

CLIMATE CHANGE:

FUNDAMENTALS AND REGULATION OVERVIEW IN INDONESIA ¹

PERUBAHAN IKLIM: FUNDAMENTAL DAN ULASAN PERATURAN DI INDONESIA

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ABSTRACT

From its trending phenomenon, climate change adaptation and mitigation becomes mainly discussed in global discourse, including from the fundamental and law perspective. This article aims to elaborate descriptively the fundamentals concept of Climate Change Adaptation and Mitigation. Moreover, the research method of this paper is normative and empirical law study, to examine the implementation of regulation enforcement in conceptual and factual. First section, the paper describes the fundamental of climate change. Second section, explains the previous researches regarding climate change adaptation and mitigation, and lastly elaborates the regulatory framework and list of the regulation enforcement in Indonesia. In addition, it also provides the historical overview of first Ratification, Presidential decree, the instructions of Ministry of Environment and Forestry. The History began since the ratification of law products from United Nations Framework Convention on Climate Change (UNFCCC) in 1992, Kyoto Protocol, Bali Roadmap and several regulations regarding the Climate change management and control.

Keyword: Climate Change, Adaptation, Mitigation, Environment management

ABSTRAK

Dari fenomena saat ini, adaptasi perubahan iklim dan mitigasi menjadi isu global yang krusial saat ini, termasuk dari konsep dasar dan perspektif hukum. Artikel ini bertujuan untuk mengelaborasi secara deskriptif tentang konsep fundamental dari adaptasi perubahan iklim dan mitigasi. Metode penulisan artikel ini menggunakan metode normatif empiris, dengan melihat implementasi perubahan iklim secara konseptual dan faktual. Pertama, artikel ini menjelaskan konsep dasarnya, kedua mengungkapkan beberapa hasil dari penelitian terdahulu terkait dengan perubahan iklim, dan pada bagian ketiga mengelaborasi ratifikasi, dan peraturan yang ada terkait dengan perubahan iklim di Indonesia. Selanjutnya, artikel ini juga memberikan informasi terkait dengan perjalanan inisiasi peraturan perubahan iklim yang diratifikasi dalam konvensi PBB tentang Perubahan Iklim, Kyoto protocol, Bali Roadmap dan beberapa peraturan dari Kementerian Lingkungan Hidup dan Kehutanan.

Kata Kunci: Perubahan Iklim, Adaptasi, Mitigasi, dan Manajemen Lingkungan

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A. INTRODUCTION

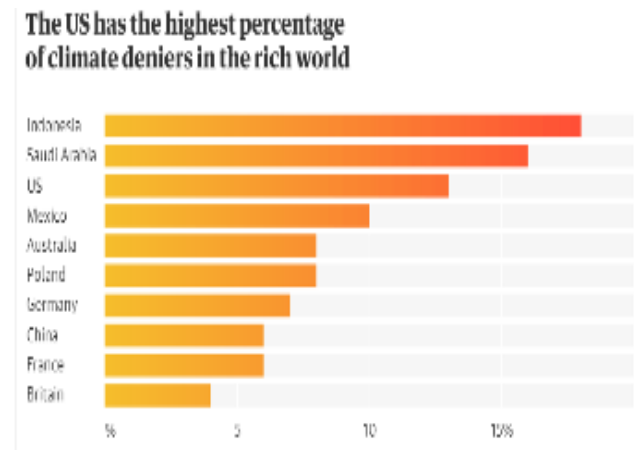
Climate change undoubtedly becomes crucial issue at the present days, since it threatens the existence of human and natural environment. Since the Industrial revolution began on 1750, it has been scientifically proven that anthropogenic emissions of greenhouse gases (GHGs) are changing the earth's climate disastrously, due to the incremental of human activities (Clarich and Impinna, 2016). This condition also impacted substantially to climate change by increasing carbon dioxide (CO₂) and other heat-trapping gases to the atmosphere.

Until recently, many studies have argued that the costs for combating climate change are more damaging to economic prosperity than the potential benefits. According to the several researches, we still rely on carbon fuels for 85% of all the energy our world burns every year, and resulted in the amount of warming pollution up in the atmosphere traps extra heat energy (IPCC, 2007).

United Nations stated, that the Climate change is the one of the most global threatening issue in the latest century (UNFCCC, 2015). Climate change is defined as a long term continuous change in average weather conditions or the range of weather; effects include physical responses such as change in surface temperatures, extreme weather conditions such as droughts and floods, storms, sea level rise among others (Hansen and Sato, 2016). In addition, the impact of climate change is directly perceived by many countries around the world, particularly Indonesia. Climate change issues become the crucial subject in

many local, national and international level of conventions and conferences.

Indonesia is one of the tropical countries with the highest level of the biodiversity (Hilman, 2009). Those resources, including the forest, water resource and the sea have given millions of income to the citizens. However, the natural resources and the environment is undergoing the high pressure impacted by the human activities in all sectors, which directly and indirectly contributed to the global warming.



Graph 1

Source: YouGov/ The Guardian (2019)

The graphic portrayed that Indonesia is in the highest rate of proportion of people 1doubtful on manmade climate change. Most Indonesian accepted the statement "climate is changing, but human activity is not responsible at all" (The Guardian, 2019). As Reported by researchers, Indonesian denial regarding the climate change issue triggered by their preference to deliberate about racial and gender issues instead of environmental issues (Renaldi, 2019). In addition, it is supported by the Walhi (2019), that during the 2014 and 2019 elections, tendency of media in Indonesia to

concern more on politicians and religious debate. The president candidates also did not consider the climate change issues as the priority to the nations in the previous presidential election.

Indonesia geographically is the biggest archipelago located in the tropics, with the existence of small and large islands which are so vulnerable to the natural disasters impacted by the climate change. While high risk of disasters due to the climate change becomes the major problems at the present days. According to Kompas (2002), Indonesia is at the ninth place as the Carbon dioxide contributors: 2,4-2,6 %. Furthermore, the experts predict that the emission keep increasing in 2030 and the tendency of this acceleration literally impact on temperature raising until 6 degree at the end of 21 century. In fact, this issue is getting more urgent that threaten the future environment and ecosystem balance.

Intergovernmental Panel on Climate Change (IPCC) in 2007 portrayed as the hottest years in the latest 12 years, due to the raising of total temperature since 1850. Based on this result, the average of global ocean keep increasing from 2001 until 2005, 0,76' degrees. In addition, IPCC also reported human activities impacted in global warning issue, and will keep raising with no exception.

Carbon Emission Movement



Graph 2

Source: Boden, T.A., G. Marland, and R.J. Andres, *Global, Regional, and National Fossil-Fuel CO₂ Emissions* (Carbon Dioxide Information Analysis Center, OakRidge National Laboratory, U.S. Department of Energy: Oak Ridge, 2010).

The significant movement of Carbon dioxide concentration in the atmosphere since 1960 depicted on above graphic. Indonesia is one of vulnerable countries impacted by most of disasters, related to climate change, particularly flood and landslide in last decade. As reported by several valid data, from 2003-2005, 1429 disasters and approximately 53,3 percent connected to hydro-meteorology (Bappenas and Bakornas (2006) Almost 24 small islands have lost including:

1. 3 islands in Aceh Province
2. 3 islands in South Sumatra Province;
3. 3 islands in Papua Province, and
4. 5 islands in Riau Islands Province.

Climate Change Concept and Adaptation

Indonesia is one of the country which has low level of resistency regarding the catastrophe. In the last decade, there are 1.429 catastrophes listed in Bappenas and Bakornas (2006). Additionally, 53,3 percent of the events related to the hydro-meteorology system. This condition is assumed closely connected the existence of greenhouse gasses. With no any responds for fighting climate change, greenhouse gasses concentrate will gradually increase, predicted two till three fold than before in 2025.

Epistema institute (2012) on the climate change prosiding pointed out that global warming is the biggest contributor for the climate change.

According to IPCC report, there are several causes of global warming:

1. CO₂, Metane , and so forth;
2. Natural sources, (eruption, Biological Process, and organic material decomposited); Activity (fossil burnt, elctricity power, transportation, industry process, deforestation, etc).

Another essential issue related to the climate change is inequality of the distribution of resources in entire world (Epistema Institute, 2010). The impact of climate change resulted on several natural issues, including temperature increase.

IPCC (2007) confirmed that human activity is the major cause of the climate change, especially in the last 50 years. The influence of human appears from the increase in emissions of greenhouse gases (carbon dioxide, methane, nitrogen oxides, and a number of industrial gases) from human activity. The highest in history and unprecedented since 800.000 years ago gas concentrations CO₂ are now 40 % higher than the pre- industrial era. The raising of this number mainly due to the burning of fossil fuels and deforestation. Furthermore, the human activity is also detected from ocean warming, changes in rainfall, melting galciars, and ice cover in the Arctic, as well as the occurence of a number of extreme climates on earth.

Particularly in Indonesia, power is the most extreme occurred that disrupted economic activity. Farmersand fishermen can no longer determine the planting, harvests and a sail that can produce optimal catch. Floods and droughts have occurred everywhere and the incidence of tidal sfloods also has been more often

experienced by city communities located on the seafront. The heat wave (El Nino) which caused peat fires and the wet wave (La Nina) which caused flooding has experienced a change in time. If the greenhouse gas emissions and global warming continues, then in the absence of a serious effort to reduce emissions of gases greenhouse, the global temperature will tend to rise more than 2 ° C over the century, next even up to 5 ° C. The risk of some extreme events, especially heat waves and heavy rain, is expected to increase further in the coming decades. The levels of Global sea is expected to increase, reaching 0.26 to 0.81meters at the end of this century and will continue to increase in centuries. The coming Climate change impacts will increase as events continue climate change. Most aspects of climate change will last for centuries even if greenhouse gas emissions can be stopped. Most of the impacts of climate change events are irreversible.

Climate change Adaptation Agenda

Fighting the climate change has become one of the goals for Indonesian Sustainable Development Goals (SDG's) stipulated in National Midterm Development Plan 2014-2019. Indonesia has voluntarily commits to decrease the greenhouse gas emissions through the Presidential decree 61 Year 2011 and 33 Regional action plannings and recorded in Governor regulation. The implementation of the climate change adaptation and mitigation plan in various aspect related, imposed in across area program in RPJMN 2015-2019 with a target in depreciating greenhouse gases around 26 percent in 2019 and

improving regional security of the climate change.

The fact that the climate has warmed is hard for humans to actually experience first hand, and we certainly can't see carbon in the air with our own eyes. For most of us, climate change manifests itself and affects our lives through heatwaves, storms, wildfires, floods and droughts. However, this does not mean that all extreme weather events are being made stronger or more frequent. The role played by climate change compared to other drivers of extremes - whether natural variability in weather systems, or man-made drivers such as deforestation - strongly depends on the type of extreme event and the part of the world and season they are happening in. Attribution of scientists aimed to quantify weather and to what extent human-induced climate change alters the likelihood and intensity of extreme weather events. In some cases, like heat waves in European summers, it's a real game-changer. The European heatwave in July 2019, for example, was made up to 100 times more likely due to climate change. In other cases, analysis shows that the role of climate change was very small - for example recent droughts in Brazil were mainly driven by other factors.

And in some cases we do not know, either because the data and tools we currently have are not sophisticated enough to quantify the role of climate change - as was the case for droughts in East Africa - or because no study has been undertaken. This is the case for many extreme weather events occurring around the world, because attribution studies are still relatively rare and heavily skewed

towards events happening in the developed world.

B. RESEARCH METHOD

This paper aims to address and explore the climate change regulation journey and history, till the latest update, particularly in global and national context. This paper entitled "climate change Adaptation: fundamentals and regulation history in Indonesia" is normative and empirical study. Referring to Puslatbang KHAN (2019) normative empirical study has purpose to assist the positive implementation of regulation enforcement factfully, and the combination of law normative studies and empiricall law research. This paper also uses primary materials consist of International regulation, agreement, ratification and decree related to the climate change mitigation and adaptation, environment management and deforestation. Moreover, secondary materials used to analyse several journals and documents to classify in term of descriptive analysis.

This article uses descriptive qualitative method to elaborate the development of climate change regulations and policy, and also to answer the effectivity of existing law enforcement related to climate change adoption and mitigation in Indonesia. After revealing the answer for the research question, there will be discussion and recommendation regarding the policy, particularly in Indonesia.

Literature Review

Wijoyo and Prihatiningtyas (2016) in his studies stated that as an effort to achieve the climate change

program mitigation, real actions based on the capability of each countries is required. Capacity building is the essential of “means of implementation” which determined the succeed of the atmosphere protection programs.

Forqan (2009) on his research entitled “Global Warming, Global Scheme and the Implication to Indonesia” reported that Forests have contributed to climate balance, reducing pollution, reducing, absorbing CO₂ and reducing global warming. In recent years forest looting or illegal logging in forest areas has been rife everywhere as if out of control. The threat of forest destruction will obviously cause enormous negative impacts due to the elnino effect of forest loss, especially in many areas that have large ecological and biodiversity functions. The Forestry Department Planology Agency, through satellite imagery, shows that the area of land that is still forested or that is still covered by trees in Java in 1999/2000 is only four percent. This area is mostly a catchment area in a watershed (DAS). Additionally, an investigation by International centre for International Forestry research (CIFOR) found that from the conversion of peatlands alone (the number of peatlands in Indonesia reaches 22.5 million hectares and almost half is already damaged), Indonesia releases 1,100 million tons of carbon dioxide (CO₂) in the air yearly. This is the same as all German emissions. This resulted in Indonesia emerging as the country with the third largest greenhouse gas emissions in the world after the United States and China. Deforestation, forest fires and

drainage of peat are mentioned as the main causes of Indonesia's emissions.

A study by Amelina (2014) affirmed that Indonesia's commitment for supporting and contributing to climate change mitigation and adaptation efforts can be seen from the ratification of international environmental law instruments including the 1992 United Nations Framework Convention on Climate Change (UNFCCC) through Law No. 6 of 1994 concerning Ratification of the United Nations Framework Convention on Climate Change; and the Kyoto Protocol through Law No. 17 of 2004 concerning the Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change which is a form of commitment of the Indonesian State in supporting the legal efforts of developed countries in reducing carbon emissions production, one of which is by mitigation cooperation called Clean Development Mechanism (MPB). As revealed by Amelina (2014), the regulation ratification products regarding the climate change mitigation in Indonesia, consists of: 1. United Nations Framework Convention on Climate Change, 2. Kyoto Protocol, 3. Reducing Emissions from Deforestation dan Forest Degradation (REDD), 4. Reducing Emissions from Deforestation dan Forest Degradation plus (+REDD), 5. Presidential Decree Number 61/ 2011, National Action Plan to Reduce Greenhouse Gas (GHG) Emissions Indonesia.

C. DISCUSSION AND RECOMMENDATION

The International Regulatory Framework for Climate Change

The climate change policy imposing has begun since 1979 in *The First World Climate Conference* which firstly initiated to identify climate change as an urgent global problem. This conference eventually produced a declaration for inviting all government around the world to involve and find the solution for climate crisis. Furthermore, World Climate Programme which is administered by World Meteorological Organization (WMO), United Nations Environment Programme (UNEP) and International Council of Scientific Unions (ICSU) and was followed by the holding of Intergovernmental conference on Climate Change Issues.

In 1988, in Toronto conference, held international debate participated by 30 participants from 46 countries, which ultimately recommended establishing a comprehensive global framework convention as an effort to protect the atmosphere. Following the proposal submitted by Malta, the UN General Assembly addressed the issue of climate change for the first time by adopting Resolution 43/3. WMO and UNEP formed the Intergovernmental Panel on Climate Change (IPCC), to examine the changes in the world that have occurred, estimated the impact they have caused and proposed strategies to mitigate them.

In mid 1990, Intergovernmental Panel on Climate Change (IPCC) published the first Assessment Report on the state negotiations under the United Nations General Assembly on a Climate Change Convention. In December 21st, 1990 UN General Assembly.

1. United Nations Framework Convention on Climate Change (UNFCCC)

IPCC (2011) stated that UNFCCC is an agreement that purpose to stabilize the concentration of GHGs in the atmosphere, at a level that does not endanger the life of organisms and allows adaptation of ecosystems, so that it can guarantee the availability of food and sustainable development. The UNFCCC is a manifestation of the global community's commitment in dealing with the effects of climate change. The UNFCCC is a national agreement resulting from UNCED in 1992 in Rio de Janeiro (the Earth Summit). The UNFCCC is a national agreement resulting from UNCED in 1992 in Rio de Janeiro (the Earth Summit). The work program of the UNFCCC is the holding of the Conference of the Parties (COP) which also resulted in the existence of other instruments in order to cope with the effects of climate change (United Nations Conventions on Climate Change, 2011).

In 1994 Indonesia already had an additional notion of mitigation, namely Law 6/ 1996 concerning Ratification of the climate change convention. What happens to our society is that even though the regulation were born after the emergence of the Climate Change Convention, it have not adequately accommodated climate change issues. Moreover, Law number 24 of 2007 regarding Disaster management, claimed that there is not a single word about "climate" or "climate change". This means that the disaster referred to this Law is a general disaster, not specific to 'climate-related disasters'. Perhaps because the birth of this law

was triggered by the tsunami in the province of Nanggroe Aceh Darussalam in 2004. The tsunami disaster caused by the movement of tectonic plates under the surface of the earth.

Law of the Republic of Indonesia Number 27 of 2007 concerning Management of Coastal Areas and Small Islands. In this law, all the terms 'mitigation' are only related to disaster, and in no way associated with efforts to reduce GHG emissions (under the understanding of the UNFCCC). As a negative effect of this misunderstanding, some people think that our oceans are able to absorb Carbon Dioxide, which is a major cause of global warming and climate change, in the atmosphere very significantly, by using the term 'mitigation' in Law No. 27 / 2007 (Santoso, 2015).

Meanwhile, the term 'adaptation' in the UNFCCC is defined as an effort to adapt to a changing climate system. Therefore, efforts to reduce the impact / risk of climate change, including disaster management, in the context of climate change / UNFCCC, fall into the category of climate change adaptation. Because the activity enters into understanding: adjusting to changing natural conditions (which may be caused by climate change).

2. Kyoto Protocol

In order to implement the objectives of the Climate Change Convention to stabilize GHG concentrations so as not to disrupt the system climate, at the third meeting of the Conference of the Parties (COP-3) held in Kyoto, Japan in 1997, a consensus was reached in the form of a decision (Decision 1 / CP.3) to adopt the Kyoto Protocol to the United

Nations Framework Convention on climate change. The Kyoto Protocol is the basis for industrialized countries to reduce their combined greenhouse gas emissions by at least 5 percent from 1990 levels prior to the 2008-2012 period (UNFCCC, 2013).

This legally binding commitment aims to restore the tendency to increase emissions historically starting with these countries 150 years ago. The Kyoto Protocol places a heavier milestone on developed countries, based on the principle of common but differentiated responsibilities, which legally imposed on February 16, 2005 and ratified by 192 countries, except United States.

In general, the Kyoto Protocol can be grouped into several main discussion groups (Amelina, 2014). The First Group is the initial part of the Kyoto Protocol which regulates in detail both the definitions that will be used in implementing the protocol. The second group, contains provisions regarding the commitment of the parties in the framework of implementing emission reductions. This section on the one hand regulates in general the tasks of all countries to carry out the commitments that have been determined. On the other hand, this section also provides guidance on how to reduce emissions that can be done specifically by developed countries by providing financial assistance to developing countries in order to carry out their specified commitments. Third Group regulates several market mechanisms that can be used in efforts to reduce greenhouse gas emissions. The Protocol Kyoto explicitly regulates 5 (five) mechanisms that can be used systematically, namely meeting targets

together (Join Implementation), Clean Development Mechanism (CDM), Emissions Trading (ET), and the formation of financial assistance.

3. Bali Road Map

In its latest development, the 13th UNFCCC held in Nusa Dua Bali at the end of 2007 also carved a step forward. After holding two meetings consecutive weeks, finally all delegations from 190 countries agreed on a consensus to suppress the pace of climate change. The decision was received surprisingly after the United States delegation finally agreed to accept the consensus as outlined in the Bali Road Map (Pawe, 2017).

From the beginning, the meeting in Bali was designed to discuss the points of proposals relating to climate change regulation post 2012 (the reduction in GHG emissions) for the second period. This turned out to divert discussion of the responsibilities of developed countries to reduce emissions (GHGs) by 5% in 2008-2012 (first period commitment in the Kyoto Protocol).

Since there is no an explicit and clear direction, the commitment for the first period, determined and expected results are not discussed. This is due to some developed countries are declined to reduce their national GHG emissions and to complete their commitment in providing funds and technology transfer. Moreover, the developing countries can also move towards climate-friendly development, by regulating the commitment of the post-2012 period as top priority of the government policy (Salim, 2009).

4. Paris Agreement 2015

To streamline the implementation of the Climate Change Convention, at the 2007 COP-13 meeting in Bali,

Indonesia, the Bali produced Action Plan, which among them agreed on the establishment of The Ad Hoc Working Group on Long-term Cooperative Action under The Convention (AWG-LCA). The AWG-LCA aims to streamline the framework of cooperation long-term until 2012 and after 2012. In accordance with the COP-17 2011 decision in Durban, South Africa, the Ad Hoc Working Group was formed on the Durban Platform for Enhanced Action (ADP), with the mandate to develop protocols, other legal instruments under the convention that applies to all parties (applicable to all Parties), which must be completed no later than 2015 at the COP-21 meeting.

The 21st meeting of the UNFCCC Parties or COP21 / CMP11 UNFCCC has agreed to adopt a series of decisions including Decision 1 / CP.21 on Adoption for the Paris Agreement as the main outcome. The Paris Agreement reflects the equality and principle of shared responsibility which is differentiated according to the capabilities of the state parties, taking into account the different national conditions.

The Paris Agreement is effective 30 days after it has been ratified by at least 55 parties to the convention whose total emissions are at least 55 percent of the total global greenhouse gas emissions. The Paris Agreement itself is open for signature for one year from April 22, 2016 to April 21, 2017. To demonstrate commitment with a strong political willing, the Indonesian government has signed the Agreement Paris on the first occasion on April 22, 2016 in New York

5. Law Number 32 of 2009 concerning Environmental Protection and Management (PPLH Law)

One form of follow-up to the ratification process that has legally implemented with national legal instruments, among others, can be seen by integrating climate change considerations into the Protection and Management Action of Living environment. This is at least stated in the preamble item which states that the current phenomenon of increasing global warming has resulted in climate change so that it worsens the decline in the quality of the environment because it is necessary to protect and manage the environment.

Provisions on climate change are scattered in several sections and articles of the PPLH Law. In the consideration section, the PPLH Law states that increasing global warming results in climate change, thus worsening the deterioration in the quality of the environment. Concerning climate change is emphasized in the general explanation of the PPLH Law which states that Indonesia is in a position that is very vulnerable to climate change.

6. National Action Plan on Climate Change in 2007

In 2007, the Ministry of Environment issued the National Action Plan on Climate Change (RAN-PI), a legal document containing directions for institutions in order to mitigate climate change. This document also contains various coordination steps that need to be taken by the government, related to efforts to tackle climate change. RAN-PI specifically includes an action plan related to the Landsector Use, Land Use Change Forestry (LULUCF),

which is divided into three target categories, first is the target of reducing emissions and increasing carbon sequestration capacity.

According to RAN-PI the emission reduction from the forestry sector will be done through eradicating illegal logging, preventing forest fires, cutting sustainable tree, strengthening the management of conservation areas and arranging policy directions for implementing Reducing Emissions from Deforestation and Degradation (REDD in Rinaldy, 2011). As reported by Ministry of environment and forestry website (ditjen PPI, 2020), the regulation, agreement and ratification regarding climate change has published transparently via website. The Directorate General of Climate Change Control (DJPPPI) is one of the work units of the Ministry of Environment and Forestry that deals with climate change, especially in the implementation of mitigation, adaptation, reduction of greenhouse gas emissions, reduction and elimination of ozone depleting substances, resource mobilization, greenhouse gas inventory, monitoring, reporting and verifying climate change mitigation actions and controlling forest and land fires. With the establishment of DJPPPI as implemented of Presidential Decree number 16 Year 2015, becomes a new hope for the implementation of climate change control activities that are well managed in supporting the development objectives in the field of environment and forestry.

Table 1 listed the publisher Law, Government Regulation, Presidential Decree and the Instructions of the Ministry of Environment and Forestry.

Law	Regarding
Law No. 16 Year 2016	Ratification of the Paris Agreement to the Nations Framework Convention on Climate Change (Paris Agreement on the Framework Convention of the United Nations Concerning Climate Change)
Law No. 32 Year 2009	Concerning Environmental Protection and Management (underpinning Climate Change is under the Ministry of Environment and Forestry)

Government Regulation	Regarding
PP No.46 Year 2017	Regarding Environmental Economic Instrument

Presidential Decree	Regarding
Presidential Decree No 16 Year 2015	Ministry of Environment and Forestry Directorate General of Climate Change Control
Presidential Decree No 77 Year 2018	Managemet of Environmental Funds

Regulation / Decree of the minister of Environment and forestry	About
P.13 / Menlhk / Setjen / OTL.0 / 1/2016	Organization and Work Procedure for Climate Change and Forest Fire Control
Agency P.18 / Menlhk-II / Secretariat General / 2015	Ministry of Environment and Forestry Organization and Work Procedure
P.32 / Menlhk / Setjen / Kum.1 / 3/2016	Forest and Land Fire Control
P.33 / Menlhk / Setjen / Kum.1 / 3/2016	Guidelines for Action Planning Climate Change Adaptation
P.84 / Menlhk / Setjen / Kum.1 / 11/2016	Climate Village Program

SK.777 / Menlhk / Setjen / OTL.0 / 10/2016	Steering Team for the Preparation of the Third National Communication Document for the Framework Convention of the United Nations Concerning Climate Change
SK.282 / Menlhk / Setjen / PLA.1 / 6/2017	Map of Forest and Land Fire Areas in 2015 and 2016
P.70 / Menlhk / Setjen / Kum.1 / 12/2017	Procedures For Implementation Of Reducing Emissions From Deforestation And Forest Degradation, Role Of Conservation, Sustainable Management Of Forest And Enhancement Of Forest Carbon Stocks
P.71 / Menlhk / Secretariat / Kum.1 / 12/2017	National Registry System Operation Of Climate Change Control
P.72 / Menlhk / Secretariat / Kum.1 / 12/2017	Guidelines For Implementation Of Measurement, Reporting And Verification Of Action And Resource Control Climate Change
P.73 / Menlhk / Secretariat / Kum.1 / 12/2017	Guidelines For The Implementation And Reporting Greenhouse Gas Inventory Of National
P.7 / Menlhk / Secretariat / Kum.1 / 2/2018	Guidelines For The Study Of Vulnerability, Risks, And The Impact Of Climate Change
P .8 / Menlhk / Setjen / Kum.1 / 2/2018	Technical Criteria Of Health And Emergency Status Of Fire Forestfor
P.9 / Menlhk / Setjen / Kum.1 / 3/2018	And / Or Information Fieldfixed Proceduresand / Or Information Field Fixedforest And Land Fire
SK.344 / Menlhk / Setjen / OTL.2 / 5/2016	Team For Development Of Legal Implementation On The Ratification Of Paris Agreement On Climate Changeon Climate Change
SK.679 / MENLHK / SETJEN / KUM.1 / 12/2017	Monitoring Implementation Of Implementation Of Contributionsnationally Determined Contribution - Ndc

P.73 / MENLHK / SETJEN / KUM.1 / 10/2019	Qualify Framework Indonesian National Ikasi And Certification Of Work Competency For Refrigeration Techniques And Air Procedures
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RULES / DECREE / INSTRUCTIONS OF DIRECTOR GENERAL OF CLIMATE CHANGE CONTROL

DOCUMENT	About
SK.25 / PPI / SET / KUM.3 / 12/2016	The establishment of the Working Group Document Preparation Third National Communication Convention of the United Nations Framework on Climate Change (Third National Communication-UNFCCC
P.1 / PPI / SET / KUM.1 / 2/2017	Regarding Guidelines for Implementing Climate Village Program
P.1 / PPI / SET / KUM.1 / 1/2018	Guidelines for Evaluation of Expert Registration Registration Related to Adaptation Climate Change
P.2 / PPI / SET / KUM.1 / 1/2018	Concerning Facilitation Guidelines for Preparing Climate Change Adaptation Plans in the Regions
P.3 / PPI / SET / KUM.1 / 1/2018	Formation and Development Community Concerned About Fire
SK.6 / PPI / SET / KUM.1 / 3/2018	Cross-Map Function Map 07 Climate Change Control
P.5 / PPI / SET / KUM.1 / 12/2017	Guidelines for Calculating Gas Emissions Greenhouses for Community Based Climate Change Mitigation Action
P.3 / PPI / SET / KUM.1 / 7/2016	Procedures for Assessment and Determination of Sustainable Wana Appreciation Recipients Category Manggala Agni and Fire Concerned Community
P.3 / PPI / PKHL / Keu.1 / 9/2017	Activity and Cost Standards in the Field of Forest and Land Fire Control in 2018
SK.24 / PPI / SET / PPI.0 / 7/2017	Concerning the Secretariat and Technical Team of Village Climate Program
SK Director General PPI Decree No. 8 of 2019	Concerning the Establishment of Subnational FREL

INS.1 / PPI / SET / SET.0 / 7/2019	Instruction of the Director General of Climate Change Control on the Prohibition of Using Plastic or Styrofoam Drinking Water and Food Packaging and Disposable Plastic Bags in the Directorate General's Scope Climate Change
ControlP.4 / PPI / SET / KUM.1 / 11/2019	Director General of PPI Regulation on Guidelines for Identification of Ecosystem-Based Climate Change Adaptation
P.3 / PPI / SET / KUM.1 / 4/2020	Director General of PPI Regulation concerning Organization and Working Area of Manggala Agni

Table 1

Source: ditjenppi, 2020

(<http://ditjenppi.menlhk.go.id/peraturan-perundangan.htm>)

Conclusion and Recommendation

From the review above, it can be seen how the current phenomenon of climate change is becoming a global threat. The impact of all this maybe Not immediately felt by us at this time, but we still have the responsibility to our children and grandchildren to carry out sustainable development (sustainable development) as the successor to the earth.

Mitigation efforts on climate change in terms of controlling greenhouse gas emissions have been poured into several forms of legal instruments. Starting from legal instruments International include the United Nations Framework Convention on Climate Change (UNFCCC) as the parent of arrangements international legal, the Kyoto Protocol, the Bali Road Map and the Paris Agreement. Whereas in the national legal instruments of Indonesia has been initiated to several legal instruments as the implementation of the mandate of international law, starting from the ratification of international legal instruments namely the ratification of UNFCCC through

Law No. 6/1994, ratification of the Kyoto Protocol through Law No. 17/2004 and the ratification of the Paris Agreement through Law No.16 / 2016.

Furthermore, the spirit of GHG emission control is translated into a number of national legal arrangements including Law No. 32 / 2009 on Environmental Protection and Management, the National Climate Change Action Plan (RANPI) program, and Government Regulation No.61 / 2011 regarding the Plan National Gas Reduction ActionGreenhouse (RAN-GRK). The impact of global climate change actually has begun since the last fifty years. Based on 1970-2004 data collected by the Intergovernmental Panel on Climate Change (IPCC) shows that the earth's temperature has increase in an average of 0.20C per year. The 2001-2010 period was recorded as the ten-period hottest year since the was first recorded weather in 1850. Likewise, ocean temperatures have also been warming since the mid-20th century, causing massive melting of icebergs in the Arctic Ocean (Arctic) and in the Antarctic Ocean (South

Pole), which subsequently resulted in an increase in sea level from -20 cm in 1950 to +5 cm in 2000.

In addition, global climate change has also resulted in irregular climate patterns, extreme weather, rainy seasons becoming longer with high rainfall, as well as drought, floods, landslides, heat waves, blasting disease, eroding biodiversity), and a decline in food production in many parts of the world. This great potential and impact is the basis for consideration that mitigation and anticipation preventive and curative are essential. In this conclusion, the process of adaptation and mitigation is needed through the context of a protective approach by making protection, approaches accommodative or making adjustments both physically and socio-economically and culturally, as well as with a retreat pattern by surviving the impacts that arise. Even at the level of regulation and policy, Indonesia has a sufficient legal framework to accommodate these points.

Referring to Ditjen PPI website (2020) the climate change control and environmental management have properly published in website, suggesting that the government of Indonesia as a country that is committed to the efforts, to maximize the impact of climate change impacts, needs to make further efforts. Law enforcement is one of the important aspects in handling this problem, both preventive and repressive. The making of special laws on climate change will be able to complement existing environmental legal instruments, the specific laws on climate change will be able to make concrete contributions and continue Indonesia's commitment

to reduce the impacts of climate change. There are many methods we can do to reduce pollution that occurs, by using public transportation, such as, start promoting by contributing ideas for creating ecofriendly environments, composing friendly environment, designing urban spatial planning, maintaining urban forests, protecting existing natural resources, and so forth.

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