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Legal and Economic Instruments of Response to Climate Change Emergency

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Abstract: **Legal and Economic Instruments of Response to Climate Change Emergency**
Climate change is one of the most important challenges of contemporary world. It is due to the fact, that dangers connected with climate change puts upon the question of the fundaments of our socio-economic and socio-environmental systems. Legal response to this danger evolved from top-down mechanisms to bottom-up approaches reflected by the Nationally Determined Contributions. Climate change can be treated as an emergency issue. This is due to it's dynamics, the importance of risks connected with climate change and the fact that at least some of those dangers can be avoided thanks to the determination and important changes in socio-economic relations, which can be introduced by laws of emergencies. There are however doubts as to the purposefulness of using laws of emergencies in order to deal with climate change issues. Interesting and more efficient alternative seem to be the use of various financial and economic instruments which can result in lowering the social costs of introduction of changes induced by the process of climate change mitigation and adaptation.

Keywords: Climate Law, Law of Emergencies, Climate Emergency, Economic Instruments, Climate Change.

1. Evolution of climate change legal regime

Climate change may well be the most complex environment-related problem for international co-operation of this century. The UN climate negotiation process has proved to be one of the most challenging in the history of Multilateral Environmental Agreements (MEAs). General climate issues were addressed at a series of scientific conferences in the 1970s and early 1980s. In the early 1990s the United Nations Environmental Program (UNEP) and the World

Meteorological Organization (WMO) jointly established an independent scientific body called the Intergovernmental Panel on Climate Change (IPCC). In 1988, the UN General Assembly (resolution 43/53 0f 6 December 1988) recognized that "climate change" is a common concern of mankind which required urgent action by all States[1]. In its resolution 45/212 of 21 December 1990, the UN General Assembly decided to establish an intergovernmental negotiating process for the preparation by an Intergovernmental Negotiating Committee of "an effective framework convention on climate change, containing appropriate commitments, and any related instruments as might be agreed upon".

However, long after scientific conferences on climate change and UN General Assembly resolution, the UN Framework Convention on Climate Change (the Convention)[2] was finalized on 9 May 1992. The architecture of the contemporary climate regime is far much more complex. Also, the results of the IPCC assessment reports give wealth of scientific knowledge. They were followed with development of new legal instruments which were added to the Framework Convention, supplementing it and creating additional obligations within its framework. An evolutionary path, in fact, is quite common in multilateral regime-building. The regime, including the principles, rules, the negotiations and decision-making procedures that guide the behavior of actors in this policy field, has undergone transformation from the "top-down" to the "bottom-up" approach[3] over the last years. In this paper, we define two periods in the multilateral climate change regime which outline the following section.

The first period, in the early years after the inception of the climate regime functioned as a **top-down mechanism.** The equity between developed and developing countries is mediated through the principle of *common but differentiated responsibilities and respective capabilitie*s (CBDR RC). The key to the successful negotiation and adoption of the United Nations Framework Convention on Climate Change (the Convention)[4] was the explicit agreement on the mentioned principle of the CBDR RC (article 3.1) as the basis for action by regime actors. The Convention, nevertheless, required Annex I parties (forty industrialized countries and economies in transition) to reduce their GHG emissions to 1990 levels by the year 2000. Industrialized countries further agreed to provide financial and other forms of support to developing countries for climate action.

[1] UN General Assembly, A/44/484, 19 September 1989.
[2] UN Framework Convention on Climate Change (1992) FCC/INFORMAL/84/Rev.1GE.14-20481E.
[3] N.K. Dubash, L. Rajamani, "Beyond Copenhagen: Next steps", *in Climate Policy*, 10 (2020), n. 6, pp. 593-599.
[4] UNFCCC: Status of the Ratification of the Convention. Recovered from https://unfccc.int/process-and-meetings/the-convention/status-of-ratification/status-of-ratification-of-the-convention#:~:text=Currently%2C%20there%20are%20197%20Parties,Framework%20Convention%20on%20Climate%20Change, [Consultation date: 28/02/2021]

The UN climate negotiation process has proved to be one of the most challenging in the history of Multilateral Environmental Agreements (MEAs) as most developing countries have been unwilling to take on onerous commitments, arguing that it was mainly the developed countries which had contributed to the increase in global warming as part of their economic development. The UNFCCC also allowed for adopting a protocol with legally binding obligations. The Kyoto Protocol (1997) – the mitigation-centric, top-down instrument which dictated commitment for developed countries only in achieving its quantified emission limitation and reductions. Negotiations to this end began at the first meeting of the Conference of the Parties (COP) in 1995, however only two years later, governments adopted the Kyoto Protocol with two commitment periods, which set a time-bound, quantitative limit on developed countries' emissions. On 13 March 2001, US President Bush withdrew from the Kyoto process for precisely commitments reasons. Indeed, his specific opposition to the Protocol was

> because it exempts 80 percent of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the U.S. economy. … there is a clear consensus that the Kyoto Protocol is an unfair and ineffective means of addressing global climate change concerns[5].

In the meantime, governments were able to negotiate a detailed rulebook known as the Marrakesh Accords (2001) to outline for three new Protocol's "flexibility mechanisms" for trading and offsetting emissions. In 2001, the decisions adopted by the seventh session of the Conference of the Parties in Marrakesh, constituting the Marrakesh Accords, paved the way for the timely entry into force of the Kyoto Protocol[6].

Despite being responsible for three-fourths of historical cumulative emissions, by the early 2000s developed countries only accounted for half of global annual GHG emissions, while emissions in developing countries were growing twice as fast[7]. Due to this reason, a new round of negotiations was launched against this background. After a failure in 2009 during negotiations in Copenhagen, states have successfully concluded a new global agreement under the climate regime, the 2015 Paris Agreement starting the second period of the functioning of the regime. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016.

The **second period** of the regime is marked by the negotiations at the

[5] The White House, *Text of a Letter from the President to Senators Hagel, Helms, Craig, and Roberts.* Office of the Press Secretary March 13, 2001. Recovered from https://georgewbush-whitehouse.archives.gov/news/releases/2001/03/20010314.html, [Consultation date: 28/02/2021].
[6] Report of the Conference of the Parties on its 7th session, held at Marrakesh from 29 October to 10 November 200FCCC/CP/2001/13/Add.1
[7] K. Baumert *et al*., *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, Washington D.C., 2005.

Conference of Parties in Paris that concluded by the adoption of the Paris Agreement 2015[8]. The Agreement can be characterized as an "evolution in climate governance, and a revolution in the UNFCCC COP process"[9]. It incorporates all institutional structures that have been negotiated in the UNFCCC, apart from the Kyoto Protocol, which expired in 2020. The Agreement introduced a new institutional architecture built on voluntary contributions by countries to reduce greenhouse gas emissions and adapt to climate change. Each country decides on its individual contribution based on national capacity, priorities, and development needs. Most important, the regime is no longer dictating on allocating emission reduction commitments among countries (the top-down approach reflected in the Kyoto Protocol), but rather states decide their ambition levels independently by introducing an approach based on Nationally Determined Contributions (NDCs) (the bottom-up approach). The communication of NDCs is legally binding under the Paris Agreement, but their content and targets are not. The COP21 in Paris agreed

> that the information to be provided by Parties communicating their nationally determined contributions, in order to facilitate clarity, transparency and understanding, may include, as appropriate, inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its nationally determined contribution is fair and ambitious, in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2[10].

The global regime has grown in wealth of COP decisions, complexity of issues, and participation. Since COP21 in Paris, the regime has transformed into a regime complex denoting the broad activities of smaller groups of states as well as non-party actors, such as cities, regions, companies, and non-governmental organizations along with United Nations agencies with their voluntary commitments. At COP21, the outcome formally recognized non-party stakeholders' efforts and created a new dedicated process called – the Marrakesh

[8] Paris Agreement as contained in the report of the Conference of the Parties on its twenty-first session, FCCC/CP/2015/10/Add.1.

[9] IISD, Earth Negotiations Bulletin, Vol. 12, No. 663, *Summary of the Paris Climate Change Conference. 29November–13 December 2015.* Published by the International Institute for Sustainable Development (IISD) Tuesday, 15 December 2015. A Reporting Service for Environment and Development Negotiations. Recovered from http://www.iisd.ca/climate/cop21/enb/, [Consultation date: 29/03/2021]

[10] UNFCCC, Decision -/CMA.1. Further guidance in relation to the mitigation section of decision 1/CP.21.

Partnership for Global Climate Action[11] – to bring these activities under one umbrella.

2. Climate change as an emergency issue

Climate change can be considered as an emergency issue. First group of arguments for looking at climate change from this perspective is the fact that the process of climate change has its dynamics, which speeds up with the rising concentration of greenhouse gases in the atmosphere. The effects of this process are also accelerating in the frequency of their visibility as well as with the magnitude of their severity. Emergencies are, however, also connected with the effects of climate change. Intergovernmental Panel on Climate Change (IPCC) in its Assessment Report from 2014 indicates rising number of extreme events which result in posing a threat to life and well being of humans globally. Among risks, the Report mentions heat waves related human mortality, droughts, floods, cyclones, wildfires, resulting in alteration of ecosystems, disruption of food production and water supply as well as damages to the infrastructure and settlements, human morbidity, and mortality. Report adds that the direct and insured losses from weather-related disasters have a tendency to rise in the recent decades both globally and regionally.

The risks described in the IPCC's Report seem to be unavoidable especially due to the fact that some of them appear even in the scenarios of the average temperature rise of 1ºC. The climate changes vulnerability of the societies differs and depends to a large extent on their level of development and adaptive capacity. The economic inequalities affect the climate change vulnerability even within the societies of highly developed countries. This rises the questions from the field of climate equity but also may result in additional problems like climate change induced migration. Beyond doubts, climate change surely changes our perception of disasters. Climate change will increase the incidence, strength and distribution of extreme events, their consequences for a growing number of people therefore climate change might be considered both as a source of natural emergencies as well as an emergency itself.

3. Laws of emergencies

In common parlance, the "state of emergency" denotes those situations in which public institutions are vested with extraordinary powers in reaction to existential

[11] UNFCCC, *Background on the Marrakech Partnership for Global Climate Action*. Recovered from https://unfccc.int/climate-action/marrakech-partnership/background, [Consultation date: 28/02/2021]

treat to public order[12]. Existence of a state of emergency should not change the state's commitment to the rule of law. As a consequence, the obligation of making decisions by public institutions impartially and in a non-discriminatory way in accordance with pre-established legal principles still exists even in case of existence of state of emergency. Answering to this request, state's constitutional regimes as well as international law developed special categories of laws – laws of emergencies.

Emergencies through centuries resulted in generating political pressure to strengthen executing power at the expense of legislative and judicial ones. The paradigm case for emergency powers has been the imminent threat to the very existence of the state which necessities empowering the executive to take extraordinary measures[13]. In ancient Rome the function of Dictator seems to show the origin of this concept. Today however, thanks to the human rights warranties as well as introduction of the concept of law of emergencies, the situations in which the executive may legally derogate from their obligations to respect, protect the civil and political rights are strictly regulated in their existence and scope. This is to ensure that special competences envisaged to the public administration will be withdrawn as soon as the premises of introduction of laws of emergencies passed. The human rights perspective on laws of emergencies seems to be rational as "states of emergencies" may have profound impact on various categories of human rights, including but not limiting itself to cultural, social, political and economic ones.

There is a whole body of international law which confirms the obligations and limits of the executive powers, strengthening national constitutional warranties of limits of interference with civil rights[14]. Majority of them employ two stage test to evaluate the derogation from general human rights standards. First stage analyses if there are circumstances which suffice to initiate the state of emergency. Second one concentrates on evaluating the measures employed by the state to address the emergency, their proportionality and rationality.

4. Climate change law as law of emergencies

Anthropocene can be described as a period in the Earth's history when humanity has achieved the potential to change the conditions of the functioning of planet's ecosystem beyond the planetary boundaries. These boundaries define safe operating space for humanity with respect the Earth system and interaction with

[12] E. Criddle, E. Fox-Decent, "Human Rights, Emergencies, and the Rule of Law", in *Human Rights* Quarterly, 34 (2012), pp. 44-45.
[13] B. Ackerman, "The Emergency Constitution", in *Yale Law Journal*, 113 (2004), p. 1031.
[14] E. Criddle, E. Fox-Decent, *op. cit.*, p. 46.

biophysical processes and systems[15]. Among those boundaries climate change is represented by the carbon dioxide particles concentration in the atmosphere at the level of 350 parts per million by volume[16]. This scientific fact has received political support by December 2009 Copenhagen Accord and amounts to the average temperature rise of around 1,5 degrees Celsius. Current (as for the end of 2020) CO2 concentration level has reached 414 parts per million[17]. This means that after over the decade the world is still heading for a temperature rise in excess of 3°C in this century – far beyond the Paris Agreement goals of limiting global warming to well below 2°C and pursuing 1.5°C. In order to slow the process of global warming and keep the humanity within the planetary boundaries limits, within the framework of Earth's safe operating space, substantial and rapid cuts are unavoidable[18]. This means a need to departure from the "business as usual" scenario and deep changes in social and economic norms. This is especially true within the high developed countries and EU who have decided to present the most ambitious emissions reduction goals. As UN Secretary António Guterres stated in November 2019 "the climate emergency is a race we are losing, but it is a race we can win"[19].

The notion of "climate emergency" refers to a new form of declared emergency or a new model of the state of emergency. This newly conceptualised state of emergency surely has important political dimension[20]. This analysis will however focus on it's legal dimension. First question which has to be asked is if the theory of laws of emergencies could apply to the climate change emergency? Or putting it differently – are the risks connected with climate change sufficient for introduction of laws of emergency? International Covenant on Civil and Political Right identifies the possibility of introduction of such laws in the situation of the threat of the life of the nation[21]. Similarly, the conditions of introduction of state of emergency were identified in European Convention of Human Rights[22]. European Commission on Human Rights in Lawless v. Ireland defined public emergency as a "danger of crisis" which is present or imminent, exceptional, concerns the entire population and constitutes a threat to organised life of the "community"[23]. According to the ECtHR judgement in Brannigan and

[15] M. Lenton, M. Scheffer, C. Folke, H.J. Schellnhuber, B. Nykvist, C.A. de Wit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sörlin, P.K. Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R.W. Corell, V.J. Fabry, J. Hansen, B. Walker, D. Liverman, K. Richardson, P. Crutzen, J.A. Foley, "A safe operating space for humanity", in *Nature*, 461 (2009) p. 472.
[16] *Ibidem*.
[17] The Daily CO2 page https://www.co2.earth/daily-co2 [Consultation date: 28/03/2021].
[18] UNEP, UNEP DTU Partnership *Emmissions Gap Report 2020.* 2020 UNEP, p. 74.
[19]Recovered from https://www.unep.org/news-and-stories/story/un75-un-environment-programmes-leader-shares-three-actions-save-world, [Consultation date: 22/02/2021]
[20] G. Monbiot, *Heat: How to Stop the Planet Burning*, South End Press, Boston, 2009.
[21] Par. 4.1
[22] Par. 15.1
[23]§ 28 Lawless v. Ireland (no. 3), Judgment on Merits, App no 332/57 (A/3), [1961] ECHR 2.

McBride the national authorities have in principle a margin of discretion to evaluate if those conditions have been satisfied, as they are expected to be better informed on the situation which should result in entry into the state of emergency (Jus ad Tumultum)[24]. What is additional except from those material conditions UN Commission on Human Rights added one formal requirement – namely that the states must exercise their emergency powers with all the applicable requirements of national laws[25]. This includes also all national legal formal requirements of declaring the existence of the state of emergency and adequate notification on this fact to the adequate international institution[26].

One can apply the test introduced in *Lawless v. Ireland* case to the climate change emergency. Analysing the material international legal conditions for introduction of the state of emergency connected with the climate change it might be noted that the danger of climate change and what is more important dangerous atmospheric phenomena induced by the climate change already appear with rising frequency. This means that the danger is surely present or at least imminent in many jurisdictions. Is worth mentioning that climate change emergency is often described as a "catastrophe in slow motion" in order to stress it's catastrophic results happening in a relatively long time perspective, or at least time perspective which is longer then in case of most other natural disasters[27]. Environmental and especially climate change issues contain the constitutive features of an emergency that arise from the complex, adaptive nature of ecological systems, which makes it impossible to eliminate in advance the probability of climatic catastrophe[28].

Climate change is a danger exceptional to all already known environmental threats. It poses a complex and seemingly intractable policy challenge with implications in virtually every aspect of state's policies. This includes energy, agriculture, transportation, urban planning, trade and many others. Climate change surely concerns entire population in each individual country as well as the global population. It is described by a concept of a common concern of humankind[29]. Any real attempt to face the climate change challenge has to involve global changes in consumption, production as well as overall lifestyle all contemporary life is used to. What is more, those changes will probably have to be enforced by

[24] Brannigan and McBride v United Kingdom, Decision on merits, App No 14553/89, App No 14554/89, A/258-B, IHRL 2592 (ECHR 1993).
[25] CCPR General Comment No. 29: Article 4: Derogations during a State of Emergency* Adopted at the Seventy-second Session of the Human Rights Committee, on 31 August 2001 CCPR/C/21/Rev.1/Add.11.
[26] *Ibidem.*
[27] R. Pierrehumbert, "Climate Change: A Catastrophe in Slow Motion", in *Chicago Journal of International Law*, 6 (2006), n. 2, p. 573.
[28] J. Stacey, *The Constitution of the Environmental Emergency*, Hart Publishing, Oxford, 2018, p. 2
[29] F. Biermann, "Common Concern of Humankind": The Emergence of a New Concept of International Environmental Law", in *Archiv des Völkerrechts*, 34 (1996), n. 4, pp. 426-481.

state's institutions, posing threat to the human rights[30]. Finally, there are strong arguments to support the premise that it constitutes a threat to organised life of the community. It is "beyond debate" that the adverse effects of climate change will in their severity constitute threat to various categories of human rights[31]. Most frequently in this context the rights to life, right to food, health and housing are being mentioned, each of them individually being enough to give basis for the introduction of state of emergency.

Being in a comfortable situation of not having a state of emergency, resulting from the climate change threats, formally introduced, it might be challenging to evaluate the conditions of legality of measures introduced as a consequence of identification of state of climate change emergency. It might be even more interesting to find reasons to argue in favour of such extraordinary measures in the climate change context. One of the most important principles concerning the scope of the *jus in tumultu* is the principle stating that the powers used by the state should not be employed in a way which will go beyond the temporal and geographical limitations.

Out of the many already identified states of emergency, which can be roughly divided into military and non-military emergencies, the climate change emergency surely can be qualified among the second type of emergencies[32]. They include both humanitarian emergencies caused by natural disasters risks as well as economic emergencies connected with transformation and mobilisation of economy and in consequences deep change in socio-economic models of the functioning of the societies[33]. Such mobilisation can surely remind the wartime mobilisation known from modern long lasting military conflicts[34]. Prospective measures connected with the introduction of the state of climate change emergency will surely have more to do with deep intervention and interference in industrial production cycle, societies consumption habit limiting certain economic and social rights. On the other hand, humanitarian emergencies are already appearing endangering human right to a healthy environment and other related rights by the existence of natural disasters like floods, droughts and other natural

[30] D. Hernández, "Understanding 'energy insecurity' and why it matters to health", in *Social Science & Medicine,* 167 (2016), pp. 1-10; F. Birol, "Energy economics: a place for energy poverty in the agenda?", in *Energy Journal,* 28(2007), pp. 1-6; S. Bouzarovski, S. Petrova, "A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary", in *Energy Research & Social Science*, 10(2015), pp.31-40.

[31] D. Bodansky, "Introduction: Climate Change and Human Rights: Unpacking the Issues", in *Georgia Journal of International and Comparative Law*, 38 (2010), n. 3, p. 511; L. Rajmani *"*Human Rights in the Climate Change Regime: From Rio to Paris", in J. Knox, R. Pejan (eds.), *The Human Right to a Healthy Environment*, Cambridge University Press, Cambridge, 2017.

[32] *Ibidem*, p.267

[33] L. Kotzé, "Reflections on the Rule of Law in a Time of Socio-ecological Crisis", in *Journal of Environmental Law*, 31 (2019), n. 2, pp. 367-382.

[34] A. Brandt, "Had We But World Enough and Time (Reconsidering 'Emergency')", in *Australian Feminist Law* Journal, 31 (2019), n. 1, p. 30.

disaster emergencies known to humanity for years but accelerating in the frequency of their appearance and scope.

As it has been mentioned above, according to ECHtR it is a national court's and administrative bodies discretion to decide both on the necessity of introduction of state of emergency and on the human right's limitations which stem from this decision.

Starting from the late 2018 many local governments began declaring a state of climate emergency. Today in 1863 jurisdictions in 33 countries such binding declarations have been declared. Most of them were issued by local county level administration however since 2019 such initiatives have also been undertaken by national parliaments. On 28 April 2019, the First Minister of Scotland declared a climate emergency on behalf of her government at an annual Scottish National Party conference. One day later, on 29 April 2019, the Welsh Parliament was the first parliament in the world to declare state of climate emergency at the national level. On 3 May 2019, the Gibraltar Parliament followed, and the government of the Republic of Ireland announced their declaration on 9 May. The next day, the Isle of Man parliament declared a climate emergency as well. The Parliament of Portugal declared a climate emergency on 7 June 2019 – that is, the Assembly of the Republic passed the declaration, but it still requires further approval by the Council of Ministers, which hasn't happened. The Canadian House of Commons followed on 17 June 2019, and the French parliament a climate emergency on 27 June 2019. Argentina followed on 17 July 2019[35]. European Parliament adopted resolution on climate change emergency on 28 November 2019.

From the legal point of view, it is interesting if in the above mentioned jurisdictions a formal state of emergency has been introduced which would be unprecedented probably since the times of World War II, with 820 million citizens living in different parts of the world being subject to Laws of Emergency[36]. The legal characteristics of those declarations are however far from being an act of introduction of formal state of emergency in any of the following jurisdictions. This is both from the formal as well as material form of those declarations. First of all, in most of the locations where climate emergency has been introduced, constitution level documents do not provide for such a type of state of emergency. Second, it is usually central public administration bodies competence, whereas in the majority of cases that were various forms of local administration who made the climate emergency declarations. Third, the state of emergencies usually is introduced for a relatively short period of time with the possibility of prolonging it by formal accord of parliament, whereas the climate emergency declarations have been declared for indefinite period of time. Fourthly and most importantly, the texts of climate emergency declarations indicate that they are more documents of

[35] Climate Emergency Campaign. Recovered from https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/ , [Consultation date: 07/01/2021].
[36] *Ibidem.*

sharing the scientific belief in the climate change hypothesis or declarations of determination of public administration to engage in actions aiming at mitigation and adaptation processes. What is most important from the perspective of this analysis, they do not assign any special power to the executive, and especially do not provide for any limitations of human rights. From this perspective they should be treated as important political declarations of determination, specific calls for ambitious commitments in accordance with relevant international legal acts (especially Paris Agreement), but do not by themselves introduce any form of state of emergency. It is a symbolic acknowledgement at the highest levels that we're facing a climate change crisis – and a commitment to meet the challenge[37]. It might be followed, if it is considered necessary, with introduction of formal state of emergency, however, it is more likely that such measures will be introduced in a situation of fighting natural disasters caused by the climate change process.

5. The general function of economic instruments

United Nations Framework Convention on Climate Change is a cornerstone of international efforts to fight effects of climate change. It stands on the realistic position that two sets of actions have to be undertaken in order to overcome the problems connected with climate change. First line of actions is aiming at mitigation of human activities impact on climate system[38]. This is however not enough, as drastic measures of greenhouse gases elimination would surely negatively affect the development, what is unacceptable especially for the developing countries. This is why the second group of actions are advocated by the Convention – namely actions which aim at adaptation to the changing climate conditions. Both of those lines of actions can be effectively supported by the economic instruments of response to climate change emergency.

Flexibility seems to be one of the most important arguments for introduction of economic instruments of climate protection. Energy production and consumption accounts for a vast majority of anthropogenic greenhouse gas emissions, being one of the most important field of industry as well as providing energy required for both production and individual consumption. Transformation from energy being produced from non-renewable resources into the green energy is for most of the countries a lengthy and costly process, with consumers bearing large part of the transformation price. Energy provision is also one of those

[37] New Zealand Herald, Recovered from https://www.nzherald.co.nz/nz/analysis-what-does-declaring-a-climate-emergency-actually-do/6U3YQFOLDTZCCBWZ4ETXLHLDOE/, [Consultation date: 07/01/2021].
[38] C. Voigt, *Sustainable Development as a Principle of International Law. Resolving Conflicts between Climate Measures and WTO Law*, Martinus Nijhoff Publ., Leiden-Boston, 2009, p. 46.

fundamental goods, provision of which is crucial for human rights protection[39]. On the other hand, effects of climate change induced by the energy production from nonremovable resources negatively affect human rights, being identified as a source of great humanitarian disasters, mass migrations, disease spread and many other[40]. Climate policy invariably affects larger and also more sensitive areas of society, compelling change in nearly all domains of social behaviour and, notably, constraining economic activity at a much broader scale than any other area of environmental governance. Being caught between those two risks policymakers openly embraced alternative policy approaches based on economic instruments, flexible markets and price incentives, in the hope of limiting harmful effects on the society, economy and competitive distortions in the global marketplace[41]. In this context, economic instruments of climate change mitigation should not be treated as an alternative to decarbonisation, but more as instruments of making the process less invasive into the human rights aspects connected with access to affordable energy.

Rising awareness of the importance of mitigating climate change together with better calculations of the costs of climate change effects and also costs of climate change mitigation efforts help us realize the necessity of introducing flexibility mechanisms into the global regulation of climate change. Such mechanisms are present in the Kyoto Protocol, they are also introduced into the text of Paris agreement. Those mechanisms enable to obtain support for climate protection actions also by states which are not prepared for achieving Paris agreement's goals solely by mitigating the emissions. Market based instruments introduce flexibility so important in obtaining universal support for global climate change regime[42].

Paris agreement creates new and wider perspectives for already known flexibility mechanisms known from the Kyoto Protocol[43]. "Mechanism" – the equivalent of flexibility mechanism from the Kyoto Protocol are regulated by article 6 of Paris agreement. The use of the "mechanism" will be to some extent determined by the obligation to promote environmental integrity resulting from

[39] See e.g. S. Tully, "Access to Electricity as a Human Right", in *Netherlands Quarterly of Human* Rights, 24 (2006), n. 4, pp. 557 and ff. see also UN Secretary General Ban Ki-moon's statement at the Clean Energy Ministerial Meeting of 12 may 2014 SG/SM/15839-EN/288.

[40] D. Bodansky, J. Brunnee, L. Rajamani, *International Climate Change Law,* Oxford University Press, Oxford, 2017, p. 3.

[41] M. Mehling, "Implementing Climate Governance: Instrument Choice and Interaction", in E. Hollo, K. Kulovesi, M. Mehling (eds.), *Climate Change and the Law*, Springer, New York/London 2013, p. 11.

[42] M. Nyka, "Trade related environmental measures in the global climate protection regime", in *Przegląd Ustawodawstwa Gospodarczego* 866 (2020), n. 8, pp. 19-20

[43] D. Marinella, E. Calliari, A. D'Aprile "Climate policy after Paris: assessment and perspectives", in *Centro Euro-Mediterraneo sui Combiamenti Climatici Research Papers*, Issue RP0277, December 2015. Recovered from www.cmcc.it/wp-content/uploads/2016/06/rp0277-ecip-12-2015.pdf , [Consultation date: 22/02/2021].

Art. 6 par. 1 of the agreement[44]. The fulfillment of this obligation will refer to considering social and environmental aspects when using flexibility mechanisms, instead of focusing only on the amount of greenhouse gases that have not been emitted in connection with their use[45]. Article 6 encourages international cooperation and allows countries with higher emissions or higher ambition to acquire emission reductions (Internationally Transferable Mitigation Outcomes, or ITMOs, Article 6.2) or other kinds of mitigation outcomes (Article 6.4) from transferring countries. This can help to mobilize climate finance and technology from one country to another and any such financial transfers will help towards the Parties' commitment to mobilize $100 billion per annum by 2020[46].

6. The role of economic instruments in climate change law

What are economic instruments in climate change law? What role do they play in the climate change regime? In this section we define *economic instruments in the climate change regime* and discuss their crucial role in fulfilment of global commitments on combating climate change. Economic instruments in climate law can be divided into two categories such as: (i) market approaches and (ii) non market approaches. There is no universal formula for economic instruments to be implemented by host countries due to the fact that countries have different needs for climate action, as well as, their institutional capacity differs in terms of ability to process projects. In order to determine which policy instrument is the most appropriate to be used, cost/benefit analysis should be used, but environmental impacts are difficult to value in monetary terms[47].

Article 6 of the Paris Agreement sets out several routes through which countries may wish to cooperate in implementing their nationally determined contributions (NDCs) on a fully voluntary basis. Article 6 sets out three tangibly different approaches to this international cooperation such as the following: (i) Cooperative approaches under Article 6.2 and 6.3; (ii) The UNFCCC-governed crediting mechanism under Article 6.4 to 6.7; (iii) The framework for non-market approaches under Article 6.8 and 6.9. These three different approaches played also a crucial role in the first period of the climate regime. Under Articles 6 and 12 of the Kyoto Protocol, Joint Implementation (JI) and the Clean Development Mechanism (CDM) allow developed Parties to the Protocol to offset part of their

[44] J. Ciechanowicz-McLean, *Prawo ochrony klimatu*, Powszechne Wydawnictwo Prawnicze, Warszawa, 2016, p. 143.
[45] M. Nyka, "Trade related instruments of promotion of human right to the environment in international climate law", in Soňa Košičiarová (ed.), *Právo na životné prostredie a nastroje jeho presadzovania*, Trnavská univerzita v Trnave, Trnava, 2016, p. 176.
[46] African Development Bank Group. Recovered from www.afdb.org/en/news-and-events/cop24-progress-on-article-6-of-the-paris-agreement-18754/, [Consultation date: 22/02/2021].
[47] M. Kohn, "Energy, Environment and Climate: Economic Instruments", in *Energy & Environment,* 7 (1996), pp. 147-168.

reduction targets through emission-reducing projects, respectively, in developed and developing countries. The third flexibility mechanism, international emissions trading under Article 17 of the Kyoto Protocol, allows for units of emissions to be transferred among developed countries and subsequently used in meeting Kyoto Protocol targets. Governments have built emissions trading systems upon this to allocate emission targets to private and public sector emitters and allowing them to meet their targets by finding the most cost-efficient choice of reducing emissions and buying either national or international units – a metric tonnes of CO2.

The existing literature on the effectiveness of climate economic instruments such as for example, the CDM may be helpful to determine which policy or mix of measures is most appropriate to help reach the global mitigation goals[48]. Now, it is 25 years of experience with market mechanisms and public funds under the Kyoto Protocol, the UN Framework Convention on Climate Change and under the Paris Agreement. The Clean Development Mechanism (CDM) provides industrialized countries with an incentive to invest in emission reduction projects in developing countries to achieve a reduction in CO2 emissions at lowest cost that also promotes sustainable development in the host country. Emission credits the so-called Certified Emission Reduction (CERs) were used by developed countries to fulfil their Kyoto targets. Brazil was first which set-up their CDM institutions in 2002 followed by India in 2004 and China in 2009 that dominated the CDM market[49].

The equity between developed and developing countries is mediated through Article 3.1 called the principle of common but differentiated responsibilities and respective capabilities (CBDR RC) which was the key to the successful negotiation and adoption of the Convention and is a solid foundation of the whole climate regime. The decision for the inclusion of the CBDR in the Convention is a result of the recognition of the economic and financial reality that, in order to overcome the challenges posed by climate change, every single kind of available financial flows and other economic instruments are required. Article 4.4 and 4.8 of the UNFCCC highlight the needs of developing country parties that are particularly vulnerable to the adverse effects of climate change, as well as the specific needs and special circumstances of least developed countries (LDCs). The Paris Agreement introduces a broader understanding of climate finance, which so far has been limited to public financial flows from developed to developing country parties. In this regard, Article 9 is in line with Article 2.1(c) that sets "making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development" as the third

[48] See for example: A. Michaelowa, F. Jotzo, "Transaction costs, institutional rigidities and the size of the clean development mechanism", in *Energy policy*, 33 (2005), n. 4, pp. 511-523.
[49] A. Michaelowa, J. Buean, "The Clean Development Mechanism gold rush", in A. Michaelowa (ed.), *Carbon Markets or Climate Finance? Low Carbon and Adaptation Investment Choices for Developing World,* Routledge, London, 2012, pp. 1-38.

objective of the Agreement[50]. In addition, Article 9.3 also refers to a "variety of actions" to mobilize financial resources. This stresses that mobilization is not only financial resources per se but also public policies and strategies to shift public investments and/or leverage private investment. Finally, in order to ensure transparency and improve flow of information, Article 9 of the Paris Agreement is supplemented by provisions in Articles 13 and 14 that establish a regime of communications on climate finance, and includes climate finance and support in the global stocktake.

Multilateral climate finance is a term used to describe the financial resources mobilized to mitigate and to allow developing countries to adapt to climate change. Direct transfers of climate finance from governments of developed countries to governments of developing countries were perceived by some donor countries as risks due to uncertain recipient capacities, lack of transparency and respective outcomes. In order to minimize such risks and to facilitate the provision of climate finance the Convention established a dedicated financial mechanism with multilateral funds to ensure equity and justice. Funding provided by Annex II Parties is channeled mostly through the Convention's financial mechanism. The Global Environment Facility (GEF) has served as an operating entity of the financial mechanism since the Convention's entry into force in 1994. At COP 16, in 2010, Parties established the Green Climate Fund (GCF) and in 2011 also designated it as an operating entity of the financial mechanism. The financial mechanism is accountable to the COP, which decides on its policies, program priorities and eligibility criteria for funding[51]. At the Paris Climate Change Conference in 2015, the Parties agreed that the operating entities of the financial mechanism – GCD and GEF – as well as the SCCF and the LDCF shall serve the Parties to the Convention.

The Marrakesh Accord outlined issues related to funding under the Convention in its decision 7/CP.7[52]. The COP (FCCC/2011/CP/L.9)[53] designates the Green Climate Fund (GCF) as an operating entity of the financial mechanism of the Convention. The Kyoto Protocol mirrors the Convention in recognizing the

[50] J. Gastelumendi, I. Gnittke, "Climate Finance (Article 9)", in D. Klein, M.P. Carazo, M. Doelle, J. Bulmer, A. Higham (eds.) *The Paris Agreement on Climate Change: Analysis and* Commentary, Oxford University Press, Oxford, 2017, pp. 239-258.

[51] GEF website: <https://www.thegef.org/about/funding> [Consultation date: 02/03/2021], also see UNFCCC website: <https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance#:~:text=To%20facilitate%20the%20provision%20of,resources%20to%20developing%20country%20Parties.&text=The%20financial%20mechanism%20is%20accountable,and%20eligibility%20criteria%20for%20funding.> [Consultation date: 02/03/2021].

[52] Marrakesh Accord FCCC/CP/2001/13/Add.1 p. 43.

[53] UNFCCC documents. Conference of the Parties Seventeenth session Durban, 28 November to 9 December 2011 Agenda item 8 Green Climate Fund – report of the Transitional Committee Green Climate Fund – report of the Transitional Committee. Recovered from https://unfccc.int/resource/docs/2011/cop17/eng/l09.pdf [Consultation date: at 02/03/2021]

specific needs and concerns of developing countries, especially the most vulnerable among them. The outcome of UN climate negotiations related to the discussion in this paper is the Marrakesh Accord that outlined the issues related to the funding under the Kyoto Protocol in its decision 10/CP.7[54] and also established four funds focused on support of concrete adaptation project and programs in developing countries, particularly addressing food security, water resources, disaster preparedness and health in the Least Developed Countries (LDCs)[55] .

The Adaptation Fund (AF)[56] under the Kyoto Protocol was established as a self – standing institution. The Fund is the first multilateral policy instrument to promote adaptation in developing countries by providing grants for adaptation projects and programs. With its innovative features, such as an alternative source of revenue, recipient-country driven process, as well as transparent process, the Adaptation Fund is well positioned to deal with adaptation challenges in vulnerable countries and communities. The Fund is financed with the share of proceeds from clean development mechanism (CDM) project activities and other sources [57]. The COP held in Katowice in 2019 by its Decision 13/CMA.[58] decided that the Adaptation Fund shall serve the Paris Agreement under the guidance of, and be accountable to, the Conference of the Parties. Also, in Katowice all the Parties decided that the Adaptation Fund will continue to be financed by the activities under Articles 6, 12 and 17 of the Kyoto Protocol. The World Bank serves as trustee of the Adaptation Fund on an interim basis. As of 2nd of March 2021 the Fund balance was US$ 568,68 million[59].

The goal of the Green Climate Fund (GCF) is to promote a paradigm shift in developing countries towards low-emission, climate-resilient development pathways. Currently GCF has committed US$5 billion for the implementation of funding proposals for NDC. As of 22 February 2021 the GCF has approved 158 projects and disbursed US$1.6 billion[60]. Despite the crucial role of climate finance in the post Paris Agreement period, there is still very little written on perspectives

[54] Marrakesh Accord, FCCC/CP/2001/13/Add.1, p. 52.
[55]I. Ratajczak-Juszko, "The Adaptation Fund: towards resilient economies in the developing world", in A. Michaelova (ed.), *Carbon* Markets, cit., p. 93.
[56]Adaptation Fund website: <https://www.adaptation-fund.org/> [Consultation date: at 1/03/2021].
[57] UNFCCC website https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period [Consultation date: 1/03/2021].
[58] UNFCCC: FCCC/PA/CMA/2018/3/Add.2 Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the third part of its first session, held in Katowice from 2 to 15 December 20.
[59] The World Bank. Financial Intermediary Funds (FIFs), Recovered form: <https://fiftrustee.worldbank.org/en/about/unit/dfi/fiftrustee/fund-detail/adapt#3> [Consultation date: 1/03/2021].
[60] The Green Climate Fund. The GCF at a glance, Recovered form: https://www.greenclimate.fund/sites/default/files/document/gcf-project-portfolio-en.pdf [Consultation date: 1/03/2021].

of practitioners and researchers on climate finance in development of effective climate policy. Kingsbury et al. (2009)[61], Parker et al. (2009)[62], Michaelowa et al. (2012)[63] offer some interesting analysis of post – 2012 negotiations leading to Paris Agreement and contribute an increase of transparency in this very complex policy field.

However, the Paris Agreement decisions on finance contain some ground breaking rules of transparency such as – *Ex ante communication* in Article 9.5. For the first time, the climate regime establishes an obligation for parties to communicate information on projected climate finance, or what is called ex ante communication, both quantitatively and qualitatively. This new obligation will allow Parties and the multilateral funds to better plan climate finance allocation among projects and programs.

Technology transfer is defined in this paper as a form of development assistance addressing issues such as lack of adequate technology in some developing countries. The technology transfer and development play a crucial role in supporting the global effort on implementation of nationally determined contributions (NDCs) successfully. The Article 10.1 in the Paris Agreement aims to advance technology development and transfer (TD&T) to help developing country parties improve resilience to climate change and reduce greenhouse gas (GHG) emissions. The technology-related set of decisions in the Paris Agreement and the associated Decision text are an important part of the overall fabric of activities and provisions meant to facilitate climate action[64].

Capacity Building is also defined in this paper as a form of development assistance. As we already explained, not all developing countries have sufficient capacities to deal with many of the challenges brought by climate change. It is the first time in Article 11 which is supported and operationalized by paragraphs 71–81 of Decision 1/CP.21, that capacity-building is laid down in a stand-alone provision within the climate regime, separate from other means of implementation[65]. The inclusion of this article on capacity building is another fact to support the argument that the Paris Agreement is truly revolutionary. Article 11 identifies the means through which capacity-building is to be enhanced under the Agreement as well as it outlines the roles and obligations of all parties. However, capacity-building is nothing new in the regime and has been repeated by developing countries often during the negotiations and is involved in many issues

[61] B. Kingsbury, B. Rudyk, R. Stewart, *Climate finance: Regulatory and funding strategies for climate change and global development,* New York University Press, New York, 2009.
[62] C. Parker, J. Brown, J. Pickering, E. Roynestand, N. Mardas, A. Mitchell, *The Little Climate Finance Book. A guide to financing options for forests and climate change,* Global Canopy Programme, Oxford, 2009.
[63] A. Michaelowa (ed.), *Carbon Markets or Climate Finance?*, cit.
[64] H. de Coninck, A. Sagar, "Technology Development and Transfer (Article 10)", in D. Klein, M.P. Carazo, M. Doelle, J. Bulmer, A. Higham (eds.), *op. cit.*, pp. 258 -276.
[65] C. d'Auvergne, M. Nummelin. "Capacity-building (Article 11)", in D. Klein, M.P. Carazo, M. Doelle, J. Bulmer, A. Higham (eds.), *op. cit.*, pp. 277-292.

referred to in Convention articles. Capacity-building is addressed in the Convention and has been part of the UNFCCC process since the first session of the Conference of the Parties (COP). However, the Convention rather emphasized the support and enhancement of endogenous capacities of developing countries in connection with other areas, such as technology transfer or research and systematic observation. The purpose of capacity-building is defined in Article 11.1. Accordingly, capacity building under the Agreement should enhance the capacity and ability of developing country parties to take effective climate change action. Capacity-building should also facilitate development, dissemination, and deployment of technology; access to climate finance; education, training, and public awareness, as well as a transparent, timely, and accurate communication of information. According to Article 11.1, developing country parties are the recipients of capacity building support. Article 11.1 also highlights countries with the least capacity, namely "the least developed countries, and those that are particularly vulnerable to the adverse effects of climate change, such as small island developing States", in particular, as recipients. The Paris Committee on Capacity-building (PCCB) was established at COP 21, with the aim of addressing gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties and further enhancing capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention[66].

7. Evaluation of efficiency of legal and economic instrument

The Paris Agreement contains the first mention of human rights in a climate change. The preamble to the Paris Agreement includes an acknowledgement "that climate change is a common concern of humankind" and that "Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights".

The international community agreed to tackle climate change and hold global average temperature rise well below 2°C and, if possible, 1.5°C, in line with recommendations from scientists.

Implementation of economic and financial instruments into the climate change regime surely allows for lowering costs of required changes in the socio-economic systems. In accordance with principle of common but differentiated responsibility most of the market based instruments are more designed to help developed states in transformation to a low emission models of energy production, transportation and others, to allow climate change emergency measures not to impede the basic human rights in those countries, limiting the potential risks connected with energy poverty or drastic changes in the standards of life of the

[66] Decision 1/CP.21, para. 71.

societies in the developed countries. The financial assistance instruments as well as technology transfer mechanisms are more developing states oriented and serve both the transformation as well as assistance in development of more climate neutral policies. Also, in relation to those countries the financial assistance measures aim at limiting the shocks in the socio-economic systems. It is worth mentioning that despite the declarations, market based instruments have proven to be abused by the states – what led to their deep reconstruction in the Paris Agreement. The financial engagement of developed states into the various forms of climate change resilience rising mechanisms is to date also not reaching the declared levels.

The role of economic instruments in climate change law is in assisting developing countries in meeting the costs of climate change in terms of adaptation and mitigation. However, we argue that the role of economic instruments is also to support the whole international community to collectively combat climate change, its environmental, economic and social human rights issues that due to climate change are challenged. Despite these promises, countries' collective emission reduction pledges are far from being sufficient, the Paris Agreement targets are not to be met and lack of adequate climate finance for developing countries action contributes to a failure of international community collective action to tackle climate change. Moreover, some inaction due to lack of capacity, practical knowledge, technology also result in halting sustainable development in developing countries and violation of basic human rights in most climate vulnerable communities worldwide, but especially in the Least Developed Countries.

If the role of economic instruments in climate change law lies in assisting developing countries in meeting the costs of climate change is not fulfilled the global community may fails to address the climate crisis and enters into the climate emergency state with violation of fundamental human rights. The role of economic and financial instruments in the climate change regime can be seen as helping avoiding the worst scenarios in which either the human rights will be violated due to the commonly appearing atmospheric and connected with them social and economic conditions or in which the need of abrupt changes in socio-economic conditions will have to be introduced by means of law in order to efficiently deal with climate change crisis. Financial and economic instruments might be identified as resilience building and instruments of relief and alleviation to the challenges connected with climate change.

Climate finance has a potential to make a fundamental shift in the whole global system. An increase in private finance is required in order to get the international community the trillions of climate money that are urgently needed – as set out in the COP26 private finance agenda.

The formative period (1990's) of the international response to climate change is coincident with a period of economic prosperity for most of the OECD countries resulting in support for increased environmental protection and development assistance. We conclude that the second period of the climate regime

is far less ambitious and very fragile due to lack of adequate climate finance. Another challenge to be considered, still ahead of us, is the COVID19 spillover effect on the international response to climate change. Both contribute to a state of climate emergency.