The importance of politics on precautionary principles’ implementation in the environmental sector: cases and examples of Indonesia and Australia

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Abstract. The United Nations’ arrangement to establish the Rio Declaration on Environment and Development in 1992 can be perceived as an effort to enforce sustainability efforts in the environmental sector. The declaration’s main principles are about the interdependent and indivisible relations between peace, development, and environmental protection. The Rio Declaration also mentions the term precautionary principle that could be implemented by the industrial actors in the countries but not limited to them. Countries that put ratification on it are directly binding to hold the mandate as one of the main actors in control of environmental protection. This study attempted to examine some countries’ government action toward formulation and implementation of environmental policy regarding the precautionary principle as the embodiment of the Rio Declaration 1992. This study will use descriptive qualitative methodology with data based on cases in Indonesia and Australia. The findings will explain the direct and indirect correlations within the government and industrial actors about the precautionary principle in the action. In addition, the result of this study indicates how politics plays a powerful role in the implementation of the precautionary principle.

1. Introduction
Precautionary principles, a concept which defines a protective action that needs to be taken although there has not been any complete scientific proof of risk towards something, is simply a concept to not delay any action because of the lack of scientific information provided [1]. Etymologically, the term “precautionary” comes from the Latin language “prae” which means before and “caution” means security [2]. This principle emphasizes how to take preventive measures to avoid any deterioration in the quality of the environment due to pollution. Furthermore, it also regulates a precautionary measure to prevent environmental degradation that will have a significant effect on the life of humanity.
Germany had adopted it first in their program of environmental protection in 1971 called “The German Program of Environmental Protection of 1971” with the term “vorsorge”. Then in 1992, precautionary principles included in the Rio Declaration 1992 were released in The United Nations Conference of Environment and Development (UNCED), the first Earth Summit ever held. The primary objective of this summit was to produce a broad agenda and a new blueprint for international action on environmental and development issues that would help guide international cooperation and development policy in the twenty-first century [3]. The implementation of precautionary principles to protect a particular country’s environment is usually demonstrated in the adoption of this principle into their law. It is also written in the Rio Declaration Article 15: “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”

On the other hand, the initiation of the precautionary principle and how it gets the spotlight in the Rio Declaration simply cater to the needs of foundational guidance for countries that are dealing with environmental issues, direct or not. It is quite clear that precautionary principles are simple in its content, but it holds great potential as a principle for policy formulation. Therefore, one of the other reasons why the precautionary principle emerged can be referred to as its role as a beacon of direction for countries when creating policies that may impact the environmental sector, respectively. Simply, the precautionary principle shows that the country should be careful in every action and step that has a correlation with the environment. It also shows the need for policy to prevent environmental degradation.

There are three elements to apply precautionary principles:
1. Once a risk has been identified.
2. Where there are threats of serious or irreversible damage.
3. Lack of scientific certainty.

Adopting and implementing precautionary principles into law and policy is essential, because, with the development of technology, a lot of benefits can be obtained for the sake of the environment. While at the same time, it produces an increasing variety of agents and circumstances whose consequences are unknown, difficult to predict, and capable of posing irreversible risks to human health and that of the ecosystem. The concern lies under a statement, how human societies could gain great benefits from the development while promoting a clean and healthy environment and ensuring an adequate standard of living in the future [1].

From the projection above, it becomes clear that the need to apply precautionary principles for any policies related to the environment is getting more necessary. There is almost no loss or risk coming from the stance to carefully measure action on the environment, compared to the practice of usual conduct which is usually done by humanity when dealing with the environmental issues, that sometimes end in negative results such as misconduct against a certain environmental issue, or even damage to nature. With this notion, the need to apply precautionary principles is high, but before it even begins, one should understand the root of this principle, what it is, why it emerged, and what urgency and concern it brings to the discussion of environmental issues.

One of the examples of precautionary principle lies within the case of the Showa Maru tragedy back in 1975. The oil spillover happened in the Malaka strait. More or less than 7300 Ton of crude oil contaminating the water and the life below them. The bad weather in addition made the contamination spread faster and wider. The countries that have been affected by the spillover were Indonesia, Malaysia, and Singapore. The stability of fishermen and other marine activity is critically endangered because of the contamination. Before this happens, both countries are not having a precautionary scheme if something bad happens to the water activity within their territory. The crew of Showa Maru also did not predict and calculated the risk that might happen while they sail in the Malaka Strait like the depth of water that could cause the crash between the side of the ship and the coral. On the other hand, the three countries also did not notify the crew of Showa.
Maru about the characteristics of Malaka Straits and provide some analysis. After dealing with the case, the government of Indonesia, Malaysia, and Singapore established the Traffic Separation Scheme (TSS) and got validation from IMCO in 1977 to develop the concept of marine protection and marine law protection [4].

In this study, we will discuss the case in Indonesia and the case in Australia, as two countries who already ratified the Rio Declaration 1992 and are supposed to apply the precautionary principle on their policy in addressing environmental issues and try to figure out the relations between scientific intelligence and politics in terms of policymaking.

2. Methods
This study uses the qualitative descriptive method to analyze the dynamics of the precautionary principle application on environmental issues-related policy. Arguments and findings in the analysis are also supported by literature studies derived from the various primary literature, including scientific articles and previous research. There is a question arising between the precautionary principle itself related to environmental protection. Is the precautionary principle incoherent and therefore irrational to use as a guide or tool of policymaking? In academic discourse, there is support and critics, which emphasize the strong form of the precautionary principle and its weaker form in case of hard to defend results in certain cases. Firstly, we put aside the debate whether the precautionary principle is incoherent and irrational and focus on the real implementation of the precautionary principle as a policy-making guide. As we know, the government is the authority when we talk about the policymaker, even though in the process they collaborate with some stakeholders like individuals, community, and corporations, in the end, the decision is in their hands [5].

In line with this ideal value, decisions in complex technologically-developed societies flow from the top-down as scientific experts isolate problems and apply tools to solve them. In accordance, the term ‘policy’ seems to implicitly denote this rationalistic approach to the problem as the opposite of the irrational bargaining and power of ‘politics’ or ‘advocacy’ where it takes place. In terms of the policy process, precautionary principles both gather the scientific intelligence and advocacy to possess the value of political decisions about how to handle risk and uncertainty [6]. The process itself takes a long journey and the development of these rules is governed by an additional set of principles including proportionality, non-discrimination, consistency, cost-benefit analysis, ongoing monitoring of scientific developments, and the establishment of the burden of proof. This study then proceeds to scrutinize deeper on the case of Indonesia and Australia, as countries that have already ratified the Rio Declaration 1992 and are supposed to apply the precautionary principle on their governments' policy to surmount issues in the environmental sector. Further, into the analysis, it will be discussed from the findings how political factors affect the implementation of environmental policy in a country (particularly in Indonesia and Australia cases), even though the precautionary principle should already become the main priority and guidance in making those policies.

3. Results and discussion

3.1. Indonesia case
Indonesia's ratification of the Rio Declaration happened on August 23, 1994. Before its ratification, the National Development Planning Agency produced the Biodiversity Action Plan for Indonesia (BAPI) in 1993. The action plan mainly prioritized the in-situ conservation efforts as well as the ex-situ ones. Other than that, it is also intended to be a reference to maximize the use and the management of natural resources. In 2003 after going into several enhancements, a second document titled the “Indonesian Biodiversity Strategy and Action Plan (IBSAP)” was developed to achieve five objectives 1) to encourage changes in
attitude and behavior of Indonesian individuals and society, institutions, and legal instruments to increase their concern about conservation and utilization of biodiversity, for the welfare of the community should be in harmony with national laws and international conventions 2) to apply scientific and technological inputs, and local wisdom; 3) to implement balanced conservation and sustainable use of biodiversity; 4) to strengthen institutions and law enforcement, and 5) to resolve the conflict over natural resources [4]. There have been several policies, action plans, laws, and acts produced by the Indonesian government by the Convention on Biological Diversity (CBD). For example, the Strategy and Action Plan to conserve the Indonesian Sumatran Rhino population which came into force in 1993 with its main objective to conserve rhino species in Indonesia. The action plan continued in 2007 with the release of another action plan with related issues. But, the implementation of these action plans did not meet its objective because the data showed that the rhino population in Indonesia (especially Sumatran rhino species) is stagnant and tends to decrease from 1995 to 2007 [6].

Not long after ratifying the CBD and releasing a conservation act regarding rhinoceros, Indonesia was involved in a forum together with other ASEAN countries to discuss the environmental crisis that hit the Southeast Asian region in the late 1990s. At that time, in the second half of 1997 Southeast Asia was severely covered by smoke-haze pollution caused by the forest fire on the Indonesian islands Kalimantan and Sumatra. The forest fire mainly resulted from the land clearing for agriculture using an open burning method to accelerate the process [7]. The smoke-haze itself nearly became an annual occurrence for some ASEAN countries. The dangerous levels of the smoke-haze usually worsen in the dry season. This condition greatly affected the ecology, economy, and health sectors among ASEAN countries. ASEAN as a regional institution body tried to address the issue through the 1997 Regional Haze Action Plan (RHAP) and the 2002 ASEAN Agreement Transboundary on Haze Pollution (AATHP). The AATHP in 2002 became the first official agreement and reference framework by ASEAN to tackle the smoke-haze issue. This agreement was made more legally binding rather than the RHAP one by stated authority and obligations of each country that will ratify the framework [1].

As one of the ASEAN countries that became the primary source of haze in this particular issue, Indonesia was the last country to ratify the agreement in 2014 and deposited its instrument of the agreement on January 20, 2015. The ratification of the agreement after a decade seems to be twofold, it somewhat showed Indonesia’s interest to both strengthen, secure its international profile and answer to the increased international attention after the high levels of haze pollution in 2013. Indonesia finally takes the opportunity to end what had been a very controversial issue and had caused a disturbance to Indonesia’s diplomatic relations with other countries especially in the environmental regional forum [5]. But, ratifying AATHP in 2015 does not immediately put the issue to rest. Because the AATHP is only a legal framework for cooperation and does not address important technical issues. And as ASEAN has the non-interference principle and in AATHP there is not a single article that refers to any sanctions for violations of the agreement. This became the reason why Indonesia could get away from ratifying the agreement. The agenda to postpone ratifying specific agreements showed that the decision-making process of Indonesia’s government towards the smoke-haze issue failed to meet any decision-making approaches in uncertainty. The awareness of the existence of high-risk communities affected by the issue is neglected. The decision to postpone ratifying the agreement also did not include science as the basis to assess and manage the risk. Lack of transparency in the decision-making process also worsening the issue. This particular fact shows that ratifying regulation and applying precautionary principles is not enough if the observation and the enforcement of the policy in the field are lacking. Nevertheless, this study argues that some factors may have an impact on Indonesia’s unfortunate case regarding the use of the precautionary principle, they are non-optimal top-bottom relations, non-binding or non-firm sanctions from national and regional levels, and the lack of awareness regarding an environmental issue.
3.2. Australia case

Some other cases are Australia's Climate policy. Recently Australia is still struggling with its carbon emission reduction scheme. At the Rio ‘Earth Summit’ in 1992, Australia was represented by the labor government and immediately ratified the United Nations Framework Convention on Climate Change (UNFCCC). After the liberal take over, they continued the momentum and negotiated on behalf of deliberations over the Kyoto Protocol to the UNFCCC and signing the treaty but then refused to ratify [6].

![Figure 1. Australia’s exported emissions 1961-2017 as a share of global CO2 emissions from fossil fuels (www.climateanalytic.org)](image-url)

The table shows how domestic greenhouse gas from Australia in the world’s emissions share [3]. From 1961 until 2017 the emissions constantly increased and later raised a question about the Australian commitment to the climate action treaty and the implementation of the policy-based action (Figure 1). In 2009, the first Australian ETS legislation was introduced into the parliament called the Carbon Pollution Reduction Scheme Bill (CPRS). CPRS contains six bills to be implemented for the carbon pollution reduction scheme. The bill gives Australia’s government obligation under the United Nations Framework Convention on Climate Action by outlining: entities and emissions covered by the scheme; liable entities’ obligation to surrender emission units corresponding to their emissions; limits on the number of emissions units that will be used; the nature and allocation of Australian emissions units; a mechanism to contain costs and also contains a regulation-making power [5]. Later on, this bill was rejected by the senate after two coalitions of labor and green did not agree on that due to a major amendment request which did not happen between the three coalitions, resulting in three times proposal and three times rejection. In 2012 after Deputy Prime Minister Julia Gillard became Prime Minister, the Australian Labor party agreed to a politically inclusive committee on climate change, the Labor-Greens agreement must establish a commitment to tackling climate change to reduce pollution. This agreement establishes a carbon tax as a way to reduce fossil fuel emissions. The government had announced this policy as a transition while waiting for the CPRS to be built. But at the end of the day, this policy does not deter the new investment [6]. The journey of this policy-making had been affected Kevin Rudd and Malcolm Turnbull lost their positions in the parliament, and a lot of other politicians had fallen because of climate change policy.
4. Conclusion
Politics and policy are linked to each other. From the study case, it implies that passing environmental policy to implementing the precautionary principle is harder than a lot of people think. There is a power battle between the political parties, negotiation with the affected party, and even gathering supporters from each country which have different backgrounds. From Indonesia's case, the failure of demonstrating decision-making approaches in uncertainty and the lack of accountability, empowerment from the regional and national level made the ratification of the particular agreement seem useless and have no significant implication towards the improvement of environmental quality among ASEAN. From Australia's point of view, there is a battle between the liberal and labor parties and also the green party to determine the best solution to reduce the carbon pollutants. One more economical side is by implementing a carbon tax and the other is by scheme and mechanism that would take time but worth in a sustainable way.

At the end of the discussion, there is a direct and indirect effect between politics and policymaking. The potential topic for further research or discussion is the failure of the implementation process of certain environmental policies or regulations despite already addressing the precautionary principle and the statistical relations between two variables which are politics and the stakeholders.

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