million people, much more than previously it has been estimated. The more precise calculation is based on more accurate assessment of topography of coastlines – **J. Watts, Rising sea levels pose threat to homes of 300 m. people – study, source available at:** <https://www.theguardian.com/environment/2019/oct/29/rising-sea-levels-pose-threat-to-homes-of-300m-people-study>.

¹¹ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*

¹² *Ibid.*

Humans influence climate change in many ways. Main cause of contribution to climate change by humans is production of greenhouse gases, aerosols and cloudiness¹³. They are produced during different human activities, in the largest amount while burning of fossil fuels which process triggers releasing of carbon dioxide gas to the atmosphere¹⁴. Releasing of large amount of the greenhouse gases meddles with solar radiation (in and out-going) which as a consequence disturbs the Earth energy balance¹⁵.

To visualize what amounts of greenhouse gas emissions humans are producing, The European Union's productions can serve as an example. In 2015 total amount of greenhouse gases' production in the EU (excluding land use, land use changes and forestry) reached 4 310 Mt CO₂.¹⁶ The 2015 was also a first year in which increase of greenhouse gases' production has been noted. Such a state was due to the growth of GDP which influences increase in energy consumption.¹⁷ The largest increase in emissions have been noted in the maintaining (heating) of buildings as well as road transport.¹⁸

People affect climate change in many ways and on rapid speed. That is an undeniable fact. But is anything being done in this respect? How for example European Union deals with its impact on climate change?

THE EU AND CLIMATE CHANGE

In this part I will shortly present the procedure in which EU climate law is being shaped as well as recommendations regarding shaping EU climate policies, after which I will present the EU recent internal and external (international) strategy and commitments regarding climate change.

¹³ European Environment Agency, *How do human activities contribute to climate change and how do they compare with natural influences?* available at: <https://www.eea.europa.eu/themes/climate/fag/how-do-human-activities-contribute-to-climate-change-and-how-do-they-compare-with-natural-influences>.

¹⁴ *Ibid.*

¹⁵ European Environment Agency, *How do human activities contribute to climate change (...)*, *op.cit.*

¹⁶ European Environment Agency, Report no 8/2017, Analysis of key trends and drivers in greenhouse gas emissions in the EU between 1990 and 2015, Luxembourg: Publications Office of the European Union, 2017, p. 7

¹⁷ *Ibid.*

¹⁸ *Ibid.*

EU provisions and shaping climate EU law

EU environmental law, including climate change law has been evolving during years. After adoption of the Maastricht Treaty, protection of environment has been established as the principle for European policy. Recently combating climate change has been explicitly mentioned as an objective of EU environmental policy in the article 191 of the Treaty of on the Functioning of the European Union (“TFEU”)¹⁹.

Also, as the EU promotes the concept of sustainable development, meaning finding a balance between environmental, social and economic interactions, fighting with climate change has broader legal grounds in EU primary law, i.e. art. 3 of the Treaty of the European Union (“TEU”²⁰) which mentions pursuing towards sustainable development as a main objective of the EU, art. 21 of TEU regarding the external action of the EU as well as art. 11 of TFEU expressing an integration principle. These principles are the legal commitment of the EU to aim at and develop sustainable development both within the borders of the EU as well as beyond its territory²¹.

Article 4 of TFEU on the other hand states that environment is a shared competency between the EU and Member States. This means that the EU can act on certain areas (in this case on environment) before Member States. Certainly the role of Member States is not to be underestimated – they are implementing EU law into national legal orders.

Next to legal bases the character and organization of an entity/authority needs to be taken into account, in order to assess its possibilities of acting. The EU is a construction based on politics. Finding a solution on political basis always requires looking for a balance of different interests, in other words for a compromise. In case of the EU it is even trickier as the compromise needs to be achieved by 28 Member States, which economies and societal needs and expectations differ from each other. When we talk about such a complex issue like tackling climate change, which requires serious adjustments in almost all economic and market sectors, the way of finding acceptable ideas which can subsequently form policies and be enforced in each of the EU Member State, might be a long and twisted one.

¹⁹ Consolidated version of the Treaty on the Functioning of the European Union, *OJ C 326*, 26.10.2012, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>.

²⁰ Consolidated version of the Treaty on European Union, *OJ C 326*, 26.10.2012, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012M%2FTXT>.

²¹ J. Delbeke, P. Vis (editors), *EU Climate Policy Explained*, *op.cit.*

How EU decides on adopting EU-binding climate change policies? According to the data of the Institute for European Environmental Policy the EU has an extensive set of environmental legal provisions including more than 500 directives, regulations and resolutions²².

The EU environmental policies are in general shaped according to the “ordinary legislative procedure”, which means that the main decisive actors are the Council (in the form of the Environment Council) and the European Parliament.²³ Until recently the European Council has not been much involved in direct shaping of environmental, including climate change policies, but this is also changing. The European Commission on the other hand can be called “the climate change policies’ coordinator” aiming at including environmental and climate change issues while regulating other policies regarding i.e. transport, agriculture, etc²⁴.

Also other actors are taking a voice in a discussion preceding adopting any EU climate related provision. It is variety of lobbying groups: representatives of NGOs, companies, enterprises etc. Taking into account voices and concerns of all interested groups active in multiple sectors: just to mention agriculture, transport, aviation, production, energy, requires making public consultations and starting discussions much earlier before the planned adaptation of a new legal instrument²⁵.

Recommendations on shaping EU climate policies

Shaping the best policies on paper will not be efficient at all if there will be no will and political power to implement them. Therefore, EU climate policies should be created a) in the course of dialogue of multiple stakeholders, b) in a flexible way, leaving a space for a change in case of emerging of new solutions or reviewing experiences, c) including global context and international negotiations; d) while keeping an eye on new solutions and innovative ideas; e) at the same time while pursuing a long-term vision²⁶.

As it was already mentioned policy, which might be beneficial for tackling climate change, but which is not preceded with public consultations and presenting technical and economical overview convincing enough for interested actors in backing this project up, is unlikely to be

²² The Institute for European Environmental Policy, data available at: <https://ieep.eu/>.

²³ Z. Wolska, *Polityka Unii Europejskiej wobec zmian klimatycznych*, Studia Europejskie 3/2010, p. 67.

²⁴ *Ibid.*

²⁵ Interview with Nils Moussu, The role of the business sector in climate negotiations, available at: <https://ec.europa.eu/research/social-sciences/index.cfm?pg=newspage&item=151126>.

²⁶ J. Delbeke, P. Vis (editors), *EU Climate Policy Explained*, *op.cit.*, p. 2 – 3.

successfully adopted.²⁷ This factor should be especially taken into account in the phase of preparation of climate related legal initiatives.

What can be observed is that the EU policy makers adapt the step-by-step strategy while shaping EU climate policy.²⁸ This means that instruments and directions used while enforcing the EU climate policy are changing depending of the new ideas and learning from past experiences, which is an advantageous strategy.²⁹ As an example attempts of introducing EU carbon-energy tax can be presented. They occurred unsuccessful – for multiple reasons, among them lack of acceptance of this solution by citizens as well as due to institutional obstacles (there is a requirement of unanimous voting of Member States in order to introduce tax functioning on the European level – there was no common political will to adapt such a solution).³⁰ The experience resulted in withdrawal from the idea while pursuing with different ones.

One of them is focusing on decarbonisation³¹. Many meaningful actions which result in reducing emissions in this scope have been implemented on the EU level. Certainly the mechanism which should be praised is putting a price on carbon, which subsequently is the subject of trading on the market.³² It is a solution which has been working successfully and found its place in the economy. The system has its flaws (market fluctuation) which should be aimed to be improved which only shows that the EU strategy focusing on flexibility of introduced and then changing policies has its advantages.

The EU involves in fighting with climate change not only on EU level but also in global scope – by taking an active voice on international agendas, engaging in initiatives aiming at setting global goals and achieving ambitious targets. One of the examples can be certainly the aim at keeping the global average surface temperature rise below 2⁰ C above pre-industrial levels.³³ The international policy of the EU on climate change will be a subject of more detailed description in next section.

The EU in its climate policies focuses also on innovations. Developing technologies based on renewable energy, low-carbon emissions and energy efficiency bring results in form of

²⁷ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, op.cit., p. 2 – 3.

²⁸ *Ibid.*

²⁹ *Ibid.*

³⁰ *Ibid.*

³¹ *Ibid.*

³² *Ibid.*

³³ *Ibid.*

reducing emissions as well as brings hope for even more efficient solutions and answers in the future.³⁴

While staying focused on innovations and new technologies which may occur beneficial for mitigating climate change, EU policy experts also recommend to regulate climate change policies as a long-term vision rather than focusing on short-term solutions.³⁵ The European Union aims to act in advance and with consideration towards consumers and actors present on the EU economic market – having published climate and energy policy framework for 2030, and prospects of the framework for 2050. This is a document stressing importance of decreasing the amount of carbon as well as increasing the amount of solutions resulting in more production of renewable energy and energy efficiency.³⁶

The aforementioned principles: flexibility, international overview, long-term prospects with a room for innovations seem to be a sound fundament of creating effective policies. However, the main issue is to make them implemented.

The EU internal climate change commitments

The EU sets itself ambitious and far-reaching climate-related goals. The EU 2030 climate & energy framework (“the framework”), set by the European Council in 2014, revised in 2018, reveals EU targets and objectives aiming at combating climate change for the period of 2021 – 2030.³⁷

Under the framework the EU focuses on three areas, in relation to the levels measured in 1990: a) 40 % of cutting the greenhouse emissions; b) 32 % of increase of overall share of renewable energy; c) 32,5 % of improvement in energy efficiency³⁸.

In order to achieve the aforementioned goals, the EU needs to take a collective and individual effort and turn forward low-carbon economy solutions.

For example, to cut the greenhouse emissions to the set level, the EU needs to stick to the commitments made under the Paris Agreement (which will be presented in the next section),

³⁴ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*, p. 2 – 3.

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ 2030 climate & energy framework, available at: https://ec.europa.eu/clima/policies/strategies/2030_en

³⁸ *Ibid.*

develop its EU emissions trading system (ETS) as well as influences the non-ETS sectors to cut their emissions.³⁹

In order to achieve any of the aforementioned targets the EU needs to constantly monitor the reached levels and, if necessary, react accordingly. The reply to this necessity is a governance system in the form of integrated monitoring and reporting rules which are supposed to help the EU in realizing the ambitions under the Paris Agreement⁴⁰. What is important to underline, the governance system includes the consultations with citizens and stakeholders, often determining efficiency of proposed solutions, as it was already underlined in the previous section.⁴¹

As the EU consists of separate Member States who shape their own climate policies as well as implement the EU proposals, each of the Member State is obliged to prepare its own National Climate and Energy Plans (“NECPs”). Member States were committed to present the draft proposals of NECPs until the end of 2018, with the aim at presenting their final versions at the end of 2019⁴².

In order to coordinate national plans and made them more in line of objectives set up in the Framework Member States were also obliged to prepare their own national long – term strategies by 1 January 2020. The aim of such a complex regulations, both on EU and Member State level is to guarantee consistency and efficiency of the planned measures and instruments⁴³. After all the EU functions as a one organization but in reality what testifies to its strength is an ability to coordinate and cooperate. In the case of ensuring achieving the goals set up in the framework, it is NECPs and national strategies which play a crucial role in supporting their realization.

International actions of the EU

The EU is also involved in multiple international actions on behalf of climate. On international arena, the EU can be called a leader in terms of developing international climate change policies. The internal and international policies regarding climate change are intertwined and shaped the EU actions in this area from 1990s⁴⁴. Such an approach of the EU – focus on international cooperation in terms of combating climate change, has solid ground. First of all it

³⁹ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*, p. 2 – 3.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ 2030 climate & energy framework, *op.cit.*

⁴⁴ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*, p. 94.

shows the EU's strive to push for multilateral reaction to climate change issue. As climate change does not know boundaries and affects whole planet, the efforts in order to fight with it, must be common. Even the most ambitious plans of the individual country or even the EU, will not bring the effective response, if the rest of the world will not join common effort. In this sense the politics of the EU and seeking joint discussion and goals, is justified one. Only collectively countries have a chance to set measurable goals and monitor and control each other in realizing them.⁴⁵

The history of creation and development of international climate change policies starts from adoption of the United Nations Framework Convention on Climate Change (“UNFCCC”) in 1992⁴⁶. 1997 is another important date marking adoption of so called Kyoto Protocol –legal package consisting of international commitments on combating climate change⁴⁷. The most recent agreement regarding international effort on combating climate change has been concluded in Paris in 2015 (so called “Paris Agreement”)⁴⁸. All the aforementioned steps, from adoption of UNFCCC, through Kyoto Protocol until Paris Agreement, forms one package, illustrating revision of made declarations, setting new plans and goals for the future⁴⁹.

The goal of the 1992 UNFCCC has been to make a universal effort and formulate an objective well grounded in a scientific research of reducing greenhouse gas emissions, in a form of a treaty⁵⁰. It takes form of annual gatherings (Conferences of the Parties – so called “COPs”) in which political representatives on the level of ministers as well as heads of state participate. What is a success of UNFCCC is that the parties of the framework took the commitment on collecting and reporting the levels of greenhouse gas emissions generating by their economies seriously and actually fulfill this commitment.⁵¹

Under the agenda of UNFCCC different mechanisms are being checked in terms of mitigating climate change as well as financial support is being provided to developing countries.

⁴⁵ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*, p. 2 – 3.

⁴⁶ What is the United Nations Framework Convention on Climate Change?, available at: <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>.

⁴⁷ *Ibid.*

⁴⁸ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*, p. 94.

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

The process of negotiating a new effective international climate deal has been a long one. There were attempts of negotiating a new agreement on the Climate Summit in Copenhagen in 2009, which led to concluding only informal commitments. It was a first time however when the countries such as China, India, Brazil or South Africa made their own commitments regarding improving situation on domestic level⁵².

Since then new challenges emerged. Recently it is China which is the biggest emitter of greenhouse gas emissions, replacing the United States. Also India increases substantially its contribution to the overall amount of greenhouse gas emissions, being at high place in the global ranking⁵³. This change in the world-wide contribution to the amount of greenhouse gas emissions needs to be taken into account while negotiating future international climate agreements. At the same time the overall situations of the economies is also a factor which should not be neglected during international negotiations.

Such an international climate deal should be ambitious and inclusive when at the same time fair and sound. It might seem to be a recipe for success in terms of negotiating the effective international agreement which will help the entire world to fight the global threat which is climate change. Unfortunately, the reality of negotiating a successful and effective climate change deal, which would ensure from scientific point of view reduction of global greenhouse gas emissions to the safe level, has still not been reached⁵⁴. It is like this as international politics is even more complex than the EU one. Different countries being at different level of economic development, set priorities and political directions which might be far from ideal scenario. Views of political representatives who are currently holding a power also shape the decisions on climate change combating, which might have far-reaching consequences.

For example Donald Trump, president of the United States, one of the countries generating vast amount of greenhouse gas emissions, has announced in 2017 the withdrawal of the United States from the Paris Agreement. Mr Trump states that “The Paris accord will undermine (the US) economy” and “puts (the US) at a permanent disadvantage”⁵⁵. The declaration on withdrawal of the United States from the most important international deal regarding

⁵² J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*, p. 94.

⁵³ Data available at: <http://worldpopulationreview.com/countries/co2-emissions-by-country/>.

⁵⁴ J. Delbeke, P. Vis (editors), EU Climate Policy Explained, *op.cit.*, p. 94.

⁵⁵ B. Chakraborty, June 2017, "Paris Agreement on climate change: US withdraws as Trump calls it 'unfair' Fox News.

combating climate change has been confirmed by Mr Trump himself recently at an energy conference in Pittsburgh⁵⁶.

Another example is Jair Bolsonaro's attitude, who also publicly doubts about causes of climate change. The President of Brazil puts in question scientific findings on deforestation in Amazon forest, calling scientific outcomes as lies⁵⁷. Such an approach does not bode finding "ambitious, inclusive or fair" agreement on climate change soon.

On the other hand abandoning any attempts of negotiations and reaching political commitments over climate change would be admitting to failure. This is why the role of the EU in international discussion over climate change is much needed. The EU, by making alliances and trying to convince some parties to taking more decisive steps, might be seen as a leading actor in the climate change world-wide debate.

While being aware of ideal visions of international climate agreement as well as recent political obstacles regarding reaching wide consensus on tackling climate change, it is important to mention the most recent international agreement on climate change – so called "the Paris Agreement". The Paris Agreement is a huge global political project engaging and joining 195 countries in combating climate change. Adopted in December 2015, the Paris Agreement can be called a first universal global climate deal, which has legal grounds⁵⁸. In order to enter into force, at least 55 % of countries which generate at least 55 % of global greenhouse gas emissions had to deposit their ratification instruments. This condition has been already met and the Paris Agreement entered into force on 4 November 2016⁵⁹. The EU has been the first entity to satisfy this condition by submitting its contribution already in March 2015⁶⁰.

⁵⁶ Mr Trump confirmed that in his opinion the Paris Agreement is not beneficial for the United States as the pro fossil policies made the US energy independent and powerful. Mr Trump announced that the US's withdrawal from the Paris Agreement might formally start at the beginning of November – R. Harrabin, Paris Agreement: Trump confirms US will leave climate accord, source available at: <https://www.bbc.com/news/world-us-canada-50165596>.

⁵⁷ In the course of the dispute between Mr Ricardo Galvão, a director of a Brazilian government agency monitoring the state of Amazon and Mr Jair Bolsonaro, the President of Brazil over the data regarding Amazon, Mr Galvão has been dismissed from the position – T. McCoy, available at: https://www.washingtonpost.com/world/the_americas/the-amazon-monitor-who-was-fired-by-bolsonaro-speaks-out-on-deforestation/2019/08/06/f436af92-b844-11e9-bad6-609f75bfd97f_story.html.

⁵⁸ https://ec.europa.eu/clima/policies/international/negotiations/paris_en

⁵⁹ What is the Paris Agreement?, available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>.

⁶⁰ *Ibid.*

The Paris Agreement aims at being an interim solution between what can be achieved today taking into account political, economical, social and legislative differences, and ideal scenario in which the impact of humans on climate is neutral.

The Paris Agreement sets four main goals: a) keeping the increase in average temperature around the globe below 2°C in comparison to pre – industrial levels; b) aiming at limiting the increase of temperature to $1,5^{\circ}\text{C}$ as this would make a safe net for impacting of climate change; c) realizing that there is need for global greenhouse gas emissions to reach their peak as soon as possible, taking into account that for developing countries it might take more time; d) being aware of necessity of swift action aiming at rapid reduction of global greenhouse gas emissions, based on the scientific research and expert knowledge.⁶¹

In order to make enforcing aforementioned goals real, the individual countries presented during the Paris conference the comprehensive national climate action plans (so called “INDCs”)⁶².

Under the Paris Agreement its parties agreed on several main principles which constitute as a whole the global plan for combating climate change. According to this plan the countries will focus on the following main areas of action: a) reporting and monitoring – governments agreed to participate in the meetings of the parties of the Paris Agreement, held each 5 years, in order to discuss and set new targets based on the newest scientific research. Also the countries agreed to share the results of implementing already set targets and spread this knowledge to the public. The parties agreed that all activities under the provisions of the Agreement should be monitored under the principles of transparency and accountability, b) cooperation and adaptation – governments decided to support the societies’ ability to face the impact of climate change as well as developing countries in their path to combating climate change, c) mitigation measures – the parties of the Agreement underline the importance of introducing the international system aiming at world – wide cooperation in implementing measures such as early warning systems, emergency readiness or risk insurance in the event of loss and damage caused by climate change. Also the importance of averting and minimizing actual loss and damage has been pointed out, d) involvement - the parties of the Agreement noticed the necessity of involving different actors than political powers in the fight against climate change. The actions of societies, cities, private companies or entrepreneurs, other authorities also have an impact on climate change and at the same time a potential to fight with it. It can be done in a

⁶¹ Paris agreement, available at: https://ec.europa.eu/clima/policies/international/negotiations/paris_en

⁶² *Ibid.*

most effective way by cooperating with both national authorities but also with each other. Under the Paris Agreement non – governmental actors have been invited to join the efforts in reducing greenhouse gas emissions, taking up promotional actions both on regional and international level or gather the means and prepare the solutions enabling them to face climate change damages⁶³.

Under the Paris Agreement the division on development countries (including the European Union) and developing countries is noticeable. The developed countries took additional commitment in supporting developing countries in their fight against climate change. Furthermore, developed countries set a collective goal to gather 100 billion USD each year starting from 2020 until 2025. After this date a new goal is going to be set.⁶⁴

The efficiency of the Paris Agreement is yet to be proved. However, the aim at making climate change a topic of international discussion and engagement is vital. Only unified effort can bring measurable results and global actors, including the European Union, should take an effort at leading it and bringing the intended results.

MAKING A CHANGE ON EU, NATIONAL, LOCAL AND INDIVIDUAL LEVEL

As it was presented in the previous chapter regulating and implementing climate change law is a complex issue. Sometimes it is technically difficult, sometimes it interferes with the interests of stakeholders/other groups, sometimes the obstacles in effective introducing the change are multiple.

Nevertheless, the complexity of making a change should not stop us from trying. Despite the interests of the companies and politicians, the interest of some other group should prevail – citizens, people who live on this planet and who should have a knowledge on importance of combating climate change and possible actions which can be taken in this matter. After all it is citizens who choose political powers on the basis of their vision of the world. The vision of healthy, unpolluted world should appeal to all of us.

This section includes the proposals aiming at rising the effectiveness of fighting with climate change based on research as well as on discussions with my peers and interviews with Polish entrepreneurs whose daily experience involves implementing already existing legal provisions regarding environment and climate. Some of presented proposals (if not all of them) have been

⁶³ Paris agreement, available at: https://ec.europa.eu/clima/policies/international/negotiations/paris_en

⁶⁴ *Ibid.*

already formulated, some of them were already presented in more detail and depth. Nevertheless my aim is to signalize potential directions of the change which in my opinion would make our actions (both citizens and politicians) more effective.

RAISING THE CONSCIOUSNESS

Climate change should not be treated as a myth or a scary bed-time story. Knowledge on its sources, its influence on the planet as well as on human impact on its severity and rapidity should be popularized. It can be done by educational programs, specialized applications, public campaigns and initiatives as well as administrative cooperation and support.

Education

The discussion in media on climate change is hot. Every single day while reading news or listening to the radio or watching tv, one can be informed on necessity of taking a swift action in order to tackle climate change. At the same time, now and then I have a discussion with someone among my colleagues or friends who expresses doubts about causes of climate change and its severity. How to cope with this double narrative? Why there are still individuals who are not convinced about human impact on climate change?

There is also another factor which should be made in this point. People who are aware of consequences and causes of climate change do not always know what can be done about this (including me). Article in the internet or TV news rarely focus on specific actions which can be introduced, limiting itself to alarming tone. Certainly, more discussion of this topic in media brought more people to look for more in-depth answers on their own. However, what we need to underline, is that looking for reliable answers takes time and not always lead to the most effective searches.

There are vast opportunities which can be enhanced on regulatory level which would lead to raising the consciousness on climate change and the ways of fighting with this.

One of them is introducing into education programs classes regarding environment and climate change from the very beginning (starting from kindergartens). Each child should have an opportunity to participate in the regular classes committed exclusively to protection of environment and tackling climate change. As this topic is already present in the scholarly

agenda⁶⁵, it would be recommended to include it in the obligatory curriculum in all Member States of the European Union on regular basis.

One needs to take a notice that each Member State keeps its own education system nevertheless there are the options of promoting the idea of including more climate related topic in school agenda around the EU. The exemplary program could be prepared and advertised on the EU level with the financial supporting from the European Commission.

Also focus on environmental and climate change education could be made while enforcing the EU-wide educational programs such as Erasmus +. Including special scholarships or courses related to the topic, offered to Europeans might raise awareness and commitment to act among young citizens.

Online tools as a source of knowledge

As recently people live in digital era, the use of online tools and technologies should be taken into account while introducing educational content on climate change fight.

People, in order to check some facts, often refer to internet. They expect to find information presented in the clear and simple way, which is often offered in the form of online application. Creating such an online application, available among whole EU, helping checking topic-related facts, might occur effective in answering questions and improving knowledge on climate change among EU citizens. Such a tool should have a functionality enabling individuals to ask questions and raise discussions. Sharing views on tackling climate change would certainly lead to exchange of ideas which could occur brilliant on local or community level.

Certainly creation of such an application with the online platform to share views by Europeans would require substantial financial supporting and EU-wide advertising. Raising awareness seems however a better preventive method than looking for remediation solutions.

Information campaigns

There is also a potential in carrying out the EU-wide and national campaigns presenting basic information on causes of climate change.

⁶⁵ Unfortunately the topic of climate change is still not present enough in Polish schools. Classes regarding climate change are included in the curriculum of high school students, whereas at the earlier education levels, the topic is not present: - zmiana klimatu “wypadła” z program nauczania, available at: <https://ziemianarozdrozu.pl/artykul/4029/zmiana-klimatu-%E2%80%9EWypadla%E2%80%9D-z-programu-nauczania>.

Recently in Poland the campaign regarding waste management kicked off, which explains clearly waste sorting system. Similar information should be spread out regarding i.e. catastrophic effects of burning plastic or tires in the households for heating purposes as well as other sources of climate change.

Also, as an example, there is still a huge public resentment regarding incineration plant placement. Educational campaigns regarding this matter should also take place.

People should be aware what is their climate footprint and how by making everyday choices they can decrease it (e.g. what it will change to take a train rather than a car). Thanks to raising consciousness, thoughts regarding impact on climate change will be present in everyday decision making, and as a consequence, can lead to taking aware and pro-climate actions.

Controls

Recently in Poland the deterioration of air quality can be already noticed due to temperature decreasing and heating of the households.

There are several reasons why such a direct effect regarding starting of heating season can be noticed.

As it was already mentioned there is still a knowledge deficiency what can be burned in the individuals' households and what are the effects of burning forbidden materials, among them plastic⁶⁶.

Also lack of provision of effective and deterrent control is evident. The controllers are purely paid and not sufficiently trained in order to conduct successful controls, both in households and companies. Whole procedure of controls in the companies – e.g. low fines result in their inefficiency.

The control system, at least in Poland, needs a solid restructuring in order to boost its efficiency. Controls should be more frequent, conducted by well trained civil servants who are entitled to pose effective and deterrent sanctions, preceded by a warning notice. The controllers should be able to provide the individuals and entrepreneurs with comprehensive information⁶⁷.

⁶⁶ Zrównoważone Miasta. Poprawa jakości powietrza w Polsce 2018, available at: <https://ungc.org.pl/wp-content/uploads/2018/12>

⁶⁷ D. Lesner, Kontrole Inspekcji Ochrony Środowiska mają być skuteczniejsze, available at: <https://www.prawo.pl/biznes/inspekcja-ochrony-srodowiska-z-wiekszymi-uprawnieniami,351126.html>.

More detailed idea regarding cooperation between the administration and the companies is presented in further section.

Public support

Another factor which can be improved in order to fight with this specific climate change cause is combating its source – the fact that in Poland still many households have no environmentally friendly heating system. It can be done by financing or co-financing the replacement of the heating system as well as supporting whole range of financial incentives, including tax reliefs or low interest loans.

Examples deriving from different regulations

In past two years there was much discussion and heated debate on entering into force of General Regulation on Data Protection (“GDPR⁶⁸”) in the EU. Being aware how different the topics of data protection and climate change are, there are a few solutions which were used in GDPR which might be useful to discuss on the ground of combating climate change.

First of all, for clarity and transparency reasons, it would be recommended to consider creating a key EU document in the form of directly binding resolution which subject would be climate change. Such a legislative procedure helps to identify core legal provisions and may be a first reference document on the subject. Large amount of EU citizens have heard about GDPR whereas identifying any legal EU document on climate change could prove to be tricky. Certainly such a state of facts (implementing climate change law more in a form of directive rather than directly binding resolution) comes from necessity of providing flexibility of enforcing specific provisions on national ground. Nevertheless creating such a “base” document seems to be recommended.

GDPR expresses the principles of privacy by design and privacy by default. Under these principles privacy solutions should be automatically included in the device, technology or a type of processing, without obligations of data subjects of taking any position regarding their

⁶⁸ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance), *OJ L 119*, 4.5.2016, available at: <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

activation⁶⁹. The same approach should be applied in the projects or actions influencing climate change.

Such an attitude can be already observed. What is important and stressed by the regulatory experts is “ingraining” climate-friendly solutions while regulating other policies, affecting the climate, i.e. industry, energy, transport or development. Climate change should not be tackled as a separate issue, isolated from the reality which *nota bene* affects climate change. Such an alienating attitude would lead to rather combating climate change effects rather than preventing it on the level of solutions adopted in sectors implying its existence, scope and rapidity.⁷⁰

At the same time climate change solutions should be created with care to keep their flexibility and technological neutrality. As technology development can be observed constantly, keeping the open gate for changes would be highly recommended.

Finally, what could be inspiring on the basis of GDPR and implemented on the ground of climate change solutions is a creation of the position of climate change officer (created on the example of data protection officer) in the organizational structures of chosen companies or entrepreneurs. Such a person would be responsible i.e. for having a sound knowledge on existing climate change regulations and for auditing her employment unit in terms of applying them. What could be new in such a solution and beneficial for companies and other commercial stakeholders, would be a creation of dedicated representative on behalf of community administration, which would be designated to keep the contact with the companies’ climate change officers.

Such a solution would enable companies to keep track on changing legislation, receive first-hand recommendations on possible actions and instructions on what can be changed/improved in the functioning and organization in terms of climate change.

With a moment of registering the climate change officer, the company would receive an information with whom on behalf of the administration she can contact in case of any questions or doubts. That would substantially help the organizations in the thicket of legal provisions whereas would enable the administration representatives to monitor the companies more closely and effectively.

Introducing such a solution would be connected to substantial costs both for companies and for administration. However, it seems that strengthening the communication between industry and

⁶⁹ Regulation (EU) 2016/679, *op. cit.*

⁷⁰ J. Delbeke, P. Vis (editors), *EU Climate Policy Explained*, *op.cit.*, p. 94.

public sector would allow to limit ambiguities related to the climate and environmental obligations and aware or non-aware actions against these provisions.

Promoting of climate friendly initiatives

Organizing periodical or thematic initiatives aiming at promoting of climate friendly actions among individuals all around the EU seems to be recommended in order to awareness raising.

For example setting a day without flying which could be promoted among the EU countries might be an example of such an event. Such initiatives might rise the reflection among individuals on their actions and choosing more “pro-climate” solutions.

Another idea regards organizing an EU-wide competition on the most “pro-climate” initiative realized by an individual or a community in the EU. Presenting the initiatives as a part of such a competition would be an occasion to compare adopted ideas all around the EU and enhance individuals or communities to be more pro-active in terms of combating climate change.

Furthermore, the important factor of such initiatives would be strengthening the sense of commitment towards taking care of climate and environment. The more individuals would be aware of possible steps they can take the more people would be willing to be engaged and actually do what they can to avoid making harmful impact on climate change.

Such EU-wide initiatives could also make individuals realize how many collective actions on the level of community can be taken on behalf of tackling climate change.

RAISING COMMITMENT

It is impossible to stay indifferent, if somebody is aware of a certain threat. Climate change certainly poses a danger to life on the planet which we know. Therefore, engagement of individuals on many levels in a common fight with climate change should also be encouraged as a potential way with tackling this phenomenon.

Make your community green again

Living in the city, town or village brings a lot of chances to make a collective effort to influence the environment and climate in a beneficial way. For example the residents can analyze the advantages of installing photovoltaics on the roofs of residential buildings or make space for a collective garden on the roof or in the courtyard.

Furthermore, space management should be taken into account while looking for climate tackling solutions. Making cities greener is one side of the coin. What should be also underline,

is the importance of designing spatial solutions including leaving air corridors between the buildings. What can be noticed in many Polish cities is special planning focused on density of buildings without much consideration for air corridors. Such an architecture can lead to not sufficient air flows, and as a consequence bad quality of air in the cities.

Another idea which can be adopted by the cities is a creation of the system allowing using rainwater by its accumulation, storing, filtering and reusing. That would prevent a huge water waste and will allow cities to use collected water for their own needs⁷¹.

Transport

Transport also makes a huge impact on climate change. Moreover, it is the sector in which generating of greenhouse gas emissions is constantly growing since 1990⁷².

It is a car transport which has the biggest share in making pollution⁷³. At the same time it is the only mean of transport which in real prices has been cheaper than others (like trains or buses) for the end consumers⁷⁴. This, among other factors, might be a cause of choosing cars as a mean of transport so willingly – cars were chosen for over 80 % of passengers' journeys in 2015⁷⁵.

The instrument already used in regulating the individuals' choice of means of transport, is fiscal policy, taking a form of i.e. taxation on ownership of the mean of transport or taxation on

⁷¹ An idea of turning cities into sponges has been adopted by a few chosen Chinese cities taking part in a pilot program which aim is to combat climate change effects. Because of rapid urbanization residents of cities are going to face more and more frequently consequences of climate change: bad air quality or shortages in water. The creators of this initiative also underline the important potential effect of making cities greener and more sustainable: reducing the impact of heat waves. This could be done as green plants absorb the water which is afterwards released and made a cooling effect. As cities are getting hotter, such an effect is not be underestimated. There are also even more ambitious initiatives already in the phase of planning – the idea of creation a “forest city” has been formulated. The aim is to cover the space of the city almost entirely with plants and trees. Any initiatives which aim at making a positive change and reverse the effects of climate change are worth to be considered – **A. Zweynert, Sponges, urban forests and air corridors: how nature can cool cities**, available at: <https://www.reuters.com/article/us-heatwave-cities-nature/sponges-urban-forests-and-air-corridors-how-nature-can-cool-cities-idUSKCN1C100Q>.

⁷² Eurostat, Climate change - driving forces, Eurostat Statistics explained, https://ec.europa.eu/eurostat/statistics-explained/index.php/Climate_change_-_driving_forces

⁷³ European Parliament, CO₂ standards for new cars and vans, Briefing on EU legislation in progress, <https://l.samho.nl/co2-standards>

⁷⁴ European Environment Agency (EEA), Real change in transport prices by mode, EEA website, <https://l.samho.nl/real-price-change>

⁷⁵ Eurostat, Passenger transport statistics, modal split, Statistics explained, <https://l.samho.nl/modal-split>

fuel (for example cars) or measuring of charging emissions (as it is in the case of plane transport which is taking a part in the EU emissions trading scheme)⁷⁶. There are plans to make the latter part of international scheme under auspices of the International Civil Aviation Organization (“ICAO”) in 2021⁷⁷.

As these regulations proved successful and should be continued and developed, there are additional initiatives which can influence the transport choices of the EU citizens, and as a consequence reduce the impact of this sector on climate change. It seems that a focus should be on promoting alternative meanings of transport by introducing the system of financial reliefs or subsidizing on public transport and electric cars.

In case of cities local authorities play particularly important role. Organizing efficient public transport and affordable prices’ system can certainly contribute to reduction of overall use of cars while everyday commuting. In their financing system local city authorities should also allocate funds for investing in environmentally friendly solutions such as electric buses.

Individuals in the cities should have an opportunity to commute on daily basis by a public transport or bikes. Investing in public connection grid and friendly system of bike paths should be a priority to local authorities.

Also organization of system of financial reliefs for certain groups of passengers (e.g. school children, pensioners) could encourage these groups to choose public transport. While organizing a public transport it should be aimed to adjust it to the needs of vulnerable groups, e.g. for individuals with disabilities.

Organization of periodical actions aiming at enhancing use of public transport or bike is also important. Introducing events like free transport for car drivers or days without car traffic in certain areas of cities might encourage individuals to permanent change and choosing more climate-friendly alternative.

Some cities like London, Stockholm or Milan also introduced a system of so called congestion car zones – areas where the extra fee is charged to be able to drive with a car⁷⁸. The system on example of London has proved to be successful – it reduced congestion by 30 % during first three years after implementation.

⁷⁶ Academic preparation KIT, Topic Overviews, European Youth Parliament, Rotterdam 2018, p. 26-30.

⁷⁷ *Ibid*, p. 27.

⁷⁸ *Ibid*.

In suburban and rural areas the field for finding alternative solutions to a private car seems much more limited than in cities. Looking for incentives of introducing an idea of car sharing seems to be worth exploring. As searching for innovative methods of redirecting from a car use for the sake of alternative meaning of transport, the focus should be also made on investing in electric and low-emitting cars.

Just as an example, according to the data from 2017, in Poland there was around 38,5 million of people⁷⁹, whereas 21,7 million of private cars have been registered. It makes 564 cars for each one thousand of residents⁸⁰. The constantly increasing amount of private cars is one side of the coin. What is equally alarming is the technical state of these cars. Around 5 million cars in Poland is 16-20 years old, which turns them into even more serious polluting threat⁸¹.

The most popular fuel used for cars in Poland are: petrol, diesel and gas. The share of electric or other alternative cars is still relatively low⁸². The most probable causes of such a state of facts are: 1) still relatively innovative character of this type of cars; b) price; d) lack of sufficient financial incentives to make such a purchase; c) common conviction on underdeveloped grid of recharging points for alternative cars⁸³. Finding a way to overcome obstacles regarding choosing electric cars is important in order to make a prognosis included in the Strategy for Sustainable Development of Transport until 2030 real – according to this Polish official document⁸⁴ it is estimated that in Poland until 2030 fleet of electric and hybrid cars might amount to six hundred thousand cars.

⁷⁹ Główny Urząd Statystyczny, <https://stat.gov.pl/obszary-tematyczne/ludnosc/>

⁸⁰ Sz. Pifczyk, stan polskiej motoryzacji, czyli dużo starych samochodów, source available at: <http://biqdata.wyborcza.pl/biqdata/7.159116.22775299.stan-polskiej-motoryzacji-duzo-starych-samochodow.html>

⁸¹ *Ibid.*

⁸² According to the data from the end of May 2019 there were 3695 electric cars registered on Polish car plates – source available at: <https://greenwaypolska.pl/blog-section/ile-wynosi-liczba-samochodow-elektrycznych-w-polsce/>.

⁸³ Contrary to popular opinion the amount of recharging points which can be used by electric cars is constantly growing. It is due to an activity of new investments which projects provide for such points – M. Skłodkowska, Szybkie stacje ładowania samochodów elektrycznych w Polsce pączkują. Gorzej z resztą, 3.10.2019, available at: <https://wysokienapiecie.pl/22902-szybkie-stacje-ladowania-samochodow-elektrycznych-w-polsce-paczkuja-gorzej-z-reszta/>.

⁸⁴ Poland has adopted a document which is called Strategy for Sustainable Development of Transport until 2030, presenting prognoses and ideas on directing the country towards more sustainability in the sector of transport⁸⁴. It is a very detailed document including data on the means of transport used in Poland and plans for their development in the future – Strategia Zrównoważonego Rozwoju Transportu

The same challenges regarding increase of use of alternative powered cars are recognized all over Europe⁸⁵. It seems that introducing financial incentives for customers is the key factor which needs to be developed in order to increase the amount of alternative powered cars in overall amount of road vehicles.

Another vast emitting transport sector is flying. Undeniable advantages of taking a plane is save in time and cost of choosing this mean of transport. Flying made individuals more mobile and made travelling more popular for tourist or professional purposes. On the other hand greenhouse gas emissions connected to aviation sector amount to around 2 % of global quantity of these gases. It is estimated that the current state of facts will increase to 200 % - 360 % by 2050⁸⁶. Moreover flying influences atmosphere not only by emitting greenhouse gases but also other harmful substances such as aerosols or nitrogen oxides. The exact estimation of impact of these other emissions on climate change seems to be difficult, but undeniably aviation influences atmosphere not only through greenhouse gas emissions. Additionally planes contribute to formation of so called cirrus clouds which are believed to also affect climate⁸⁷.

Development of railway seems to be an effective alternative for flying, at least on short – distanced journeys, for example in the EU. To give individuals a real choice between the railway and flying, the railway offer would need to be attractive in terms of time, connections and price. In order to make railway an often chosen mean of transport both for national as well as for international routes, the cooperation between the EU and neighboring countries seems to be essential⁸⁸.

Supporting of renewable energy

The EU supports investments in renewable energy by adopting the system of financial subsidies and promoting this kind of initiatives⁸⁹. In general the programs base on combination

do 2030 roku, available at: <https://www.gov.pl/web/infrastruktura/projekt-strategii-zrownowazonego-rozwoju-transportu-do-2030-roku2>.

⁸⁵ Information gathered by European Automobile Manufacturers Association, available at: <https://www.acea.be/news/latest-updates>.

⁸⁶ J. Timperley, Explainer: the challenge of tackling aviation's non-CO2 emissions, 15.03.2017, available at: <https://www.carbonbrief.org/explainer-challenge-tackling-aviations-non-co2-emissions>

⁸⁷ *Ibid.*

⁸⁸ Academic preparation KIT, Topic Overviews, *op.cit.* p. 28.

⁸⁹ Several EU initiatives, i.e.: <https://ec.europa.eu/easme/en/section/horizon-2020-energy-efficiency/finance-and-services-sustainable-energy>.

of private and EU funding, aiming at incentivizing private stakeholders to participate in energy efficiency investment markets.

Looking for flexible and most efficient way of making a financial aid to private market and at the same time providing the ultimate efficiency in actions taken up by the private stakeholders in the sector of renewable energy, is recommended. What needs to be however insured to entrepreneurs investing in renewable energy system is some certainty of law⁹⁰.

New technologies and discoveries

Financing of research on climate change is an important part of the EU climate policies. It is crucial to allocate sufficient amount of funds on scientific examining of potential ways of fighting with climate change.

Every day can bring a break – through discovery which might substantially help with combating climate change. As an example the latest discoveries can be presented.

Recently the scientists found out that offshore windfarms might be the source of electricity which can sustain the whole world energy demand. International Energy Agency (“IEA”) states that building of windfarms in around 60 km off the coast, where the water is no deeper than 60 meters, can lead to generation of 36,000 terawatt hours of renewable electricity a year. The predictions are promising as a global demand for electricity is 23,000 terawatt hours a year⁹¹. This is potentially a break-through discovery as recently the energy provided from the windfarms constitutes only 0.3 % of global power generation. There is thus a vast potential for development of this source of energy. Use of turbines would be undeniably advantageous not only because of its vast potential in energy production but also because of quality of such energy. Development on research in this area could lead to getting closer to the ambition of zero-sum emissions in the future.

⁹⁰ In Poland lack of proper implementation of the EU Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009, on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, has been signalized – source available at: diagnoza stanu przedsiębiorstw sektora odnawialnych źródeł energii (OZE) I instytucji wspierających rozwój sektora OZE mających siedzibę na terenie województw pomorskiego I kujawsko – pomorskiego, Kwidzyński Park Przemysłowo - Technologiczny Sp. z o.o., Górkki 2012.

⁹¹ Academic preparation KIT, Topic Overviews, *op.cit.* p. 28.

What is more, according to IEA turbines producing clean electricity could also contribute to generating hydrogen, which can be used as a replacement to fossil fuel gas in heating and industrial sectors⁹².

Another interesting recent discovery reported by a scientific world is the fact that the rivers in Arctic pull carbon dioxide from the atmosphere more efficiently than Amazon forest⁹³.

According to scientists who published their discovery in the Proceedings of the National Academy of Sciences, the approach towards rivers in terms of carbon emissions should be completely reviewed. Characteristics of glacial rivers made them not very hospitable habitat for plants and fish which results in small greenhouse gas emissions. What is important the reverse phenomenon can be observed. The materials in the glacial rivers, including silicate and carbonate, in the process of mixing in the running water, creates a unique process – chemical weathering. As the result of this mixing the carbon dioxide is pushed down, and as a consequence removed from the atmosphere.

STRENGTHENING CO-DECIDING

It goes without saying that political decisions are made by people's representatives on each political level, i.e. also in the European Union. However, next to the political decisions made in the process of legislative procedures, there should be a place for an active voice and contribution of citizens themselves. Such a voice should be also granted in terms of fighting with climate change.

Certainly main course of making decisions would be limited to the EU institutions taking part in ordinary legislative procedures, so the European Commission, the Council and the European Parliament. However, finding a way of direct involvement of the EU citizens in the discussion and decision making on climate change might have multiple advantages.

First of all it may strengthen individuals' consciousness on climate change affairs as well as the feeling of commitment and responsibility to combat it. Involvement in not only election of

⁹² J. Ambrose, Offshore windfarms can provide more electricity than the world needs, source available at: <https://www.theguardian.com/environment/2019/oct/24/offshore-windfarms-can-provide-more-electricity-than-the-world-needs> .

⁹³ L. Cecco, glacial rivers absorb carbon faster than rainforests, scientists find, source available at: <https://www.theguardian.com/environment/2019/oct/25/scientists-glacial-rivers-absorb-carbon-faster-rainforests>.

political representatives but also a possibility of being representative himself/herself increases the feeling of engagement in the particular case.

It could be done by organizing an EU – wide discussion forum preceding legislative proposals on climate change. At such a forum individuals, communes, cities or assemblies would have an opportunity to raise their voice, propose some specific solution or different wording of the proposal.

This idea is already realized in the process of seeking public consultations preceding the EU legislative proposals⁹⁴. What could be additionally done is promoting the whole concept and encourage citizens to take part in it.

Another aspect of strengthening co-deciding process at the EU level could be a formation of advisory body on climate change proposals, consisting of scientists, experts as well as representatives of youth in the EU. Young people are concerned about climate change and this concern is not going to disappear without its addressing. Giving young people a real possibility of participation in a decision-making process could motivate them even more to look for the answers and propose the solutions.

CONCLUSIONS

Basing on my personal experience, I can state without hesitation that for people in my surrounding, especially the ones who have children, the most treasured value is family. Children's well-being seems to be the main concern of a lot of my friends and colleagues. Struggle to provide kids with proper education, financial support, cultural or sport attractions is constant and requires a lot of effort.

Hardly anybody would question the necessity to aim at giving children the best and the most to enable them a good start in life.

Having said above and putting this into perspective of climate change's affecting our planet, we should all be ready to take responsibility for our actions. After all it is future generations who are going to cope with severe consequences of climate change.

If we care for other humans, will to fight with climate change should be a natural reaction. This will should be strengthen by a fact that we are in possession of instruments to mitigate its

⁹⁴ Description of citizens' involvement in European policymaking, available at: https://europa.eu/european-union/law/have-your-say_en

effects, to stop its rapidity and prevent realization of the worst scenarios which are described in media.

In order to make effective actions, we need to make a common effort. Climate change can be called a very “democratic” threat as it affects all of us, irrespectively of where we live, what is our social position or status. Actions on multiple levels are thus needed, as potential in individual, local, national, EU and international cooperation is present.

Fighting with climate change is in our hands, from making everyday decisions to choosing political representatives and personal engagement in pro-climate initiatives. What is needed to make it in the most efficient way is raising consciousness on the topic. What triggers any action, is knowledge based on facts and discussion. Individuals are more willing to do something or support some action, when they see a reason behind it. When they are aware that this particular step can bring a specific improvement. In order to fight with climate change, it should become to us a well realized but combatable threat, not a distant looming apocalypse vision without much perspectives for facing it.

Commitment is born on the basis of consciousness. We make an effort for things we care for. What is necessary to make a fight for climate more efficient, is to create and strengthen already existing feeling of engagement, responsibility for it.

Finally we need to have a feeling of empowerment. Social-political dialogue on this topic should be constantly vivid. As citizens, also of EU, we have a right to choose our political representatives and we can demand that climate change should be constantly present on political agenda while effective actions on national, EU and international level are being taken. Therefore, strengthening the three Cs should be the aim if we want to combat climate change. After all fighting with climate change is everybody’s business.

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