Center for Open Access in Science

Open Journal for

Legal Studies

2022 ● Volume 5 ● Number 1

https://doi.org/10.32591/coas.ojls.0501

ISSN (Online) 2620-0619

OPEN JOURNAL FOR LEGAL STUDIES (OJLS)
ISSN (Online) 2620-0619
www.centerprode.com/ojls.html * ojls@centerprode.com

Publisher:

Center for Open Access in Science (COAS), Belgrade - SERBIA
www.centerprode.com * office@centerprode.com

Open Journal for Legal Studies, 2022, *5*(1), 1-30.
ISSN (Online) 2620-0619

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ISSN (Online) 2620-0619

Center for Open Access in Science ▪ https://www.centerprode.com/ojls.html
Open Journal for Legal Studies, 2022, *5*(1), 1-10.
ISSN (Online) 2620-0619 ▪ https://doi.org/10.32591/coas.ojls.0501.01001s

Legal Issues of Children's Personal Data Protection

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Received: 14 March 2022 ▪ Revised: 28 May 2022 ▪ Accepted: 15 June 2022

Abstract

The article deals with the problems of protecting the information privacy of minors in the online gaming sector. The authors analyze core approaches and methods of collection and processing of minors' personal data, special regulation of data processing of children's audience in light of some private company's experience, current liability practices, and also offers a set of legislative measures to improve the effectiveness of children's data protection both at the international and national level, measures for implementation of data subject rights.

Keywords: personal data protection, minors, gaming industry, consent to processing, minimization.

1. Introduction

The growing threat to the protection of the information privacy of children and minors in the game industry is gradually expanding its borders, together with the problem of tightened legislative requirements for companies to maintain their personal data still remains relevant.

The aim of the article is to analyse the legal regulation of the protection of personal data of minors and different methods of collecting and processing such data both on a national and international level.

This article is an evaluating study of minors' personal data protection as a whole. In view of the fact that the legal capacity of a child in an online environment remains an under-researched topic, the study aims at systematically describing the characteristics of children's rights and legal guarantees related to collecting and processing of their personal data. A qualitative approach and descriptive data by gathering observations without intervening were followed in this study.

In our view this is the most suitable approach to answering the research questions considering the legal orientation of the issue and diversity in national personal data regulation. No ethical considerations were involved in the choice of the information gathered.

The article is based on the comparative overview of data protection legislation. The research is grounded on dialectical, formal logical methods, methods of synthesis and analysis, comparative legal methods.

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- In recent years countries have adopted data protection laws with special requirements for collection and processing of personal data.
- Children's personal data should be afforded special protection by legislative and GameDev companies' measures by design and by default.
- Determining the optimal way to balance children's rights and the commercial benefits pose a lot of difficulties for business operation in different jurisdictions with unsimilar legislative approaches.
- The evidence from this study points out that governments with GameDev companies' collaboration should define the age limit for minor data subjects, the requirements for granting minors access to gaming services, develop and provide clear recommendations for data controllers on the processing of minors' data, promote and use international certification procedures for online platforms and services aimed at children's audience.

2. Discussion

In 2016, the EU adopted the General Data Protection Regulation (hereunder – GDPR). According to Preamble 38 to the GDPR, "children merit specific protection with regard to their personal data" due to their insufficient physical and psychological maturity, falling into the category of "vulnerable persons" who often have no recourse. For this, in order to prevent children from spreading their personal information, a number of additional obligations and restrictions were imposed on the controllers prior to the provisions of Article 8 of the GDPR. As said in paragraph 127 of the Guidelines 05/2020 on consent under Regulation 2016/6791, provisions of Article 8 of the GDPR are applicable to a limited number of situations where the following conditions are met.

Firstly, the processing of personal data is related to the offer of *information society services* directly to the child. As said in Explanations of the European Court of 2 December 2010 for case C-108/09, (Ker-Optika), it is explained that the scope of the term "information society service" includes a variety of services carried out and transferred online.

Secondly, Article 6(1)(a) and Article 7 of the GDPR confirm that lawful processing is ensured by the data subject's consent to the extent that "the controller shall be able to demonstrate that the data subject has consented to processing of his or her personal data".

Accordingly, the scope of Article 8 of the GDPR applies across sectors of the GameDev industry to companies of all sizes that offer online gaming services for the category of minors in the EU.

Probably the key factors for considering whether a particular service is subject to regulation are the likelihood of being attracted to the content of the service and the way the user can access the service. For this, the term "apply directly to a child" can be interpreted broadly, expanding its scope beyond businesses targeted to children, i.e., it can include services which have more than 50% possibility to be accessed by children.

Accordingly, for GDPR compliance, children's consent and parental responsibility are mandatory to be provided from the standpoint of technical processes of these services.

Now, whilst the GDPR does allow EU Member States to enact specific laws that deviate from the GDPR in several areas, most of the acts at the EU national level re-affirm the obligations regarding special regulation of the collection and processing of children's personal data.

As an example, for Irish policy makers and regulators, protection of children's personal data has become a priority target in recent years. With respect to the General Comment №25 on the UN Convention on the Rights of the Child (hereunder – the UNCRC), adopted by the

Committee on the Right of the Child on 2 March 2021, explicitly stating that children's rights under the Convention are to apply to the digital environment, the Irish Commission for the Protection of Personal Data has issued a comprehensive guidance on the processing of children's data "Children Front and Centre: Fundamentals for a Child-Oriented Approach to Data Processing" (abbreviated as "the Fundamentals"). The Fundamentals stipulate 14 child-specific data protection interpretative principles for organisations to reduce the data processing risks posed to children by the use of and getting access to online services: providing a minimum level of managing the security of personal data (a so-called "floor" of protection for all users), a "clear-cut" consent, which comes as the legal basis for processing through freely given, specific, informed and unambiguous statement, child-oriented transparency regarding children's audiences and prohibition of profiling (or automatic processing of personal data aimed at defining personal aspects of a natural person) of a child. [2]

The Irish Fundamentals consider the imbalance of power the user-child may possess in relation to online interaction and solve the problem by implying the obligation for controllers to ensure consent is "freely given." This formulation seems to suggest consent to be *understandable* for young users. Obviously, it is only through respecting this condition that it will be made possible to rely on consent as the legal basis for processing children's data.

In addition to the principal GDPR provisions, the specific Fundamentals also include such models of interaction as:

- "Zero interference relying on a child's best interests": allows organisations to rely on legitimate interests as a core legal basis for processing;
- "Know your customer" procedure focused on child-oriented transparency;
- Specific guidance around age verification and consent.

By implying the above-mentioned requirements, the Fundamentals aim at protecting the best interests of children and setting a default floor of high standardised protection for all data subjects including the minor user audience. [7]

Likewise, the Age-Appropriate Design Code (abbreviated as the Children's Code) concerning processing of personal data of children using commercial information society services, such as streaming services, online games, applications, news and education portals, came into force in Great Britain a few months ago (in December 2021). The Children's Code was designed to provide a risk-based approach to protecting children's personal data, keeping the balance between the free usage of benefits provided by online services to their young audience and 15 obligatory standards for companies engaged in minors' data collection work. In addition, there is an extraterritorial scope of the application: provisions of the Code apply whenever the company is a British legal entity or a foreign organisation specifically targeted at children including UK citizens. [4]

Today, as regulatory controls of minors' privacy are being actively implemented by European governments in the digital arena, U.S. legislation is setting its own standards to provide adequate protection of children's privacy interests. From the year 2000 onwards, the Children's Online Privacy Protection Act came into force on a federal level in the USA and has made a commendable development in reducing the risks to the rights and freedoms of children that may appear in the process of accessing the services through digital and online technologies. Notably, provisions of Children Online Protection Act (abbreviated as the COPPA) firstly established the principle of zero interference with the best interests of a child (zero-data process) including norms to abolish the processing operations consisting of profiling and targeted/ behavioural advertising activities related to the child's personal data. [3]

Let's consider and compare the legislative approaches in other countries. By "legislative approaches" we mean the range of legislative responses addressing the dynamics of

the data protection and privacy relations. Depending on various national legislations' frameworks and different personal data classification, the scope of regulation and penalties for data privacy infringement are different. For example, as for the Chinese privacy regulation, The Personal Information Protection Law of the People's Republic of China (shortened to PIPL), a federal data privacy law went into effect on 1 November 2021, establishing a set of rules on methods for the collection, use, processing, and transfer of personal data. The PIPL lays down key legal compliance initiatives on the part of Chinese legal entities and foreign organisations operating in China and enhances the existing data protection regime of handling of children's personal data laid down in 2019 by the Provisions on Cyber Protection of Personal Information of Children (abbreviated as the PCPPIC). Some specific requirements as defined prior to Article 29 of the PCPPIC relate to the collection, storage, use, transfer, and destruction of children's personal data within the PRC territory online. The provisions of PIPL, inter alia, include the obligation for data controllers to implement particular methods for protecting children's personal data that are automatically classified as "sensitive information". [8]

In respect of operators (people handling various privacy-related activities towards a child, like collecting or processing, the principle of "minimising authorization" is established by Articles 16 and 17 of the Regulation: each network operator shall establish strict access requirements for employees who use the personal data of children as part of their work responsibilities. [6]

Ukrainian legislation, for its part, introduced the draft Law "On Personal Data" of 6 July 2021, following the principles of proportionate data collection in the interests of the child.

We showed that countries follow the line of main international legal instruments on data protection, such as fundamental right and international standards of protection of privacy recognized by the United Nations and EU General Data Protection Regulation which provided impetus to global changes in this field.

Also an overview of Russian legislation (Federal Law of 27 July 2006 No. 152-FZ on Personal Data, Articles 23 and 24 of the Constitution of the Russian Federation of 12 December 1993; Federal Law of 27 July 2006 No. 149-FZ on Information, Information Technologies, and Protection of Information, Federal Law No. 149-FZ on Information, Information Technologies and Information Protection (2006) and Chapter 14 of the Labour Code of the Russian Federation (2001) with subsequent changes) showed the similar approach to the scope, principles of data collection and processing, obligations for data operators and based on the international instruments on privacy and data protection in certain aspects. However, few legal acts cut across the youth issue. Some of the requirements for the dissemination of information about a minor in the mass media are established by the Law of the Russian Federation "On Mass Media" No. 2124-I of 27.12.1991 and the Federal Law of the Russian Federation "On the Protection of Children from Information Harmful to their Health and Development" No. 436-FZ of 29.12.2010. Through the implementation of the minors' personal information regulation existing the Article 1.1. 64 of the Family Code of the Russian Federation and p. 3, Article 3, Article 9 of the Federal Law of the Russian Federation "On the Protection of Personal Data" №152-FZ of 27.07.2006 it can be stated that the right to consent to the use of personal information about a child is vested in his or her parents (or legal representatives).

A similar specification was also introduced in the Republic of Belarus with the enforcement of the "Personal Data Protection" act on 15 November 2021. The act itself was developed to control the personal data security of each individual citizen including children, by bringing some requirements for the procedure for obtaining consent in terms of processing of a child's personal data. A same-titled law was also issued in the Republic of Uzbekistan: Article 21 of the abovementioned act lays down the following obligation: "For minor subjects, consent to the processing of their personal data in writing, including in the form of an electronic document, is

given by parents (guardians, trustees), and in their absence — guardianship and guardianship authorities."

Taken together, at the moment the legislators of the Eurasian Economic Union (EAEU) countries and most other Eastern European states are gradually moving to special regulation of personal data in relation to children and do not seek to unify all data subjects, taking into account the peculiarities of their self-awareness and the degree of vulnerability of each, thus forming requirements for organisations, mostly in the gaming industry, using the personal data of minors.

It is presumed that strict obligations shall be implied for controllers for the sake of children's privacy. However, what are the key criteria for the maturity threshold in terms of special data safety procedures? Legislators emphasise the need to define the minimum age limit for data processing subjects.

In the European Union, the general rules for the age restriction on the processing of personal data of a minor are enshrined in Article 8(1) of the GDPR, establishing that "the processing of a child's personal data is legal only if the child is at least 16 years old." Thus, in a situation when a child under the age of 16 is unable to give consent personally, it is provided by "a person who has parental rights in relation to the child". Article 8 of the GDPR provides for the possibility of EU member states to independently lower the age limit with a common minimum threshold of 13 years, therefore the age of consent varies in each of the EU member states. The UK Children's Code defines a child as "a person under the age of 18" with reference to the definition introduced in Article 1 of the aforementioned UN Convention on the Rights of the Child. In Germany, Lithuania, Slovakia, Hungary, and the Netherlands the age in question reaches 16 years; in Austria – 14 years; and in France – 15 years.

Following the §312.2 COPPA USA provision, the term "child" can be understood as referring to an individual under the age of 13. [3]

In the Chinese PCPPIC, a person under the age of 14 is considered a minor and, thus, is subject to protection. So far, the Chinese authorities have begun to pay special attention to the problems of gambling addiction among young people. For that purpose, mandatory registration under real names was officially introduced in a number of popular games, on a par with the expanded age limit in 2019: for example, PCPPIC applies a ban on persons under the age of 18 for playing between 22:00 pm and 8:00 am. [1]

The legislation of the Russian Federation, the Federal Law No. 152-FZ of 27.07.2006 "On Personal Data", in particular, does not indicate the age limit for processing personal data. At the same time, part 1 of Article 64 of the Family Code identifies a person under the age of 18 with the term "minor", whose rights are protected by parents and legal representatives. [5]

As for Belarusian legislation, 16 years is considered old enough for the data subject to reach the "age of consent" as said in paragraph 9 of Article 5 of the Law of the Republic of Belarus "On Personal Data Protection".

Thus, a lack of unification international approaches for determining the minimum age threshold of subjects requires companies in the gaming industry to either add resources for tracking regulations in targeted jurisdictions or give access to some of its products to underage users.

In order to understand issues of organisations we evaluated requirements in different jurisdictions.

Organisations can independently determine the mechanisms for verifying the age and authentication of the data subject, provided that this mechanism shall not contradict any of the abovementioned requirements and principles. However, determining the optimal way to balance

children's rights and the commercial benefits can pose a lot of difficulties for optimising an online platform's processes.

A comprehensive list of requirements is found in the provisions of COPPA USA, specifically §312.5 (b), under which verification of a parent's consent shall be carried out in the following ways: by signing the consent & sending it via e-mail, or transactions with payment systems or through video/audio communication with company representatives.

The requirement to ensure transparent information and communication regarding the rights of the data subject as well as the regime for exercising said rights is prescribed in the general rule of Article 12 of the GDPR.

At this stage, a hardest moment comes for both controllers and data operators due to (1) increased control over minors' access to the service – and, consequently, the complication of the process of collecting the necessary information on the identity of the child/parent, and (2) the development of a tendency to minimise the amount of data being collected and limit the purpose of its collection. Today, there is no legally established detailed procedure for age verification or obtaining parental consent.

Furthermore, the legal basis for processing shall be taken into account. In countries regulated by Article 6(1) (f) of the GDPR, companies can use legitimate interest as a legal basis for processing children's data, provided they take particular caution to balance minor's rights.

A balanced approach between the legal basis for processing composes a complicated task for the controller and contains some peculiarities relating to national legislation. E.g., in Ireland the vital interests of the child may form the legal basis for processing. According to the Fundamentals, "the GDPR and data protection in general, should not be used as an excuse, blocker or obstacle to sharing information where doing so is necessary to protect the vital interests of a child or children."

This forms the obstacle for organisations to use legitimate interests as the legal basis for processing children's information, as it actively contradicts a zero-tolerance approach in this provision of the Fundamentals. It is explained by the Irish DPC guidelines, prescribing that "the child's interests or fundamental rights should always take precedence over the rights and interests of an organisation which is processing children's personal data for commercial purposes."

Therefore, in circumstances where the choice between the best interests of the child and a legitimate interest is required, the best interests of the child takes precedence.

In most national legislations, when defining a legal basis for data processing of a child, parental or legal guardian consent tends to be enough. Still, given the primary focus on a child's best interests, there are cases in which said interests may not be subject to consent. E.g., Brazilian law allows the exceptions to Article 14, Section 1 of the LDPR, requiring parental consent when processing children's data. As stipulated in Section 3 of the article in question, children's personal data may be collected without the consent when contacting the parents or a legal guardian is necessary, and as long as the data is used once and is not stored, or for their protection, and under no circumstances shall the data be passed on to third parties without consent as provided in §1 of this Article.

In the scenario described above obtaining consent may be impossible, for example, when there is physical separation between the child and the parents, that's why the child's best interest will be prioritised over parental consent. [9]

It should be noted that violating the requirements of personal data security entails corresponding responsibility both to the organisation that collects and stores data and to its partners.

Practice shows that in order to ensure compliance with GDPR requirements and national regulations, manufacturers of children's online platforms should take into account modern approaches to product monetization. Many gaming platforms regularly provide users with the opportunity to make purchases inside the system (or loot boxes, in other words).

Thus, any violation of the requirements regarding personal data entails strict liability in accordance with the GDPR – a fine of up to 20,000,000.00 euros or 4% of the company's annual global income – as well as in national NPAs. For instance, a breach of personal data protection requirements according to the legislation of the EAEU countries, such as Belarus, Russia and Kazakhstan, entails administrative or criminal liability.

The maximum administrative fine in the Republic of Belarus reaches up to 200 Belarusian roubles (Article 23.3 of the Code of the Republic of Belarus on Administrative Offences), up to 75 thousand Russian roubles – in the Russian Federation (Article 5.39 of the Code of the Russian Federation on Administrative Offences). The Code of the Republic of Kazakhstan on Administrative Offences, in turn, determines the amount of responsibility based on the growth indicators of an organisation – a fine of up to seven monthly calculation index is imposed for violations of personal data protection requirements by large businesses (Article 79 of the Code of the Republic of Kazakhstan on Administrative Offences).

Current research appears to support the need for cooperation between the state and business. A good example of the involvement of private organisations in ensuring an appropriate level of protection of personal data of minors can be seen in the application of the kidSAFE voluntary certification procedure. [10]

Designed independently from the GDPR, this certification effectively contributes to an assessment of the impact on the protection of personal data, thus, it doesn't constitute a substitute for the DPIA procedure in the EU (PIA in the USA). By passing the kidSAFE certification, the business can determine a particular risk, for which the working body – in this case, EDPB – will be required to establish a list of processing operations for the introduction of further changes.

Thus, the kidSAFE international certificate either enables to define the credible rating of a particular organisation or show its feasible reputational losses, since the legal force of such a certificate doesn't make sense without independent verification by the controller, the DPO, and, after all – by the supervisory authority and the European Council for Personal Data Protection.

3. Conclusion

Based on the foregoing, our results show that with respect to the EAEU countries' legislation unlike EU and USA legislation, lack of special regulation for the processing of minors' data is a rising issue.

Among the participants of the EAEU (Russia, Armenia, Belarus, Kazakhstan, and Kyrgyzstan) Russia was taken as the first country adopted Data Protection Law, the Republic of Belarus was taken as an example of reflection to GDPR's main principles and rules. It is important to notice that other EAEU countries are not directly apply EU General Data Protection Regulation on their territory but follow the common mainstream.

Taking into account the high risks and peculiarities of working with information regarding children's personal data, their role in the gaming industry market, which is growing its volume, it is possible to point out the following legislative requirements for online gaming services' *legal purity*:

- to define the age limit for minor data subjects, information about which will belong to the category of "sensitive data";

- to highlight the requirements for granting minors access to gaming services: confirmation of consent by parents; the procedure for identification and age verification;

- to implement the principles of "data minimization" and "goal restriction" for minors through greater anonymization of the data subject (for example, by introducing a ban on targeted advertising or restrictions for monetization of games aimed at a children);

- to develop and provide clear recommendations for data controllers on the processing of minors' data, on the provision by data controllers of clear, complete and understandable privacy policies for minors;

- to promote and use certification procedures for online platforms and services aimed at a children's audience, including allowing the usage of international certificates and giving them proper legal force, for example, the use of kidSAFE certification.

Acknowledgements

This research did not receive any specific grant from funding agencies in the public commercial, or not-for-profit sectors.

The authors declare no competing interests.

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Center for Open Access in Science ▪ https://www.centerprode.com/ojls.html
Open Journal for Legal Studies, 2022, *5*(1), 11-18.
ISSN (Online) 2620-0619 ▪ https://doi.org/10.32591/coas.ojls.0501.02011s

Factors that Encourage the Implementation of Alternative Dispute Resolution Between Indigenous Peoples and Corporations in Indonesia

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Received: 23 February 2022 ▪ Revised: 11 June 2022 ▪ Accepted: 27 June 2022

Abstract

In essence, customary law prioritizes the existence of deliberation and consensus, both in the family, kinship, neighborliness starting a job or in ending the work between one and the other, preferably the way of settlement in harmony and peace with deliberation and consensus, by forgiving each other without having to rush the relationship directly brought or delivered to the state court. However, it is necessary to evaluate in-depth the implementation of alternative effectiveness of environmental dispute resolution to comply with local wisdom to realize social justice. Therefore, the authors examined the factors that influence the implementation of alternative environmental solutions with the type of socio-legal research and enforcement of legal sociology.

Keywords: dispute resolution, environment, indigenous peoples, corporations.

1. Introduction

The protection of indigenous peoples for their traditional rights is enshrined in ILO C 169 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) emphasizes the rights of ownership and ownership of the people concerned over the land they traditionally occupied and their control over their economy. It is also stated in the Constitution of the Republic of Indonesia in 1945 (hereinafter abbreviated as the 1945 Constitution) Article 18b (2) stipulates that the State recognizes and respects the unity of indigenous peoples and their traditional rights as long as they are alive and by the development of society and the principles of the Unitary State of the Republic of Indonesia, which is stipulated in the law. It is also emphasized in Article 32 paragraph 1 of the 1945 Constitution that the State of Indonesia has aspirations to advance national culture in world civilization by guaranteeing the freedom of the people in maintaining and developing their cultural values (Convention ILO 169..., 1989). From the concept of recognition and respect of indigenous peoples, there is a spirit to show social justice by giving freedom to express the identity of local culture as widely as possible which is reflected in the noble values of indigenous peoples who still live in the middle of the political constellation of law in Indonesia.

In essence, customary law prioritizes the existence of deliberation and consensus, both in the family, kinship, neighborliness starting a job or in ending the work between one and the other, preferably the way of settlement in harmony and peace with deliberation and consensus, by

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forgiving each other without having to rush the relationship directly brought or delivered to the state court. However, the existence of a green constitution along with the recognition and respect of customs contained in the constitution (law in the books) has not yet fully built a strong interdependence (law in action) to create environmental justice. This was also conveyed by Rachmad Safa'at, a paradigm of industrialization based on the ideology of capitalism that relies on the paradigm of modern science that considers that tradition is a problem and a barrier to development (Rachmad Safa'at, I Nyoman Nurjaya et al., 2015).

In 2017, the movement of Samin people began to be seen again in the fight against the government's indifference during the process of issuing environmental permits followed by PT Semen Gresik's business license (semen – cement) in the environmental utilization plan in the forest sector located in Pati and Rembang Districts, Central Java Province. Deep ecology theory "however despite repeated complaints about the use of them it still enjoys wide currency, deep evidently has an attractive resonance for many who seeks to establish a new respect for the natural world", the role of traditional societies that uphold ideas, values, and fairness with local wisdom, as well as maintaining ecological balance involving Samin communities with the consistency of living values evidenced by rejecting the exploitation of Kendeng mountains which are cement raw materials as a PT expansion plan of Semen Gresik (Laksanto Utomo, 2013).

The resistance that led to the foot-grazing action in front of the State Palace (Johnson Simanjuntak, 2016) also gained sympathizers from various other indigenous peoples and local residents who could potentially be affected either directly or indirectly on the project to be carried out. Long before 2017, long before the verdict of PK MA that defeated Semen Indonesia against farmers Rembang and Walhi, this state-owned company suffered defeat against the citizens of Samin in Pati Regency, Central Java. Samin residents sued the plan to build a cement plant in the area and won it in a lawsuit at PTUN and MA in mid-2009. Relatively many companies have legally committed pollution or damage to the environment but have not received any real action. This can be caused by weak legal tools, authority of law enforcement officials, and the occurrence of conflicts between economic interests and social and environmental interests.

Some examples of environmental destruction in Indonesia are quite large, among others, the first, in 1996 there was damage to tropical forests in the lowlands covering an area of 30 km^2 caused by waste disposal from PT Freeport Indonesia. This waste disposal is acidic and toxic that flows into the Ajkwa River and damages the river's ecosystem. Second, in 1999 the disposal of PT Newmont Minahasa Raya (PT NMR) tailings to the seabed was feared to have an impact on marine ecosystems. Walhi in 2001 urged PT NMR to build an environmentally friendly tailings disposal system, but to date, there has been no realization.

In June 1998, the pulp mill of PT Inti Indorayon Utama (PT IIU) was suspended due to alleged environmental damage. It resumed operations in September 1998, then was suspended in March 1999, and resumed operations in May 2000. The community around the plant still demands the closure of PT IIU. Third, the great flood in February 2002 that occurred in Jakarta is suspected to be one of the causes is the conversion of the function of the water catchment area into housing, hotels, and golf courses. The community accused the residential area of Pantai Indah Kapuk which was the cause of the flood (Purwantari, 2002). Examples of cases that were resolved through mediation in Balongan Village, West Java, between Farmers Tambak Balongan village with PT. Pertamina RU VI Balongan has been conducted through alternative dispute resolution by mediation by the procedures determined by the parties facilitated by the Ministry of Environment.

The mediation result, made in the form of an agreement between Farmers Tambak Balongan village with PT. Pertamina RU VI Balongan on the settlement of community compensation and certain actions for the recovery and improvement of the environment. Second, the implementation of mediation results of environmental dispute resolution between the

community of farmers along a village pond with PT. Pertamina RU IV Balongan has been done well by the parties, namely reimbursement of compensation to Farmers Pond of Balongan village and to the Ministry of Environment to take certain actions in the form of environmental countermeasures and recovery. Not only in Balongan village, but environmental disputes through mediation also occurred in Bali regarding wastewater and wastewater pollution by Amed Hotel in 2011 located in Amed Beach, Karangasem District, through mediation and has reached an agreement, namely that the Amed Hotel will repair septic tanks and will manage the waste in collaboration with the local village community (Komang Tri Darmayanti et al., 2012). Therefore, an alternative evaluation of environmental dispute resolution is required to effectively examine the factors that encourage the implementation of alternative dispute resolution between indigenous peoples and corporations in Indonesia.

2. Methodology

This study uses a type of socio-legal law research with a legal sociological approach that is conceptualized as actual behavior as an unwritten social symptom, which is experienced by everyone in a social life relationship. The location of the investigation is in the Central Java Rembang regency. The primary data in this study is obtained from direct facts of the field, while secondary data is in the form of legislation relevant to the research. The sociological approach is used because analyzing the impact of alternative failure settlement is very suitable in describing the legal culture in the community concerned.

3. Discussion

Lawrence M. Friedman (1975) presented a Theory of Legal System in which there are three main elements of a legal system, including Structure, Substance, and Culture. The Structure of Law according to Friedman is "The structure of a system is its skeletal framework; ... the permanent shape, the institutional body of the system." This means that the structure of a system is its framework; a permanent form, the institutional body of the system. The substance of law is "The substance is composed of substantive rules and also about how institutions should behave." This means that the substance of the law consists of substantive rules and also how institutions should behave. Legal culture according to Friedman is "... the element of social attitude and value. Behavior depends on judgment about which options are useful or correct."

Legal culture refers to those parts of general culture-customs, opinions, ways of doing, and thinking that bend social forces toward or away from the law (Friedman, 1975). This means that legal culture is an element of social attitudes and values. Behavior depends on an assessment of which options are useful or correct. Legal culture refers to parts of the general culture – customs, opinions, ways of doing and thinking – that deflect social power toward or away from the law.

Friedman's theory shows that legal culture is the deciding factor in a policy's success. From the results of the study there are several legal behaviors that are accepted in the community into a variable determining the direction of the law in force in the community. The legal behavior is configured against the resolution of environmental disputes and raises factors that influence its success. The factor can be identified into 2 which consists of driving factors and obstacles to dispute resolution outside the court.

3.1 *Factors that encourage the implementation of alternative dispute resolution between indigenous peoples and corporations in Indonesia*

(1) Faster completion (Wahyu Nugroho, personal communication, 2021)

Settlement of environmental disputes if done outside the court will be resolved faster than the judicial process in general. This is in accordance with the settlement through the court (litigation) based on the instruction of the Chairman of the Supreme Court of the Republic of Indonesia on 13 March 2014, has issued a Circular Letter of the Supreme Court of the Republic of Indonesia No. 2 of 2014 concerning the Settlement of Cases in the First Court and the Level of Appeal on 4 (Four) Judicial Environments.

The points of the circular letter are the settlement of cases in the First Level Court no later than 5 (five) months including the settlement of the situation. Against the nature and circumstances of certain cases whose settlement takes more than 5 months, the Panel of Judges handling the case must make a report to the Chairman of the First Tier Court with a copy addressed to the Chief Justice of the Court of Appeal and the Chief Justice of the Supreme Court; settlement of the case at the Court of Appeal no later than 3 (three) months including the settlement of the situation.

Against the nature and circumstances of certain cases whose settlement takes more than 3 months, the Panel of Judges handling the case must make a report to the Chief Justice of the Court of Appeal with a copy addressed to the Chief Justice of the Supreme Court; The grace period does not apply to specific matters that have been determined based on the laws and regulations; For the effectiveness of monitoring compliance with case handling by the above period, to enter case data in electronic-based case management information systems on time. Based on the above explanation that the settlement process through litigation takes a long time and requires relatively little cost. This is due to the slow settlement process, the cost of speaking inexpensive courts, the court is considered less responsive in the settlement of cases, so that the verdict is often unable to solve the problem and the accumulation of cases at the MA level are not resolved.

While non-litigation or out-of-court settlements protect the civil rights of the parties to the dispute in a faster and more efficient manner. Not all members of the public understand environmental dispute resolution processes either litigation (through the courts) or non-litigation (out of court). Therefore, academics and governments must socialize environmental dispute resolution mechanisms to the community. Public knowledge of environmental disputes and their settlement process can be used as a function of control over activities that harm the environment. This is intended for members of the legal literate community. In addition, out-of-court dispute resolution agencies must be established immediately.

(2) Low cost (Wahyu Nugroho, personal communication, 2021)

Environmental settlement through litigation requires substantial costs in terms of litigation costs, operational costs, and the calling of members. In addition, the cost of proof is also relatively more expensive because it must be strengthened by environmental laboratory tests and other supporting evidence. This is different from non-litigation settlements that can force the parties concerned and do something for the resolution of different disputes than if both parties have the same concerns. The ways taken to resolve disputes are strongly influenced by the prevailing system in society. This aspect is a consideration for the parties involved in determining the way that it considers the best and small risk. The process of resolving disputes/conflicts in the community is fractured and developed. Then came an alternative dispute resolution (ADR).

This form emphasizes the development of cooperative methods of conflict resolution outside the court. ADR dispute resolution methods are consensus, acceptable to the parties to the dispute (mutually acceptable solution) with an “informal procedure”. Much of the criticism was

leveled at the court. This is not only in Indonesia but also in developed industrialized countries. The development of a society that demands speed, confidentiality, efficiency, and effectiveness and maintains the continuity of existing relationships, cannot be responded to by existing litigation institutions, which received a lot of criticism in its operations are considered slow, expensive, waste energy, time and money and open and cannot provide a win-win solution so that the concept of alternative dispute resolution offered received a positive response, especially in the business world that requires efficiency and confidentiality as well as sustainable relations/cooperation and in formalistic and wants a settlement that emphasizes more on justice.

(3) Simple (Wahyu Nugroho, personal communication, 2021)

Settlement is simpler because it can be done anywhere with flexible time, in addition to the good intentions of both parties can be conveyed easily and delivered clearly. Thus, it will bring forth prudent solutions in the resolution of environmentally sound and sustainable disputes. This is in contrast to settlement through litigation which in terms of the examination process tends to be rigid or normative, in its interaction using formal words and legal language so that it is less clearly interpreted.

(4) Win – win solution (Zaenal, personal communication, 2019)

There is a balance of position between the parties and provide solutions that are not only good to the company, the affected community but also good to the environment itself. ADR (Alternative Dispute Resolution) which was originally an out-of-court dispute resolution concept that emphasizes win-win solution products in their development in the United States is integrated into the proceedings in court-connected dispute (CDR) or Court Annexed Dispute Resolution (CADR). Alternative Dispute Resolution (ADR) is the concept of cooperative out-of-court conflict resolution directed at an agreement or solution to a conflict or win-win dispute. The intended "win-win" solution here is a solution or agreement that can reflect the interests or needs of all parties involved in the conflict (shared interest). Although at the beginning of its development, especially in the United States ADR is only a mechanism of conflict resolution outside the court, but now ADR is also developed in terms of court proceedings or ADR integrated with the ADR court-connected court system.

(5) Maintaining local wisdom (Ronald, personal communication, 2019)

Customs in Indonesia tend to solve all problems through deliberation by the values that live in the community. The customary values that exist in an ethnic community are a reflection of the mindset of the community that forms local wisdom. the principle of local wisdom that in the protection and management of the environment must pay attention to the noble values that apply in the community's living system. Local wisdom is part of the community to survive according to environmental conditions, according to needs, and beliefs that have been rooted and difficult to eliminate. Local wisdom is a local knowledge used by the community to survive in an environment that integrates with belief systems, norms, cultures and is expressed in traditions and myths embraced over a long period. The functions of local wisdom are as follows. First, as a marker of the identity of a community.

Second, as an adhesive element (cohesive aspect) across citizens, religions, and beliefs. Third, local wisdom gives a color of togetherness to a community. Fourth, change the mindset and reciprocal relationships of individuals and groups by putting them on the common ground/ culture. Fifth, encourage the awakening of togetherness, appreciation as well as a joint mechanism to eliminate the possibilities that permit, even undermine, communal solidarity, which is believed to originate and grow above the common consciousness, of an integrated community. Local wisdom is a manifestation of the behavior of certain communities or communities so that they can coexist with nature/environment without having to damage it. Local wisdom is a superior activity in certain societies, the excellence is not always tangible and material, often contained elements

of belief or religion, customs and culture or other useful values such as for health, agriculture, irrigation, and so on.

Referring to this understanding can also be explained that local wisdom is deeply rooted, fundamental, and has become a form of behavior of a citizen to manage and maintain the environment wisely. The settlement based on local wisdom will show the existence and spirit of the soul of the nation (folkgeis) in achieving harmony in the community in maintaining its environment to remain sustainable. The existence and value of local wisdom that hangs its life in the forest and agriculture can continue to be maintained sustainably.

(6) Sustainable development (Fatilda, personal communication, 2020)

It is intended to create a good and trustworthy business climate because it is oriented towards sustainable development and environmentally sound. The resources in the area are part of the buffer system of people's lives, so the community is a development resource for the region. The welfare of the community is a unity and an integral part of the sustainability of resources in the region. Sustainable development is a conscious and planned effort that combines environmental, social, economic aspects into development strategies to ensure environmental integrity and safety, capability, well-being, and quality of current and future generations. Development always brings change and impact, positive and negative.

The positive impact is one of the goals of the implementation of development, namely positive changes for humanity in achieving its welfare. The concept of sustainable development has arisen because so far, not only in Indonesia but also around the world, especially in developing countries, development is less concerned with aspects or negative impacts on the environment, both biological aspects (ecosystem damage and biodiversity extinction) and non-hayati (socio-cultural).

Before the concept of sustainable development was announced, development was dominated by economic considerations, almost without considering its negative impact on the environment. instruments to achieve the objectives of the sustainable development with the AMDAL an activity or business that influences the environment will be more careful first when going to conduct such activities or businesses. If there is no AMDAL, then the three sustainable development objectives, both economic goals, social goals, and ecological goals will not be realized. It will even jeopardize the existence of current and future generations.

(7) The creation of food security (Wahyu Nugroho, personal communication, 2021)

The policy focuses on sustainable food security. Food security concerns the dimensions of availability, access, utilization, and stability of food. In Indonesia, in Law No. 18 of 2012 on Food, food security is defined as the condition of food fulfillment for countries up to individuals, which is reflected in the availability of adequate food, both in quantity and quality, safe, diverse, nutritious, evenly, and affordable and not contrary to religion, beliefs, and culture of society, to be able to live healthy, active, and productive in a sustainable manner. The above definition affects the size in looking at food security. Food security has four dimensions, namely availability, access to food, utilization, and stability of food stocks and prices. With these four dimensions, sizes are made to see food security. The existence of local wisdom system in the management of natural resources owned by indigenous peoples, especially in meeting food needs independently and sovereignly is currently experiencing marginalization, marginalization and denial process. This is because their food stability began to be intervened by the government and private sector so that structural dependence emerged that made them lack trust in natural resources and traditions declined in processing agriculture.

4. Conclusion

Analysis of the settlement of environmental disputes outside the court between indigenous peoples and corporations Samin community disputes with PT Semen Indonesia can be classified into 2 factors, namely the driving factors and obstacle factors of dispute resolution outside the court. The driving factors of environmental dispute resolution conducted outside the court include faster settlement; low cost; win-win solution; maintain local wisdom; sustainable development; and the creation of food security. While the inhibitory factors include the absence of legitimacy of the MHA which makes the weak bargain position of MHA in the eyes of the Corporation in the Negotiation process; Inactivity in the law-making process (Impact of ADR termination); weak government supervision (ADR Impact) is less pro-active than the government in terms of quality and control of environmental policies that are environmentally sound; weak sustainable development paradigm is characterized by the strong anthropocentric paradigm compared to ecocentrics, because it is too oriented to the economic aspect; the absence of alternative arrangements for applicative environmental settlement; economic growth; and moral hazard.

Acknowledgements

This research did not receive any specific grant from funding agencies in the public commercial, or not-for-profit sectors.

The authors declare no competing interests.

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Center for Open Access in Science ▪ https://www.centerprode.com/ojls.html
Open Journal for Legal Studies, 2022, *5*(1), 19-30.
ISSN (Online) 2620-0619 ▪ https://doi.org/10.32591/coas.ojls.0501.03019d

What Obligations do Developed Countries Have to Assist Developing Countries in Adapting to and Mitigating Global Warming?

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Received: 23 June 2022 ▪ Revised: 21 August 2022 ▪ Accepted: 29 August 2022

Abstract

Global warming is serious and irreversible threat that requires urgent action including adaptation and mitigation. Many developing countries, nevertheless, have less adaption and mitigation capacities but suffer first and worst from global warming, to which they contributed the least. Developing countries should take action only if developed countries provide them with adaptation and mitigation assistance. This article examines what obligations developed countries have in this regard, and why. Accordingly, Sec-II deals with the need for adaption and mitigation. Sec-III dwells on how to tackle global warming. Sec-IV explores the obligation of developed courtiers to provide adaptation and mitigation assistance. The last section concludes the essay.

Keywords: climate change, adaptation, and mitigation.

1. Why do we adapt to and mitigate global warming?

Global warming [also, climate change[1]] is a phenomenon of increase in average global temperature resulting from the concentration of greenhouse gasses [GHGs[2]]. According to scientists, warming of the globe is unequivocal as evidenced by rise in atmospheric temperature, sea-level and snow melting. It is very likely [above 90% probability] that most of the warming

[1] Climate change refers to "change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods" [United Nations Framework Convention on Climate Change, FCCC/INFORMAL/84 GE.05-62220 (E) 200705, (1992) United Nations, Art. 1(2); cf. Intergovernmental Panel on Climate Change (IPCC) (2007). Fourth Assessment Report: Climate Change: Synthesis Report, p. 30, available at: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf]. Climate change is more boarder than global warming in that it refers to the alteration of the climate system including both warming and cooling of the atmosphere [Stephen M. Gardiner (2004). Ethics and Global Climate Change. *Ethics*, 114(?), 555, pp. 558-559].

[2] The six GHGs include Carbon dioxide (C02), Methane (CH4), Nitrous oxide (N20), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur hexafluoride (SF6) [Kyoto Protocol to the United Nations Framework Convention on Climate Change, UN Doc FCCC/CP/1997/7/Add.1, Dec. 10, 1997; 37 ILM 22 (1998) United Nations, Annex A].

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since the mid-20thC resulted from anthropogenic activities. Devastating catastrophes will occur if current emission pattern continues. While global temperature rise above 2°C will cause more flood, drought and starvation, a 4°C rise even threatens human survival.[3] The "Earth [and] creation […] are in imminent peril".[4] Species and ecosystem across the world are also already being affected.[5] Urgent response including both mitigation[6] and adaptation[7] is, thus, indispensable as shown in what follows.

But climate skeptics argue that global warming is uncertain and less serious problem to which huge economic resources should not be sacrificed.[8] This, however, goes against the climate economics and science.[9] Studies indicate that tackling global warming costs 2% of the global GDP.[10] Moreover, uncertainty does not mean that there is no risk. While risk is the probability of an event and its consequences, uncertainty relates with inadequacy of evidence.[11] Putting the impact of global warming in terms of probability with some uncertainty cannot preclude catastrophic incidences.[12] Preventive action shall be taken even against uncertainty. According to the precautionary principle, scientific uncertainty should not excuse inaction where serious and irreversible threats exist.[13] Global warming has already become irreversible and will

[3] Intergovernmental Panel on Climate Change (IPCC). (2007). Supra note 1, pp. 45-48.

[4] James Hansen (2009). Storms of My Grandchildren: The Truth about the Coming Climate Catastrophe and Our Last Chance to Save Humanity (Bloomsbury: London), ix, quoted in Sam Adelman. Re-Imagining Climate Justice in the Ecology of Knowledges, in Re-Imagining Our Sociological Contemporaneity: What is the Age of Re- Embodiments? (Glasshouse, 2011), p. 1].

[5] Rosenzweig et al. (2007). Assessment of Observed Changes and Responses in Natural and Managed Systems. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, pp. 94-104.

[6] Mitigation is the reduction of emission from sources and/or the removal thereof using sinks [IPCC, 2001a, Climate Change 2001: Synthesis Report. A Contribution of Working Groups I, II, III to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge and New York, p. 398].

[7] Adaptation refers to minimizing the negative impacts of global warming and/or exploiting positive aspects thereof [Id.]

[8] Bjorn Lomborg (2007). Cool It: The Skeptical Environmentalist's Guide to Global Warming. Knopf Publishing Group, United States, cited in Frank Ackerman (2008). Hot, it's not: Reflections on Cool It, by Bjorn Lomborg. *Earth and Environmental Science*, *89*(3-4), 435, pp. 435-36.

[9] Frank Ackerman. (2008). Supra note 8, pp. 437-39.

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[11] Kirsten Halsnæs et al. (2007). Framing issues. In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, p. 131 [Also, Timothy R. Carter et al. (2007). New Assessment Methods and the Characterization of Future Conditions. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, p. 139].

[12] Id at pp. 128 and 131.

[13] United Nations Framework Convention on Climate Change. Supra note 1, Art. 3(3); Rio Declaration on Environment and Development, UN Doc. A/Conf151/5/Rev.1, UN Conference on Environment and Development (1992), United Nations, Principle 15 [Also, Christian Gollier et al. (2001). Should we beware of the Precautionary Principle? *Economic Policy*, 16(33), 30, pp. 308-10].

'hit the fan' within 20 years.[14] If not, it will become so after a decade where it will be too late to act.[15] Hence, global average temperature shall be stabilized at/below 2°C, which means that GHGs emission shall not exceed above 350 ppm.[16] Studies propose an emission reduction of 60% to 80% against the 1990 base year.[17]

Mitigation, however rigorous, cannot totally avoid the future dire consequences of global warming owing to the present huge accumulation of GHGs and their longer duration. Relying only on mitigation will make adaptation impossible or excessively costly in the long-term.[18] Adaptation is also inevitable now, not least because the impacts of global warming are already occurring.[19] "Neither adaptation nor mitigation alone can avoid all climate change impacts; however, they can complement each other and together can significantly reduce the risk of climate change".[20]

It is worth addressing herewith which countries ought to take action. As indicated, we have little time before environmental catastrophe occurs. This means that the 350 ppm target should be met promptly and effectively. This cannot, however, be achieved with the effort of developing countries only. To be effective, developing nations, esp. major emitters,[21] have to cut their emission. Developing countries cannot follow the growth path of industrialized nations for it will bring environmental catastrophe.[22] Global warming requires a concerted action as it is a global problem. All states have common responsibility to protecting common resources [ex. climate].[23] Leaving developing countries [major emitters] from binding emission commitment fundamentally impedes planetary justice.[24] Thus, the 350 ppm target should be allocated to all countries, including major developing country emitters, according to their level of emission. The following section addresses how countries can adapt to and mitigate global warming.

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[20] Intergovernmental Panel on Climate Change (IPCC). Supra note 1, p.65.

[21] Among developing countries, China, India, South Korea, Mexico, Indonesia, and South Africa have joined the top 20 global carbon emitters [Kevin A. Baumert et al. (2005). Navigating the Numbers: Greenhouse Gas Data and International Climate Policy. World Resource Institute, USA p. 12].

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[24] Sam Adelman. Supra note 4, pp. 3-4, note 8.

2. Adaptation and mitigation: Ways and determinants

Mitigation takes place at global level and its benefits are, principally, global.[25] The main mitigation tools include market mechanisms [ex. emission trading, clean development mechanism, CDM] technological innovation [ex. improving energy efficiency, deploying low/zero-carbon technologies, developing carbon sequestering technology].[26] Another way includes conserving forests, land and terrestrial ecosystem and enhancing the same to sequester carbon which deserves caution since their duration is prone to disturbances, though.[27]

Adaptation, conversely, takes place at local or national levels and its benefits, principally, go to the same levels.[28] It is taken, particularly, in relation with water, agriculture, infrastructure, human health, and energy to cope up with global warming.[29] Examples include enhancing water storage and conservation, using climate resilient seeds, rotating crops, improving land management, building seawalls and flood-barriers, deploying climate sensitive medical service and surveillance, and diversifying energy sources and using renewable energy. The CDM project is designed to enhance adaptive capacity in developing countries by promoting sustainable development in such areas.[30]

According to the mainstream approach, mitigation and adaptation should be taken in accordance with sustainable development.[31] Such is the case by integrating economic, social and environmental priorities in development policies. This can be done by greening the economy, for example, by improving energy efficiency and lowering carbon use.[32] However, sustainable development [and green economy] seek to sustain the market while leaving environmental protection on market, technological and scientific optimisms,[33] though global warming is the greatest market failures.[34] Global warming is a crisis of both growth model based on

[25] Richard J.T. Klein et al. (2007). Supra note 18, p. 750 [Harald Winkler et al. (2007). What Factors Influence Mitigative Capacity? *Energy Policy*, *35*(?), 692, p. 694].

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[28] Richard J. T., Klein et al. (2007). Supra note 18, p. 750 [Harald Winkler et al. (2007). Supra note 25, p. 694].

[29] Intergovernmental Panel on Climate Change (IPCC) (2007). Supra note 1, p. 57.

[30] Kyoto Protocol to the United Nations Framework Convention on Climate Change. Supra note 2, Art. 12. [UNCCD. The Climate Change Mitigation and Adaptation Information Kit: Linkages Between The United Nations Framework Convention on Climate Change (UNFCCC) and United Nations Convention to Combat Desertification (UNCCD), pp. 15-17, available at:

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[34] Nicolas Stern (2007). Supra note 10.

overconsumption, commodification and profit, and ecological limits.[35] "[W]e are consuming nature's services [...] 44% faster than nature can regenerate and reabsorb [...]. [I]t takes the Earth almost 18 months to produce the ecological services that humanity uses in one year."[36] Central to unrestrained growth is the idea of making life comfortable.[37] But high consumption in excess of meeting basic needs does not bring life-satisfaction. Prosperity is the ability to flourish psychologically and socially, for example, by contributing useful work to the community. We should and can flourish within ecological limits.[38] Climate justice, inter alia, demands that nature deserves protection in itself.[39] To meet the 350 ppm target, the remaining fossil-fuel should never be emitted, among others.[40]

But developing countries, particularly the poor, have no/less mitigation and adaptation capacities. Mitigation and adaptation capacities, generally, depend on economic, technological and institutional factors. These are the main barriers faced by many developing countries, particularly the poor in addition to the prevailing high poverty.[41] It is, hence, inappropriate to demand developing countries to stop growth. Growth to the extent necessary to meet basic needs should continue. Although basic need varies across palace and time, it generally refers to food, shelter, clothing, health care.[42] Still, growth to meet basic needs should be clean. This requires provision of adequate finance, clean technologies and institutional assistance by developed countries. We should balance between the development needs of poor countries and environmental conservation, to reach at equitable burden sharing.[43]

Developed countries are not, however, committed to provide adequate financial, technological and institutional assistance to developing countries.[44] For instance, they promised to provide only $ 30 billion for the years 2010 to 2012.[45] This stands in sharp contrast to what many developing countries requested. The Africa Group, for instance, requested a minimum of $ 67 billion/year for adaptation and $ 200 billion for mitigation by 2020 which is only 0.5% of

[35] Sam Adelman. Supra note 4, pp. 2 and 4-6.

[36] Andrew Simms & V. Johnson (2010), Growth isn't Possible: Why We Need a New Economic Direction, New Economics Foundation (nef), p. 5.

[37] Id. at p. 8.

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[39] Sam Adelman. Supra note 4, p. 6

[40] James Hansen et al. (2008). Supra note 16, pp. 1-2.

[41] Richard J.T. Klein et al. (2007). Supra note 18, p. 763; Harald Winkler et al. (2007). Supra note 25, pp. 695-700; and David S. G. Thomas and Chasca Twyman. (2005). Equity and Justice in Climate Change Adaptation amongst Natural-Resource-Dependent Societies. *Global Environmental Change*, *15*(?), 115, p. 116.

[42] Amartya Sen (1993). Capability and Well-Being, pp. 50-51, in Martha Nussbaum and Amartya Sen (Eds.), The Quality of Life, World Institute for Development Economics Research (WIDER), Oxford [also, Henry Shue. (1999). Supra note 22, p. 544].

[43] Henry Shue (1999). Supra note 22, p. 531.

[44] United Nations Framework Convention on Climate Change. Supra note 1, Arts. 3(5), 4(1)(c), 4(1)(e), 4(1)(g), 4(1)9h), 4(5) and 5(b).

[45] Copenhagen Accord, Draft decision-/CP.15, FCCC/CP/2009/L.7, Framework Convention on Climate Change (2009) United Nations, par. 8. [see also, Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action, Draft decision -/CP. 17 (2011) [Available at: http://unfccc.int/files/meetings/durban_nov_2011/decisions/application/pdf/cop17_durbanplatform.pdf].

Annex-II parties GDP.[46] But they worked hard to solving the recent credit crunch warming which shows that the market is the winner.[47] Developing countries should accept binding commitments only if the developed are committed to provide adequate assistance as will be argued in the following section.

3. Do developed countries have obligation to assist developing countries?

Though all countries have shared responsibility to protecting common resources, the level of their responsibility should be differentiated having regard to equity. The extent of responsibility shall take into account differences in contributions, capacity, vulnerability, and special needs.[48] "[Global warming] exacerbates existing injustices and perpetrates new ones, not least against the people of the global South, who are least responsible for GHGs emission and have the fewest resources for adaptation and mitigation [but are] most vulnerable."[49] Developing countries, particularly low-latitude and less-developed, are more vulnerable to global warming because of their higher sensitivity to impacts and lack of resources [poverty].[50] Partly, this is associated with their geographical location.[51] Global warming, inter alia, reduces agricultural productivity and income which again worsens human development [nutrition, health] and deepens poverty.[52] Global warming [as part of climate justice] is also an issue of global justice since it widens poverty and inequality.[53] As such, two forms of generational injustices, intragenerational and intergenerational, are central to global warming. The burden of global warming should, thus, be shared according to the principle of climate justice which includes reparative, retributive, and distributive justice.[54]

The first reason to oblige developed countries to provide means of adaptation and mitigation flows from their past activities. Developed countries have had high past carbon emission, the impacts of which are disproportionately borne by poor nations.[55] As GHGs stay for long in the atmosphere, so does their impacts.[56] For instance, more than 200 million people in poor nations were annually affected by climate related impacts like drought and flood between

[46] Nicola Cantore et al. (2009). Climate Negotiations and Development: How can Low-Income Countries gain from a Climate Negotiation Framework Agreement? Working Paper No. 312, Overseas Development Institute, Westminster, p. 4.

[47] Joseph Maria Antentas (2012). No More "Green Capitalism": An Assessment of the Failure of the Durban Summit on Climate. Committee for the Abolition of Third World Debt, available at http://www.cadtm.org/No-More-Green-Capitalism [Accessed on 29 may 2012].

[48] Philippe Sands (2004). Supra note 23, pp. 287-289.

[49] Sam Adelman. Supra note 4, p. 1.

[50] Stephen H., Schneider et al. (2007). Assessing key vulnerabilities and the risk from climate change. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, p. 796 [Also, UNDP. (2007). Supra note 15, pp. 79-81].

[51] Sam Adelman. Supra note 4, p. 7, note 13.

[52] UNDP (2007). Supra note 15, pp. 81-95.

[53] Sam Adelman. Supra note 4, at p. 1.

[54] Id. at pp. 2 and 7-8.

[55] Developed countries accounted for 83.8% of the cumulative industrial emission from 1800 to 1988. [IPCC, Climate Change 1995: Economic and Social Dimensions of Climate Change, Contribution of Working Group III to the Second Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, p. 94].

[56] Axel Gosseries (2004). Historical Emission and Free-Riding. *Ethical Perspective*, *11*(1), 36, pp. 37-38.

1998 and 2008.[57] Studies indicate that droughts are occurring more frequently in areas such as sub-Saharan Africa.[58] Hence, the non-recognition of historical responsibility under the climate change convention undercuts the full realization of climate justice. Reparative justice demands that states should be responsible for past emission.[59] Developed countries are bound to fix the damages they had caused and redress their historical emission debts.[60] Polluters should pay if retributive justice is to be realized, too.[61]

But many developed countries deny historical responsibility.[62] It is morally wrong to claim responsibility when people did not [cannot be expected to] foresee the effects of emission in the past.[63] Studies, however, started warning the adverse effects of industrialization so early that innocence cannot be claimed. [64]Though it is unfair to punish ignorant people, it is not unfair to make them pay costs of the damages following their acts.[65] It is counter-argued that the past polluters are no more alive; hence, it is unfair to make present generations liable who even had no control over past activities. But states should be accountable for activities within their territory despite generational gaps.[66]

Moreover, present generations of developed countries are beneficiaries of industrialization [ex. technology] while developing countries bear the burden. To restore equality, the former should assume extra-burden equivalent to what they had benefited.[67] Arguably, current inhabitants of rich countries cannot be responsible for the past since they were involuntarily benefited. Developing countries have also gained benefits from past emission.[68] But this is unjustifiable free-riding. It is unfair to reap benefits without bearing its burden. Not only developing countries received disproportionate benefits but also, they were charged.[69] Some argue that historical and benefits approaches are impracticable since it is difficult to translating such

[57] Kirsten Halsnæs and Nethe Veje Laursen (2009). Climate Change Vulnerability: A New Threat to Poverty Alleviation in Developing Countries, pp. 83-84, in Simin Davoudi et al. (Eds.), Planning for Climate Change: Strategies for Mitigation and Adaptation for Spatial Planners, Earthscan, London.

[58] Intergovernmental Panel on Climate Change (IPCC) (2007). Supra note 1, pp. 30-32 [UNDP. (2007). Supra note 15, p. 78].

[59] United Nations Framework Convention on Climate Change. Supra note 1, preamble, par. 3 and Art. 3 [Sam Adelman. Supra note 4, p. 2 and p.3, note 7].

[60] Henry Shue (1999). Supra note 22, pp. 533-537; and Eric Neumayer (2000). In Defense of Historical Accountability for Greenhouse Gas Emissions. *Ecological Economics*, *33*(?), 185, 185-192.

[61] Sam Adelman. Supra note 4, p. 2

[62] See for example, George W. Bush, re-quoted in Stephen M. Gardiner (2004). Supra note 1, p. 578 [See also, Larry Parker and John Blodgett (November, 2008). Greenhouse Gas Emissions: Perspectives on the Top 20 Emitters and Developed Versus Developing Nations, CRS Report for Congress, Order Code RL32721, CRS, pp. 3-4].

[63] Jeremy Moss (2009). Climate Justice, p. 58, in Jeremy Moss (Ed.), Climate Change and Social Justice, Melbourne University Press, Melbourne.

[64] Henry Shue (1999). Supra note 22, p. 536 [By 1896, it was predicted that burning coal generates CO2 which in turn increases Earth's temperature [Svante Arrhenius (1896). On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground. *Philosophical Magazine and Journal of Science*, *41*(5), 237, pp. 266-67 & 270]].

[65] Henry Shue (1999). Supra note 22, pp. 535-36.

[66] Jeremy Moss (2009). Supra note 63, pp. 53-55.

[67] Henry Shue (1999). Supra note 22, pp. 533-4 & 536 [also, Eric Neumayer (2000). Supra note 59, p. 189].

[68] Robert Nozick (1974). Anarchy, State and Utopia, Basic Books, Blackwell, Oxford, p. 93; and Jeremy Moss. (2009). Supra note 62, pp. 55-57.

[69] Axel Gosseries (2004). Supra note 56, pp. 47-8; and Henry Shue (1999). Supra note 22, pp. 534-535.

responsibility into specific allocations.[70] It is not too hard to overcome such practical question given that countries were able to redistribute money under the post World-War-II Marshall Plan without prior existing formula.[71]

Others argue that those who are capable should bear the burden of global warming since there is resource disparity among countries.[72] Contribution towards a common goal should progress in proportion to possessed resources.[73] Many in developing countries struggle with poverty to meet their basic needs while their counterparts in developed countries lead luxurious life. It is unjust to demand the poor to sell their blankets so that the rich keep their jewelry.[74] Fairness even requires that developed countries should provide the resources to guarantee minimum needs of people in developing countries.[75] After all, the millennium development goal aims to eradicate poverty without undermining environmental sustainability.[76] From human rights perspective, too, individuals have the fundamental interest to be protected against the ill-effects of global warming.[77]

It is, arguably, unfair to require members of one state to assist their counterparts in another. Even if they are capable, they have no obligation to assist if they did not harm or hinder others.[78] This is implausible since environmental problems are primarily caused by developed countries. The conventional conception of space and liberal theories of justice do not fit with the transboundary nature of GHGs.[79] Developed countries have used more than their equitable share of the atmosphere both through industrialization and their present lifestyle. They should compensate developing countries for such overuse.[80] Moreover, those capable to prevent others sufferings [ex. starvation], without significant loss, are morally obliged to provide assistance regardless of their geographical location. Luxurious spending should be given for starving people. This is not charity but a moral obligation, not least because not doing so is wrong in a situation where some are affluent while others starve.[81]

To capture the full dimension of the current climate injustice, it is worth focusing on impoverishment instead of poverty. Developing countries were victims of colonialism, political

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[70] Jeremy Moss (2009). Supra note 63, p. 57 [and Martino Traxler (2002). Fair Chore Division for Climate Change. *Social Theory and Practice*, *28*(?), 101-34, cited in Stephen M. Gardiner (2004). Supra note 1, p. 582].

[71] Stephen M. Gardiner (2004). Supra note 1, p. 582, note 86.

[72] Jeremy Moss (2009). Supra note 63, pp. 58-62.

[73] Henry Shue (1999). Supra note 22, p. 537.

[74] Henry Shue (1992). The Unavoidability of Justice, in Andrew Hurrell and Benedict Kingsbury (Eds.), The International Politics of the Environment, Oxford University Press, Oxford, Quoted in Stephen M. Gardiner. (2004). Supra note 1, p. 578.

[75] Henry Shue (1999). Supra note 22, p. 541.

[76] United Nations Development Program (UNDP), the Millennium Development Goals [available at http://www.undp.org/content/undp/en/home/mdgoverview.html].

[77] Simon Caney (2005). Cosmopolitan Justice, Responsibility, and Global Climate Change. Leiden Journal of International Law, 18 (?), 747, p. 768.

[78] Richard W. Miller (1998). Cosmopolitan Respect and Patriotic Concern. Philosophy & Public Affairs, 27(3), 202, pp. 220-24 [also, Jeremy Moss. (2009). Supra note 63, p. 60].

[79] Henry Shue (1999). Supra note 22, p. 542; and Sam Adelman. Supra note 4, pp. 1-2.

[80] Anil Agarwal et al. (2002). The Global Commons and Environmental Justice-Climate Change, p. 173, in John Byrne et al. (Eds.), Environmental Justice: International Discourses in Political Economy: Energy and Environmental Policy, Transaction Publishers, New Jersey.

[81] Peter Singer (1972). Famine, Affluence and Morality. *Philosophy and Public Affairs*, *1*(3), 229, pp. 231-232 235-238.

domination and economic exploitation of the developed.[82] Such kind of unbalanced power relationship lies behind their impoverishment. Impoverishment, in turn, is the root cause of developing countries' lack resource to cope up with global warming; hence, of the injustice.[83] In light of distributive justice, such "legacy of colonialism and depredations of developmentalism" are of central concern.[84] Developed countries, thus, owe huge responsibility to provide resource for adaptation and mitigation with the view to redressing what they have exploited. Only then can we fully realize climate justice.

Response to global warming should also take into account the benefits of future generations. Global warming pertains to intergenerational justice since unsustainable growth deprives the legitimate expectations of future generations; hence, raises reparative justice.[85] Global warming harms vital human interests [ex. life] that are worthy enough to impose obligation on others to reduce emission. Despite the obscurity of their identities and interests, future generations clearly have certain interests which we can affect now, not least because they are 'full humans with human needs'.[86] So, they deserve protection against the ill-effects of global warming.

4. Conclusion

According to the science, surface temperature should be maintained at 2^{o}C by stabilizing GHGs at 350 ppm. To effectively realize this target and achieve climate justice, all countries including major developing emitters should cut their emission.

However, developing countries are not only highly vulnerable to global warming but also are less able to adapt to and mitigate thereof despite their least contribution. Developed countries should provide them with adaptation and mitigation assistance. The burden of global warming should be shared with in the context of climate justice including reparative, retributive and distributive justice.

Developed countries have had high historical emission whose benefits are reaped by their present generations while the cost goes to poor nations. Reparative justice cannot be achieved without the developed countries taking responsibility for past emission. Many people in developing countries struggle with poverty while others in developed countries lead affluent life. This also goes at the center of global justice as global warming perpetuates existing inequality and creates new ones. So, the wealthy countries should pay the cost of responding to climate change. Cosmopolitanism requires that people in developed countries have moral obligation to the needy in other countries. Moreover, at the center of the present injustice lies the impoverishment of developing countries through colonialism, political domination and economic exploitation. This is a compelling reason for resource redistribution from the developed to the developing countries.

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[82] Anibal Quijano (2000). Coloniality of Power, Eurocentrism, and Latin America. *Nepantla: Views from South*, *1*(3), [Translated by, Michael Ennis], 533, pp. 534-550.

[83] Sam Adelman. Supra note 4, p. 7.

[84] Id. at p. 2.

[85] Id. at p. 8 [Also, United Nations Framework Convention on Climate Change. Supra note 1, Art. 3(1); and Philippe Sands (2004). Supra note 23, pp. 256-257].

[86] Simon Caney (2006). Cosmopolitan Justice, Responsibility, and Global Climate Change. *Can. J. L. & Jurisprudence*, *19*(2), 255, pp. 259-267.

Acknowledgements

This research did not receive any specific grant from funding agencies in the public commercial, or not-for-profit sectors.

The author declares no competing interests.

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Open Journal for Legal Studies, 2022, *5*(1), 1-30.
ISSN (Online) 2620-0619

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