

# FRAGMENTATION AND SYNERGIES IN INTERNATIONAL CLIMATE CHANGE REGIME

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## ABSTRACT

*This article examines the problem of fragmentation and building synergies in climate change regime and between climate change and other related regimes of international law. The authors highlight the issues of fragmentation in international law in general, which is one of the urgent topics of the UN International Law Commission and climate change regime in particular. Due to the 'common concern of humankind' nature of the CC and main postulates of the sustainable development concept, it is self-evident that it is impossible to tackle effectively climate change problems without enhanced interdisciplinary cooperation between different self-contained regimes (such as climate change, ozone protection and protection of the atmosphere from pollution, weather modification, marine environment, biodiversity, human rights, trade and energy) and without restrictions of economic activities at national level. The article provides some guidance to the urgent issues of international law fragmentation in connection to the topical problem of building synergies for combatting climate change.*

**Keywords:** Fragmentation, Synergy, Self-Contained Regime, International Law, Climate Change Regime, Sustainable Development, Unilateralism.

**JEL Classification:** Q50, Q54, Q58

## INTRODUCTION

A new era of Anthropocene which replaced the Holocene era brought changes to stable system of international legal order. As Vidas, Zalasiewicz & Mark (2015) mentioned, '[t]he conditions of the Anthropocene will bring a fundamental shift in the context in which international law operates—a shift in which the challenges are increasingly recognized as the consequences of natural, not only political, change'. These changes are accelerated by climate change (CC)—a phenomenon which affects every aspect of human life. Climate change is an issue that cuts across many domains and at the same time the CC regime is fragmented into various functional and sector-specific areas (Boyd, 2014; Gaur & Squires, 2018; Oh, 2017). CC challenges demand high level of coordination and cooperation in different sectors of international and national law. At first blush, international environmental law may be recognized

as best suited for this task, but it suffers lack of coherence itself, thus, more integrated approach is needed.

International environmental law has developed in a way that can be described as piecemeal and disaster-driven: the international environmental governance system consists of legally autonomous yet thematically kindred multilateral environmental agreements (MEAs), all of which have created their own institutional arrangements, approaches and rationales (Goeteyn, 2013; Garafova & Kichigin, 2016; Potoski, 2017). The risk of further fragmentation of the environmental governance system is rising, since the proliferation of the MEAs, both from thematic and institutional points of view, means there is a rising danger of overlap, double work and conflict between them (Goeteyn, 2013; Morrow, 2017 & 2017a). Such overlap can occur not just within international environmental legal regimes but also between them and other legal regimes. This factor determines the current efforts of global community to establish coordination and coherence between the different regimes with a view of more efficient implementation at the universal, regional and national scales. The climate change regime is not an exception:

Because of the intricate connections between climate change and other issue areas, one may observe a number of interrelationships between the international climate change treaties and other international legal regimes. Some degree of normative interaction and overlap is likely inevitable given the scope of the phenomenon and perhaps even necessary for integrated efforts to limit greenhouse gas emissions and mitigate the detrimental impacts of a changing climate. What is more, such overlap can also breed synergies, both substantive and institutional and may thus have beneficial consequences. However, on a systemic level, normative interaction may give rise to substantive conflicts between different areas of law (Van-Asselt, Francesco & Michael, 2008; Huggins & Karim, 2016; Rei, Gonçalves & De-Souza, 2017).

The authors of these lines describe the problem of fragmentation and building synergies in climate change regime and between climate change and other related regimes.

In June 2017, the USA President announced that the United States would withdraw from the Paris Agreement (2015) because it could undermine American economy. Almost the same happened in 1997 when US Senate Byrd-Hagel Resolution declared that the United States should not be a signatory to any agreement on CC which would mandate new commitments to limit or reduce greenhouse gas emissions for Developed Country Parties, unless such agreement also mandated new specific scheduled commitments for Developing Country Parties or resulted in serious harm to the U.S. economy (Byrd-Hagel Resolution, 1997). Since the Paris Agreement has envisaged commitments for developing countries within the framework of the common but differentiated responsibilities' principle (means that in view of the different contributions to global environmental degradation in general and to climate change in particular, States should have common but differentiated responsibilities), the logics of the US current unilateral withdrawal is grounded only on economic considerations. Although this withdrawal will become possible in 2019 and take effect in 2020 due to the Article 28 of the Paris Agreement (Paris Agreement, 2016), it will undermine global efforts in combating climate change making legal regulation more piecemeal and fragmented. Some European Union unilateral actions related to aviation taxes and shipping emissions may also be considered as undermining multilateral negotiations but there is deep difference between American and European unilateralism: the first one doesn't provide for any alternative solutions. Bearing in mind the reference of the CC treaties to the concept of sustainable development which stipulates the integration of economic, social and environmental activities and, thus, makes such an integration a necessary prerequisite

for fighting fragmentation in different fields of international interstate cooperation including CC, we may consider the American declaration as contrary to comprehensive and sustainable climate change policy-making.

The issues of international legal fragmentation in general (Alatalo, Jägerbrand & Molau, 2016; Cadman et al., 2016; Simma & Dirk, 2006) or in international environmental law (Cadman, Maguire & Sampford, 2016; Chambers, 2008; Scott, 2011) as well as fragmentation alongside with synergies for climate change policy in particular (Van-Asselt, Francesco & Michael, 2008; Roberts, 2010; Goeteyn, 2013; Parson, 2014; Boyd, 2014; Savaresi, 2017) has been discussed in many academic works. Meanwhile, they lack comprehensive legal analysis of the fragmentation and synergies concerning climate change regime, especially with regard to new developments such as unilateral declaration of the USA President to withdraw from the Paris Agreement, Kigali Amendment to the Montreal Protocol, work of the UN International Law Commission on the protection of the atmosphere or the Energy Community Treaty reforming initiatives. This article provides the study of the fragmented nature of CC regime and building synergies for improving its efficiency through the prism of the sustainable development concept and ‘multilateralism *versus* unilateralism’ conflict. That direction has a potential for further scientific research.

The purpose of this article is to analyse the issue of fragmentation and synergy in international law in general as well as in climate change regime in particular, to explore fragmentation and synergies in international legal regime for climate change at the interdisciplinary level, to find out positive and negative perspectives of the phenomenon of fragmentation in the context of CC.

## **FRAGMENTATION AND SYNERGY IN INTERNATIONAL LAW**

The United Nations International Law Commission (ILC) took up the topic of fragmentation of international law in 2000. In 2002, the Commission decided to include the topic, titled ‘Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law’ in its current work program and to establish a Study Group (International Law Commission, 2006). In 2006, the Group presented its Conclusions covering the issues of relations between special and general law, prior and subsequent law, relations between laws at different hierarchical levels, etc. The Group determined that the fragmentation of the international social world has attained legal significance especially as it has been accompanied by the emergence of specialized and (relatively) autonomous rules or rule-complexes, legal institutions and spheres of legal practice (International Law Commission, 2006). It must be observed that legal fragmentation is merely ‘an ephemeral reflection of a more fundamental, multi-dimensional fragmentation of global society itself’ (Dedinec et al., 2016; Liao, 2016; Simma & Dirk, 2006).

The ILC approached the phenomenon of fragmentation from both positive and negative perspectives: on the one hand, fragmentation creates the danger of conflicting and incompatible rules, principles, rule-systems and institutional practices, but, on the other hand, it reflects the rapid expansion of international legal activity into various new fields and the diversification of its objects and techniques (International Law Commission, 2006). One more dimension of fragmentation in international law is the potential conflict between general (universal) and regional legal rules. In the negative sense, regionalism would exempt States within a certain

geographical area from the binding force of an otherwise universal rule or principle; a separate, much more difficult case is the one where it is alleged that a regional rule is binding on a State even when the State has not specifically adopted or accepted it (International Law Commission, 2006).

The emergence of so-called self-contained regimes, such as ‘trade law’, ‘environmental law’, ‘human rights law’, ‘climate change law’, etc. contributed in a certain way to the problem of incoherence of general international law, its instability and inconsistency, which brings about normative and institutional collisions. The principal characteristic of a self-contained regime is its intention to totally exclude the application of the general international law on State responsibility, in particular resort to countermeasures by an injured State (Duyck, 2015; Simma & Dirk, 2006; Yamin & Depledge, 2004). Each ‘self-contained regime’ has its own set of principles and rules, which may sometimes conflict with and deviate from general international law. The process of diversification and decentralization has been particularly evident in the environmental context. One can observe fragmentation among international environmental law and other self-contained regimes (e.g. international trade law) and among various regimes within international environmental law (e.g. between climate change and biodiversity regimes).

Nevertheless, any self-contained regime makes references to general international law: principles of general international law are applied to solve the issue of any loophole or conflict. Karen Scott is convinced that the main question that international environmental lawyers and policymakers face today is not how to eliminate fragmentation and its consequences, but how to manage the risks and maximize potential it produces (Mbatu, 2015; Scott, 2011). One of the possible solutions could be establishing interlinkages to build synergies within a given regime or between different self-contained regimes as well as between such regimes and general international law. Synergy is described in the Oxford Dictionary as ‘interaction or cooperation of two or more organizations to produce a combined effect that is greater than the sum of their separate effects’ (Rose, 2007). Given our topic, synergy may refer to the production of greater effectiveness in achieving results for environmental protection, in general or climate change mitigation and adaptation, more specifically, by coordinating activities of the bodies of multilateral environmental and other relevant arrangements to achieve more efficient results. It is believed that a synergistic approach to managing institutions will lead to more effective and resource-efficient assessment, negotiation, decision-making, planning and implementation of policies and measures; it relates to the need to minimize inadvertent conflicts between environmental policies and with other different but interrelated international, regional and national regimes (Chambers, 2008; Chung, 2015).

## **FRAGMENTATION AND SYNERGIES IN INTERNATIONAL LEGAL REGIME FOR CLIMATE CHANGE AT INTERDISCIPLINARY LEVEL**

### **Climate Change and Ozone Protection Regimes**

The provisions of climate and ozone treaties are in principle synergetic, as the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) intends to phase out certain ozone-depleting substances, for example, chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) that are also greenhouse gases (GHGs). But in practice, however, the relations between these two treaties have been in conflict for some time, since one of the substitutes for ozone-depleting substances envisaged by the Montreal Protocol, namely hydrofluorocarbons (HFCs),

was a GHG. Thus, the fragmentation was persistent between these two regimes: HFCs were included into Annex A of the Kyoto Protocol (1997) and Parties agreed to cut down this GHG according to their obligations under Article 3, meanwhile, the Montreal Protocol didn't list HFCs as a prohibited ozone-depleting substance and allowed its utilization as an alternative for CFCs.

On 15 October 2016, the Meeting of the Parties to the Montreal Protocol adopted the Kigali Amendment on HFCs which commits the countries to a global phase down of HFC production and consumption. All countries have committed to legally binding targets which mandate gradual reductions in HFC consumption and production, starting in 2019 for developed countries and 2024 for developing countries (Environmental Investigation Agency, 2016). Article III of the Kigali Amendment clarifies its legal relationship with the UNFCCC noting that the amendment will not have effect of accepting HFCs from the scope of the commitments specified in Articles 4 and 12 of the UNFCCC. HFC consumption and production will be controlled under the Montreal Protocol while HFCs emissions will continue to be reported under the UNFCCC (Environmental Investigation Agency, 2016).

The Amendment will enter into force in 2019 and is expected to significantly contribute to the goals of the Paris Agreement. This is a unique example of building synergy between climate change and ozone protection regimes: State Parties to one regime agreed to include an exogenous substance in order to achieve the goals of another legal regime.

### **Climate Change and Atmosphere Protection Regimes**

We may also witness synergies between CC regime and regime for the protection of the atmosphere from pollution, since there is a strong connection between GHG mitigation and the emissions of air pollutants (CIAM Report, 2007). The main sources of air pollutants and GHGs are the same (combustion processes, transport and agriculture); several abatement measures affect both air pollutants as well as GHGs; some measures (such as energy saving) reduce both types of emissions; other measures reduce the emission of one gas while increasing emission of another (CIAM Report, 2007). Some air pollutants are also climate-relevant and thus known as short-lived climate pollutants, such as ground level ozone and black carbon, components of particulate matter. In 1979, the Convention on Long-Range Transboundary Air Pollution was adopted under the auspices of the UNECE. The 1999 Protocol to the Convention to Abate Acidification, Eutrophication and Ground-Level Ozone (Gothenburg Protocol) contains national emissions caps for sulphur dioxide, nitrogen oxides, ammonia and volatile organic compounds. In 2012, the Gothenburg Protocol was amended in order to reduce some short-lived climate pollutants, including black carbon and ground-level ozone precursors such as nitrogen oxides and volatile organic compounds.

Article 2(2) of the Kyoto Protocol (1997) formed the basis for fragmentation providing that 'the Parties included in Annex I shall pursue limitation or reduction of emissions of GHGs...from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively' (Kyoto Protocol, 1997). Since then, international law has been lacking integrated approach to combat aviation-driven climate change: as there were no multilateral negotiations within the framework of the International Civil Aviation Organization (ICAO) on reducing the GHGs, there were only respective unilateral measures undertaken by the European Union. Earlier, ICAO's direct authority to regulate aviation emissions could be characterized as weak: Annex 16 to the Chicago

Convention on International Civil Aviation (1944), which addresses aircraft noise in addition to emissions, lays down limited standards for aircraft engines with respect to discharges of hydrocarbon, carbon monoxide and nitrogen oxide; carbon dioxide is not covered by the Annex at all (Havel & Gabriel, 2012). Due to the slow progress in multilateral governance of the matter, the EU decided to include aviation emissions in its emissions trading scheme: subject to limited exceptions, all flights taking off from or landing at an EU airport were covered by the scheme (Scott & Lavanya, 2012). This decision was heavily criticized by foreign countries aviation associations and there was a risk of trade wars between the EU and such countries as the USA, China, Russia, etc. The airline industry has challenged the legality of the Aviation Directive before the UK High Court (*Air Transport Association of America and Others vs. Secretary of State for Energy and Climate Change* case), which permitted the complainants to seek a preliminary ruling from the European Court of Justice (ECJ) on whether the action of the EU is consistent with principles of customary law, the Chicago Convention, the Kyoto Protocol (1997) and the 2007 US-EU Open Skies Agreement (Meltzer, 2012). On 21 December 2011, the ECJ ruled in favour of the EU. The overall reaction of the international community was not to let the European Union to implement its emissions trading system on other States' aircraft operators, because the multilateral negotiations seemed to be more preferable in that situation. Thus, the international community faced the fragmentation in the form of universality *versus* regionalism.

Due to the overall resonance, the EU agreed to postpone the application of its decision to civil aircrafts of third countries till the development of a global measure by ICAO. Finally, in October 2016, ICAO agreed on a resolution for a global market-based measure to address CO<sub>2</sub> emissions from international aviation, which sets out the key elements of the global scheme – the Carbon Offsetting and Reduction Scheme for International Aviation or CORSIA. Thus, European unilateralism accelerated multilateral legal negotiations and promoted synergy between the regimes of the UNFCCC and the Chicago Convention.

### **Climate Change and Weather Modification Regimes**

The regime of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1977) is usually recalled when it comes to weather modification or geoengineering, techniques in relation to climate. In the context of climate change, geoengineering refers to 'a broad set of methods and technologies that aim to deliberately alter the climate system in order to alleviate the impacts of climate change' (International Law Commission, 2016). Generally, global warming reduction-oriented geoengineering can be divided into two categories: carbon dioxide removal and solar radiation management (International Law Commission, 2016). Marine geoengineering in the form of ocean fertilization is one example of the carbon dioxide removal technologies.

As. Parson (2014) rightly points out, present international law imposes virtually no control on any State's conduct of most forms of climate engineering, whether conducted for the purposes of research or operational climate modification (Parson, 2014). Bearing in mind the definition of 'environmental modification techniques' in Article II of the Convention, lack of explicit prohibition of the use of such techniques for peaceful purposes and the Understanding relating to Article II we may conclude that some climate change modification techniques may be governed by this regime. Though the drafters of the Convention didn't explicitly provide the possibility of applying geoengineering methods in combating CC, this fragmented piece of legal

governance becomes an integral part of the whole climate change regime puzzle by means of treaty interpretation set forth in Articles 31-33 of the Vienna Convention on the Law of Treaties (1969).

In 2013, the ILC decided to include the topic of the protection of the atmosphere in its current program of work. To date, it has already drafted some principles. The ILC efforts demonstrate an integrated and coordinated approach to tackle the issue. The Commission tried to resist the tendency towards ‘compartmentalization (or fragmentation)’ of international environmental law and to consider the legal principles and rules on the subject within the framework of general international law (International Law Commission, 2014). The Special Rapporteur has identified key principles and duties of States common for the regimes of CC, protection of the atmosphere from pollution and ozone protection, as well as referred to overlaps and interlinkages between weather modification, geoengineering and climate change regimes. Draft guideline 7 provides that activities aimed at intentional large-scale modification of the atmosphere should be conducted with prudence and caution, subject to any applicable rules of international law. As we’ll see later, the Convention on Biodiversity (1992) (CBD) and London Protocol regimes have slightly different views on climate engineering, the UNFCCC regime being absolutely silent on the issue, that’s why in case of a formal adoption, the ILC draft principles will greatly contribute to international efforts in dealing with CC fragmentation and building synergetic CC regime.

### **Climate Change and Marine Environment Protection Regimes**

The International Maritime Organization (IMO) (2011) is in charge of regulation of GHGs from shipping (Article 2(2) of the Kyoto Protocol). Maritime shipping is believed to be responsible for more than three per cent of annual global carbon dioxide emissions. The principal IMO initiatives in combating CC and building synergy with CC regime are the following. First, Annex VI of the International Convention for the Prevention of Pollution from Ships (1973) (MARPOL) sets, *inter alia*, sulphur oxides and nitrogen oxides emission limits. Second, in 2006, the Contracting Parties to the London Protocol (1996) adopted amendments to Annex I thereof that regulate carbon capture and storage in sub-seabed geological formations for permanent isolation. Third, 2011 amendments to MARPOL added a new Chapter 4 to Annex VI ‘Regulations on energy efficiency for ships’ making mandatory the Energy Efficiency Design Index for new ships and the Ship Energy Efficiency Management Plan for all ships (International Maritime Organization, 2011). These measures are equally applicable to developed and developing countries, which is at odds with the principle of common but differentiated responsibilities relating to the CC regime. A number of State delegations to IMO conferences maintained the view that such measures should only be applicable to Annex I parties to the UNFCCC (the developed countries and countries undergoing the process of transition to a market economy) and its Kyoto Protocol in accordance with the above-mentioned principle. Thus, there is a room for inconsistencies and conflicts. Fourth, in April 2016, a mandatory system for data collection for fuel consumption was approved as an amendment to Chapter 4 of MARPOL Annex VI. There are also some proposals for the development of an ‘Intended IMO Determined Contribution’ on CO<sub>2</sub> reduction for international shipping as well as development of market-based mechanism for GHGs from shipping, which evidence the aspirations of the international community for a comprehensive CC regime.

Notwithstanding the multilateral measures on reducing GHGs emissions from shipping, the EU undertook unilateral measures as in the case of aviation emissions. In 2015, the EU adopted Regulation 2015/757 setting out a monitoring, reporting and verification scheme for maritime emissions. Such measures are believed to be contrary to the freedom of navigation provided for in Article 87 of the UN Convention on the Law of the Sea (1982), the principle of exclusive flag State jurisdiction over ships on the High Seas (Article 92) and Article 89, which provides for that no State may purport to subject the High Seas to its sovereignty (Dobson & Rynngaert, 2017). The international community is yet to deal with this piece of fragmentation between general universal and special regional CC regimes.

As was mentioned earlier, geoengineering is a sphere that lacks comprehensive governance and is regulated by fragmented pieces of international law: weather modification, marine environment and climate change and biodiversity regimes. Marine environment and biodiversity regimes are mostly applicable to govern the present issue and build relevant synergies. In 2008, the parties to the London Protocol adopted a resolution on ocean fertilization activities, agreeing that they are not allowed, with some limited exceptions for scientific purposes and urging States to use the utmost caution and the best available guidance even for scientific research (International Law Commission, 2016). Furthermore, in 2008, the COP to the CBD urged States to ensure that ocean fertilization activities would not take place until there was an adequate scientific basis on which to justify such activities and a 'global transparent and effective control and regulatory mechanism is in place for these activities' (International Law Commission, 2016). On 18 October 2013, the London Protocol was amended: a new Article 6bis was added providing that the Contracting Parties shall not allow the placement of matter into the sea from vessels, aircraft, platforms or other man-made structures at sea for marine geoengineering activities listed in Annex 4, unless the listing provides that the activity or the sub-category of an activity may be authorized under a permit. New Annex 4 on 'Marine geoengineering' lists 'Ocean fertilization' defining it as any activity undertaken by humans with the principal intention of stimulating primary productivity in the oceans. New Annex 5 adds the Assessment Framework for matter that may be considered for placement under Annex 4. Thus, only one type of geoengineering-ocean fertilization for scientific research-is now permitted under the dumping regime. In 2010, the parties to the CBD also addressed the issue stating that no climate-related geoengineering activities likely to affect biodiversity may take place, until there is an adequate, justified and legitimate scientific basis for such activities with due assessment of the associated risks, which are respectfully justified by the need to gather specific scientific data subject to a thorough prior assessment of potential impacts on the environment (International Law Commission, 2016).

### **Climate Change and Biodiversity Protection Regimes**

It is a double-edged sword: changes in climate exert additional pressure on and have already affected biodiversity, while destruction of biodiversity contributes to climate change; on the other hand, halting deforestation and preserving biodiversity can contribute significantly to climate change mitigation by developing carbon sinks and biodiversity conservation can help build ecosystem resiliency and assist in adapting to the effects of climate change (Roberts, 2010). In 1999, the experts of the United Nations University noted that there are three areas of physical overlap among the main Rio instruments, namely forests, dry land areas and the impacts of

climate change, which could, if made the focus of a collaborative effort between the concerned agencies, yield valuable synergistic actions (United Nations University, 1999). Since then scholars identified some more areas of fragmentation between CC and biodiversity regimes. The main concerns rose in respect of possible conflicts between the Kyoto Protocol and the CBD, namely, climate change rules allow for projects that result in destructive large-scale, monoculture plantations, lack of protection for existing old-growth forests and the use of invasive alien species and genetically modified organisms (van Asselt, 2008). However, there are examples of successful synergy-building between the regimes. In August 2001, three Rio Conventions (CBD, UNFCCC and Desertification Convention) established the Joint Liaison Group as an informal forum for exchanging information, exploring opportunities for synergistic activities and increasing coordination. In 2001, the Ad Hoc Technical Expert Group to carry out an assessment of the interlinkages between biodiversity and climate change was established.

Since the conservation of ecosystems is a common ground for the CC and biodiversity regimes due to the wording of Articles 1(1), 2 and 4(1)(d), 4(8)(g) of the UNFCCC, preamble and Articles 7(2), 7(5), 7(4)(h), 7(9)(e) of the Paris Agreement (Paris Agreement, 2016) and the general spirit of the CBD, the international community may effectively deal with possible overlaps between climate change and biological diversity protection regimes.

### **Climate Change and Human Rights Protection Regimes**

A number of the Human Rights Council resolutions drew attention to potential conflicts, overlaps and synergies between the climate change and human rights regimes (Savaresi, 2017). The 2016 resolution underlines that responses to climate change should be coordinated with social and economic development in an integrated manner and urges governments and various UN bodies to cooperate in integrating climate change and human rights issues (UNHRC Res 32, 2016). The Paris Agreement preamble clearly states that the Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights. Although the UNFCCC seeks to protect the climate system for the benefit of present and future generations of humankind, it does not provide protection to specific human rights. Nevertheless, some initiatives devoted to building synergies between CC and human rights regimes have already been implemented (e.g. the CEDAW Committee Statement on Gender and Climate Change and the UNFCCC COP 22 Decision on Gender and Climate Change).

Another sphere of interlinking CC and human rights is protecting future generations' rights and interests from climate change risks and threats. The decision in the case of *Urgenda vs. Government of the Netherlands* (Ministry of Infrastructure and the Environment) rendered by the Hague District Court on 24 June 2015 is ground breaking, because the national court gave legal standing to an NGO, which defended rights and interests of present and future generations and claimed that hazardous CC threatened large groups of people and human rights. The Court denied the existence of any directly enforceable (individual) right based on the European Convention for the Protection of Human Rights and Fundamental Freedoms (Articles 2 and 8), rather referring to its provisions as a meaningful source of interpretation of the duty of care of a State which implies its responsibility (Van-Zeben, 2015).

One of the consequences of CC is the emergence of 'climate' refugees that is a bright example of fragmentation, which should be settled through the application of climate change, refugee and human rights law. Although provisions of the Paris Agreement on a climate change

displacement coordination facility were deleted from its final text, paragraphs 49-51 of the COP Decision adopted in Paris request a broad group of actors to develop recommendations for integrated approaches to avert minimize and address displacement related to the adverse impacts of climate change (Fornale & Doebbler, 2016). People forced to leave their homes because of climate change cannot be granted protection under the Convention Relating to the Status of Refugees (1951) and its 1967 Protocol. Meanwhile, the determination of refugee status in the context of disasters and climate change may focus on the understanding of disasters as a deeply social phenomenon with a differential impact on individuals and groups, at times owing to their race, religion, nationality and membership of a particular social group or political opinion (Scott, 2016).

### **Climate Change and Trade Regimes**

Due to its potentially growing economic activities with a risk of increased GHGs emissions, international trade affects climate change; conversely, taking measures to reduce GHGs emissions might adversely affect competitiveness and hence reduce countries' willingness to participate in such measures (van Asselt, 2008). The CC-related issues could also be raised before the WTO Dispute Settlement Body, for instance allegedly discriminatory, unfair or inequitable measures taken by States to address climate change might be challenged before this forum (Sands, 2016). The so-called special trade obligations derived from MEAs and relevant COP decisions may restrict international trade. The UNFCCC does not directly restrict trade, but actions of countries, which they take upon its implementation, may have certain implications for trade (World Trade Organization, 2015). Trade-related measures may be identified in the Kyoto Protocol (Articles 2, 6, 12 and 17) and the Paris Agreement (Article 6). The WTO Dispute-Settlement Body have already resolved a number of climate-related disputes and there are several pending ones, for example, *Japan v Canada: Green Jobs and Trade Restrictions*, *EU v Canada Renewable Energy Ontario's Feed-in Tariff*, *US v China: Measures Concerning Wind Power Equipment*, *Canada-Certain Measures Affecting the Renewable Energy Generation Sector*, *European Union and a Member State-Certain Measures Concerning the Importation of Biodiesels*, *India-Certain Measures Relating to Solar Cells and Solar Modules*, etc.

The WTO rules and jurisprudence on environmental issues (including Article XX of the GATT, the issue of processes and production methods and the definition of like products) are relevant for the examination of CC measures. A number of WTO rules may apply to measures aimed at mitigating climate change, such as: disciplines on tariffs (border measures); general prohibition against border quotas; general non-discrimination principle; rules on subsidies; rules on technical regulations and standards; rules for sanitary and phytosanitary measures; disciplines relevant to trade in services; rules on trade-related intellectual property rights which are relevant for the development and transfer of climate-friendly technologies and know-how (WTO, 2015). In their turn, the goal of the Doha agenda set up by the Ministerial Declaration (2001) and the task of WTO Committee on Trade and Environment is to overcome future conflicts and manage possible fragmentation between climate change and trade regimes.

### **Climate Change and Energy Regimes**

Energy and climate change are probably the most interlinked topics. The Kyoto Protocol (1997) refers to energy, energy efficiency and renewable energy in its respective provisions (e.g.

Articles 2(1)(a)(i), (iv), (viii) and 10(b)(i) together with its Annex A which lists energy as a source of GHGs). The Paris Agreement does not explicitly refer to energy sector, however, the COP Decision reminds of the need to promote universal access to sustainable energy in developing countries, in particular in Africa, through the enhanced deployment of renewable energy. Another international document, the Energy Charter Treaty (1994), refers to the UNFCCC in its preamble and defines 'environmental impact' as any effect caused by a given activity on the environment, including climate (Article 19(3) (b)) as does the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (1994) in its Article 2(7).

The scope of the Energy Community Treaty (2005) covers the electricity, gas and oil sectors, which are among the most potent contributors to the total emissions of GHGs. Article 13 of the Treaty states that the Parties recognize the importance of the Kyoto Protocol and each Contracting Party shall endeavour to accede to it. At the same time, one should mention an existing considerable gap between the *aquis* related to climate change applicable in the European Union and the commitments made by the Contracting Parties in the context of the Energy Community, which poses risks to homogeneity in the pan-European energy sectors, the greatest contributors to climate change (Energy Community, 2016). In contrast to the EU legislation related to energy efficiency and renewable energy, no EU legislation in relation to the reduction of GHGs has been incorporated into the Energy Community Treaty system, which poses the threat of fragmented regulation of the matter. Therefore, the revision of Article 13 has been put on the agenda: proposals recognize the necessity of including the reference to the Paris Agreement as well as to the new energy and climate-related European Union's policy and legislation (Energy Community, 2016), especially Regulation 525/2013.

## CONCLUSION

A particular dimension of fragmentation in international law is a possible conflict between universal and regional legal rules which often takes place, for example, between universal and regional human rights law. Within the context of CC fragmentation the problem is more about a possible conflict between universal (regional) legal rules and unilateral acts of states. While European Union unilateralism relating to aviation taxes and shipping emissions may be regarded as an impetus for making CC regime more efficient, American unilateral declaration on the withdrawal from the Paris Agreement may be regarded as undermining universal measures to combat CC. Such measures, undertaken today by Parties to the UNFCCC, Kyoto Protocol, Paris Agreement, the Montreal Protocol, MARPOL, London Protocol, CBD, energy and trade treaties, human rights treaties, ICAO instruments in order to contribute to global efforts, pose additional restrictions to sovereign rights of Parties to those treaties but are regarded by them as necessary steps for overcoming negative consequences of CC fragmentation. Sustainable development paradigm obliges states to integrate their policies on protection of the air from pollution, ozone protection, protection of the sea from pollution, biodiversity protection and human rights protection as well as trade and energy policies and sacrifice something for the benefit of humankind.

The authors argue that it is impossible to get effective solutions to CC threats without close cooperation between different self-contained regimes such as climate change, ozone protection and protection of the atmosphere from pollution, weather modification, marine environment, biodiversity, human rights, trade and energy. This cooperation and integration must

be carried out at international as well as national level. Unilateralism must be subordinated to multilateralism, though sometimes unilateral acts of states boost multilateral negotiations and promote synergy between the CC and other self-contained regimes. Though measures undertaken by Parties to the UNFCCC, Kyoto Protocol, Paris Agreement, the Montreal Protocol, MARPOL, London Protocol, CBD, energy and trade treaties, human rights treaties, ICAO instruments pose additional restrictions to their sovereign rights but are necessary steps for overcoming negative consequences of fragmentation in CC regime. This article provides guidance for further scientific research on the fragmentation and synergies concerning climate change regime, especially with regard to new developments such as unilateral declaration of the USA President to withdraw from the Paris Agreement, Kigali Amendment to the Montreal Protocol, work of the UN International Law Commission on the protection of the atmosphere or the Energy Community Treaty reforming initiatives.

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