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Toba Caldera Geopark Discourse:

Critical Discourse Analysis of the CSOs and the Government in North Sumatra Province of Indonesia

By

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List of Abbreviations

APGN	Asia Pacific Geopark Network
BKPEKDT	Lake Toba Area Ecosystem and Conservation Coordination Agency
	Badan Koordinasi Pelestarian dan Ekosistem Kawasan Danau Toba
CSOs	Civil Society Organizations
EGN	European Geopark Network
FPIC	Free, Prior and Informed Consent
GGN	Global Geopark Network
HPH	Forest Concession Rights
	Hak Penguasaan Hutan
ILBM	Integrated Lake Basin Management
KSPPM	Study Group for the Development of People's Initiative
	Kelompok Studi Pengembangan Prakarsa Masyarakat
KSN	Lake Toba as a National Strategic Area
	Kawasan Strategis Nasional
KSPN	National Strategic Tourism Area
	Kawasan Strategis Pariwisata Nasional
LSM	Lembaga Swadaya Masyarakat (NGO)
NGO	Non Governmental Organization
PT TPL	Toba Pulp Lestari (Company)
SLTF	Save Lake Toba Foundation
UGG	UNESCO Global Geopark
UNCED	United Nations Conference on Environment and Development
YPDT	Toba Lake Lovers Foundation
	Yayasan Pencinta Danau Toba
WSSD	World Summit on Sustainable Development

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Abstract

The idea of geopark is the new language for Lake Toba development. Following the rich history of geology formation as the result of devastating super-volcano eruption about thousand years ago, Lake Toba is considered as a geopark and further to be included in UNESCO's GGN. This institution provide a framework of international cooperation, develop models of best practice, set quality standard, which is based on strong community support, so this network can be one path for Lake Toba to be known to the world's community, and raising concern for Lake Toba preservation as well as its local communities. Therefore, since 2011, the Indonesian Government through the Ministry of Tourism and Creative Economy had started to initiate Toba Geopark discourse. However, up to the present, the society are still not completely aware yet about what and how Lake Toba area's status is as a geopark. This study found, the lack of engagement of local people in the discourse, because the government's approach still tending to top-down rather than bottom-up process. For instance, the government has not yet asked its local people's about the development of their region into geopark. Moreover, during that time, there is no seen fundamental changed related to State's policy commitment in addressing environmental degradation around the lake. Therefore, in order to ensure the Toba Caldera Geopark succeeds, the Indonesian Government should change its policy over environmental problems of the lake.

Keywords: Lake Toba, UNESCO GGN, geopark discourse, critical discourse analysis, Local Community, CSO, Indonesian Government.

Chapter 1

Introduction

1.1 General Background

Lake Toba is the largest volcano-tectonic lake in the world and the largest lake in Southeast Asia. Located in the Province of North Sumatra, measuring 100 x 30 km, with depth reach of 505 meters. Lake Toba Caldera is the result of volcanic eruptions, which occurred about 74,000 years ago, that changed the world's climate and almost destroyed the human race. Erupting at least 2800 km^3 of magma, qualifying as an 8,8 magnitude eruption[1]. Mount Toba super-eruption, sent hot massive clouds covering almost the entire East end to the West of Sumatra. Millions of cubic ash spewed out, covering the Indian Ocean to the Arabian Sea and parts of the Pacific Ocean. Sulfuric acid aerosols are released later spread to cover the Earth's atmosphere and to create total darkness for six years.

Due to the devastating eruptions, Earth's temperature dropped down to five degrees Celsius. The Sun was covered with Toba's eruption ash. Volcanic eruptions (volcanic winter) caused a global winter. Photosynthesis stopped, plants died, and even animals' ability to hunt decreased. Homo sapiens, the ancestors of modern humans, became scarce, there were only 15,000 people left. Human migration stopped and they were isolated in Africa, as recorded in the semblance of modern human genetics around the world[2].

According to geologists, such as Van Bammelen 1939; Craig A. Chesner 1991, the eruption of Mount Toba is the largest in the last 2 million years. It created Caldera Lake, and elevated an island located in the middle of the lake, called Samosir Island. Lake Toba becomes one of the most beautiful places for tourism destination on Earth. There are 7 *Kabupaten* (districts) around Lake Toba region, which comprise of Kabupaten Samosir, Dairi, Humbang Hasundutan, North Tapanuli, Toba Samosir, Simalungun and Karo. In addition, this region is the homeland of Batak ethnic groups, the third largest population in

[1] The Toba Caldera Complex, Quaternary International (2011), doi:10.1016/j.quaint.2011.09.025

[2] Kompas Ring of Fire Expedition, "Toba Changed the World," Kompas TV, 2011

Indonesia, according to tribal nations group. Batak ethnic groups were categorized into 5 sub-groups; namely Batak Toba, Simalungun, Karo, Pakpak and Mandailing, with total populations around the region reaching 2.3 million people.

Unfortunately, it is an unpleasant fact that since the 1980s up until now Lake Toba continues to experience a massive environmental degradation. The presence of multinational companies, such as pulp and rayon, PT Inti Indorayon Utama (IIU) has been a major cause of deforestation, air pollution, and water pollutions around Lake Toba. Furthermore, Lake Toba's water pollution was aggravated by the activity of cage fish culture by PT Aquafarm Nusantara since 1998.

It is easy to confirm the lack of the government's policies with inevitable environmental problems that have happened in many regions. The keyword for a series of environmental degradation around Lake Toba is due to the poor government policies and even provided the operational license to the company, which has obviously resulted a lot of environmental problems. Although even now, the mass public protests have never stopped, the Indonesian government seems likely has no power to close down all companies that are operating in Lake Toba and other pollutant-causing activities.

However, since 2011, the Indonesian government through the Ministry of Tourism and Creativity Economy has been introducing and preparing Lake Toba region to be a member of UNESCO Global Geopark Networks (GGN). Indonesian government has proposed the Toba Caldera Geopark to UNESCO GGN two times, November 2013 and November 2014. This submission was done through Toba Caldera Geopark Acceleration Team, according to the Decree of the Governor of North Sumatra, No. 188.44/404/KPTS/2013. Therefore, on March 27, 2014, Lake Toba area was inaugurated by President of Indonesia, Susilo Bambang Yudhoyono, as the National Geopark.

In this regard, the question about what, and how Lake Toba's status is as a National Geopark and the effort of becoming UNESCO's GGN member is being discussed broadly in the local communities, medias, as well as civil society organizations (CSOs). Geopark

is a concept initiated by UNESCO GGN institution as a tool for geological heritage conservation, education, economic activity and sustainable development.

1.2 Motivation and Research Questions

Despite the fact that the Toba Geopark discourse had started since the beginning of 2011, the public are still not completely aware yet about what and how Lake Toba area's status is as a geopark. How local communities enacted and involved in the geopark discourse is being debated in the media, CSOs, as well as in the society. While one of the essential principles of regional development into geopark is based on bottom-up principle, the involvement from local people is still less than it ought to be. Moreover, most people asked about what exactly are the benefits or disadvantages for Lake Toba in pursuing Global Geopark status. During that time, there were no fundamental changes shown related to State policy commitments in addressing environmental degradation around the lake. In other words, the activities which cause environmental degradation around Lake Toba are still uncontrolled.

This study, however, attempts to examine ideas and interests behind the Toba Geopark discourse, to help people in figuring out the discourse, to see responses from all the actors who support or criticize it. How they support, or even pretend to support, the environmental conservation of Lake Toba region and local communities that live in it. Furthermore, this study will examine each action of state and non-state actors, in North Sumatra Province, as well as the Lake Toba regional government (the representative district of the state and the focus) in this study.

This thesis addressed following the research questions:

1. What is the idea of Toba Caldera Geopark, and responses from CSOs and government?
2. Why does Indonesian government deal with the geopark norm which is sustainable development, while letting environmental degradations happen around Lake Toba even now?

1.3 Methodology

In this research, the author applied three methodologies. The first methodology is participant observations. Since I was an activist of the social CSO Jendela Toba association from 2012 to 2014, I had many opportunities to observe, discuss, meet and talk with Geologist, local government as well as NGOs, which focused on Lake Toba region issues. Throughout the year, I continued to monitor the development of Toba Caldera Geopark discourse which were broadly discussed in the news report, and social media. Therefore, the data was previously collected as personal document.

The second methodology is archival research. I rely on this methodology to examine the discourse of Toba Caldera Geopark on Local and National Newspapers in Indonesia, to find out what are the interests and ideas in pursuing Toba Caldera Geopark. In addition, I also studied some relevant books, documents, journals, and related papers.

The third methodology is interviewing some social and environmental CSO leaders and the government of North Sumatra Province. In this research, I conducted a few interviews with 4 CSOs, District Government (as the state representative) and Provincial Legislative Council of North Sumatra. The goal of using unstructured type interviews, was mainly to have an in depth exploration of the research's focus and questions (Riddell, 2004:287).

1.3.1 Research Approach

I use the theory of critical discourse analysis (CDA) to explain and analyze responses, interests, and ideas from Indonesian Government in the Toba Caldera Geopark discourse. The CDA theory examines the relation between dominance, power, and society in discourse, concerns more about top-down rather than bottom-up. The typical vocabulary of scholars in CDA will feature such notions as power, dominance, ideology, interests, reproduction, institutions, beside the more familiar discourse analytical notions (Van Dijk, 1998). This means, the enterprise of CDA theories in the research would be focused on the elites and their discursive strategies to maintain inequality (Van Dijk, 1993). Van Dijk CDA insight does not set the analysis to a particular structure of text or talk, *but systematically relates to the structure of the sociopolitical goal.*

Quoted from Teun A. van Dijk, this research specifically considers institutional, political, gender and media discourses (in the broadest sense) which testify to more or less over relations of struggle and conflict. CDA takes explicit position, hence wants to understand, expose, and ultimately resist social inequality. Some of the tenets of CDA can already be found in the Critical Theory of the Frankfurt School before the Second World War (Rasmussen, 1996). It currently focuses on language and discourse was initiated with the 'critical linguistics' that emerged (mostly in the UK and Australia) at the end of the 1970s (Fowler, Hodge, Kress & Trew, 1979; see also Mey, 1985)[3].

From a discourse analytical and sociopolitical point of view it is tempting to study the relations between discourse structures and power structures more or less directly. This will often be effective and adequate. It is primarily interested and motivated by pressing social issues, which it hopes to offer better understanding through discourse analysis, (Teun A. Van Dijk, 1993:252). Succinctly, according to the key CDA theorist includes Fairclough (1992, 1993, 1995), van Dijk (1993, 2001), Wodak (2001), the relationship between language and society can be described, interpreted, and explained through studying and analyzing written and spoken texts.

Many CDA scholars reject the possibility of "value-free" science, they argue that science, and especially scholarly discourse, as these inequalities are inherently part of and influenced by social structure, and produced in social interaction (Van Dijk, 1998). However, I tried to be objective as a researcher in this study. CDA has for instance addressed the ideological character of discourse (Fairclough, 1989). Van Dijk (1995) developed methods which are more focused on cultural and social contexts. Through CDA, those actor who are in power and have the means to deal with social problems are critically analyzed (Van Dijk, 1993). Critical research on discourse needs to satisfy a number of requirements in order to effectively realize the objectives, (Van Dijk, 1998:353):

1. As is often the case for more marginal research traditions, CDA research has to be "better" than other research in order to be accepted.

[3] In Teun A. Van Dijk, (1998), Critical Discourse Analysis, *http://www.discourses.org/OldArticles/Critical%20discourse%20analysis.pdf*, accessed in October 10, 2015

2. It focuses primarily on social problems and political issues rather than current paradigms and fashions.
3. Empirically adequate critical analysis of social problems is usually multidisciplinary.
4. Rather than merely describing discourse structures, it tries to explain them in terms of properties of social interaction and especially social structure.
5. More specifically, CDA focuses on the ways discourse structures enact, confirm, legitimate, reproduce, or challenge relations of power and dominance in society.

Since serious social problems are naturally complex, this usually also means a multidisciplinary approach, in which distinctions between theory. Description and application become less relevant (Van Dijk, 1993:252). The main task of CDA is to describe the relation of power, dominance and inequality produced in the discourse (van Dijk, in Tannen et al, 2001).

Jan Renkema (2004:282) in his book, "Introduction to Discourse Studies," added that discourse is a reflection of power relations that exist in society. CDA was conducted in order to detect social problems, especially the problem of discrimination. CDA sees language as an important factor as the embodiment of the power of a particular party. A text produced by a particular ideology to be conveyed to the public. In this research, I will focus on CDA Van Dijk theory, because he distinctly provide analytical entry: to describe, interpret and explain Toba Caldera Geopark discourse and its relations to detect of social problems, inequality, ideology, and society access. Through CDA methodology, geopark concepts can be understood and analyzed thoroughly, what its theoretical framework and how it will be worked in Lake Toba region.

In addition, the term of GGN which provided by international institution (The United Nations Educational, Scientific and Culture Organization/UNESCO) will be analyzed using global environmental politics images, specifically liberal institutionalism thought, to find out what is the idea and ideology behind geopark discourse.

1.5 Objectives of the Research

The purposes of this research addressed following:

1. To explain what the definite conceptions of geopark are, what government applies for, and how Toba Caldera Geopark works, in the way of government's political commitment.
2. To examine some interests and responses of the government as well as the CSOs, with whom they deal with and who they criticize, how the local communities are involved and prospering them as an essential point of the geopark conception.
3. To seek any potential about Lake Toba within the geopark brand and its compliance related to the local communities.

1.6 Organization of the Paper

The study is divided into five chapters. After this first chapter, Chapter 2 will discuss analytical framework, and review some theoretical explanations of the discourse and critical discourse analysis, geopark and UNESCO GGN, the view of global environmental politics, and environmental governance of Lake Toba region. Chapter 3 will elaborate further the idea of geopark, geopark and indigenous people, Batak culture in managing environment, and Lake Toba degradations. Chapter 4 is the main explanation of Toba Caldera Geopark discourse, critical discourse analysis of the CSOs and the government, analysis of international cooperation under UNESCO GGN, and its compliance. Finally, Chapter 5 is the conclusion and recommendation.

Chapter 2

Literature Review

2.1 The Concept of Discourse

Each discourse contains opinions and messages. Moreover, any discourse also reflects the logic of thinking and knowledge systems.

Michel Foucault defined discourse refers to: ways of constituting knowledge, together with the social practices, forms of subjectivity and power relations which inhere in such knowledges and relations between them. Discourses are more than ways of thinking and producing meaning. They constitute the 'nature' of the body, unconscious and conscious mind and emotional life of the subjects they seek to govern (Weedon, 1987:108). Discourses are treated as practices which systematically form the objects of which they speak (Foucault, 1989:74)[4].

Foucault explained that the discourse is in the interest of power, hegemony, culture and science. Discourse is not only discourse, there is a power behind it, therefore every discourse needs to be criticized and sued, and otherwise the discourse can be used, in turn, for organization interests side. Discourse, at this time mostly conveyed through the media.

Discourse is commonly used in various senses including (a) meaning-making as an element of the social process, (b) the language associated with a particular social field or practice e.g. 'political discourse', (c) a way of construing aspects of the world associated with a particular social perspective e.g. a 'neo-liberal discourse of globalization', (Norman Fairclough, 2002: 3).

In sociological definitions, discourse refers to how we think and communicate about people, things, the social organization of society, and the relationship among and between all three. Discourse typically emerges out of social institutions like media and politics (among

[4] In Wodak, Ruth and Michael Meyer, 2005, *Methods in Critical Discourse Analysis*, London: Sage Publications, p.39

others), and by virtue of giving structure and order to language and thought, it structures and orders our lives, relationships with others, and society[5].

It thus shapes what we are able to think and know at any point in time. In this regard, sociologists frame discourse as a productive force for it shapes thoughts, ideas, beliefs, values, identities, interactions with others, and our behavior. In doing so it generates a lot of what happens in ourselves and in the society. Discourse has a clear institutional dimension. Discourse here defined as a specific ensemble of ideas, concepts, and categorizations that is produced, reproduced, and transformed in a particular set of practices and trough which meaning is given to physical and social realities, (Maarten A. Hajer, 1994:44).

2.2 The View of Global Environmental Politics

In the viewpoint of global environmental politics as a field of praxis and analysis, the politics of the environment is about trying to understand and explain the practice of governments and other actors related to the environment, especially insofar as this is associated with international affairs or transboundary environmental issues (Paul G. Harris, 2014:6). In the sense of international relations theory and environment, "the question address to, what are the political causes of environmental change?" In many ways, international relations help to answer, with its focus on the roles of power and national interest, of international institutions and rules, and of norms and ideas in international cooperation, (Kate O'Neill, 2009:2).

"It is no exaggeration to say that the mainstream position in the study of international environmental cooperation is liberal institutionalism" (Harris, 2014:35). The nature of environmental politics is cooperation, since we live in the only and one planet that requires more cooperations over the state and non-state actor as well. No matter they are developing or development countries, poor or rich, they should get together to solve the environment matters. Kate O'Neill has outlined the basic of three mainstream traditions of international relations theory within this field, namely realism or neorealism, liberal institutionalism and

[5] "What is discourse?," *http://sociology.about.com/od/Ask-a-Sociologist/fl/Discourse.htm,* accessed in August 13, 2015

constructivism that recognize power, institutions, cooperation, and ideas into international environment cooperation.

The key common factor is that the international political system is anarchic, and that the primary actors within this system are sovereign nation states, (O'Neill, 2009:9). By anarchy, there is no state overarching authority that can dictate to individual states, and even in international courts and tribunals, no state can ever be forced to appear before them, or to accept punishment before them[6]. That means, the way to make environmental policy changes is that they must willing with the policies they have made. This is the line of realist or neorealist though which have a little intention to cooperation. Cooperation between states will only happen when there is a hegemony state that can impose its will on others (Robert Garner, 2011). The realist tradition, so important elsewhere in international relations theorizing, has had little to say about global environmental change. This state of affairs may be changing, not only on account of the links between degradation and armed conflict, but also as a consequence of the close connections between climate change and a long-term staple of realist analysis: the politics of energy resources (John Vogler, 2014:39).

In contrast to realist analysis, liberal theorists emphasized more to cooperate upon the states. Liberal theorists thought of cooperation possible (Baldwin 1993, Keohane 1984, Krasner 1983, Keohane and Nye 2001); cooperation is possible because states are interdependent. It was often said that the difference between neo-realists and liberals had been narrowed to such an extent that all that divided them was a disagreement over whether the gains of state participants were relative or absolute – in line with the long-standing liberal credo (Lamy 2011:123–5).

In addition, neoliberal institutionalists, see that international institutions reduce the transaction costs of cooperation (Haas, Keohane and Levy, 1993). It is the powerful contribution to understand why states cooperate over environmental problems. Robert

[6] DeSombre, R. Elisabeth, 2002, *The Global Environment and World Politics: International Relations for 21th Century.* New York, NY: Continuum, p. 7

Keohane moved away from interdependence and transnational relations and concerned himself with the extent of cooperation possible under conditions of anarchy. Neoliberal institutionalist Keohane thought was relevant to the current of world political conditions today, which recognizes the role of non-state actors.

Meanwhile, constructivism share ideational and normative perspective. Constructivism scrutinizes how states respond to and how international cooperation is shaped by, the introduction of new information of ideas, or by international norms-shared conceptions of appropriate behavior (Nadelman 1990; Finnemore and Sikkink 1998; Goldstein and Keohane 1993; Klotz 2002).

Reflective notions in international relations theories and global environmental politics, the enterprise of GGN under UNESCO's assistant dominated by liberal institutionalism thought. The liberal project is still prominent and is clearly motivated to solve environmental problems through an improvement and extension of international cooperation (John Vogler, 2014). We could however, take institutionalist conclusions in different direction. Institutionalist start with the premise, shared with many perspective in international relations that international politics is to be characterized as number of sovereign states interacting in an anarchic environment (Matthew Patterson, 2009:272). The international community's ability to preserve the quality of the planet for future generations depends on international cooperation, which, in turn, negotiations effective international institutions to guide international behavior[7]. By this approach, the UNESCO GGN institutions can be defined: persistent and connected as of rules and practice that prescribe behavioral roles, constrain activity, and shape expectations.

2.3 The Brief Introduction to CSOs in Indonesia

In general, the development of CSOs in Indonesia began in the 1970s. This occurred in conditions of political power of the new order since 1967, the authoritarian style of

[7] Robert O. Keohane, Peter M. Haas, and Marc A. Levy, 1993, "The effectiveness of international environmental institutions," in Robert O. Keohane, Peter M. Haas, and Marc A. Levy, institutions for the earth, (Cambridge, Mass: MIT Press) pp. 4-5

Soeharto regime's with a development growth orientation. So this period, the civil society in Indonesia is categorized as an affiliate of the government. Basically the construction accepted by bureaucrats, academics and civil society activists without questioning the foundation of ideology and discourse.

The term of LSM *(Lembaga Swadaya Masyarakat)* which means *"self-reliant community development institution,"* was introduced in a seminar of Indonesian NGO's on Building of the *Indonesian Labour Foundation* (*YTKI*) in 1980, at the initiative of Bina Desa, WALHI and YTKI. The use of term LSM is particularly intended to avoid misunderstandings with NGO term which means anti-government or the opposition. It is primarily associated with the Suharto regime's policy not give room for the opposition. LSM is still commonly used, although some have been changed to *Organisasi Non Pemerintah* or *Ornop* which is the literal translation of NGO[8].

It is known, none of the NGOs in the 1970s that actually reject the basic concept and idea of development. Thus, the NGOs criticized at the time were centered on methodological approaches, without questioning aspects of structural and systemic relevance of the issues that is being pursued[9]. Increasing the number of LSM in developing countries, especially in Indonesia, can not be separated from the overall history of development discourse. The existence of LSM and social organizations in Indonesia has always been concerned with development issues, because the government frequently misunderstand the concept of development. Thus, in many developing countries the term NGO always connotes the organization of "development" non governmental (Fakih, 1996).

However, after the 1980s, there was a significantly increase a number of CSOs that spread and extends to almost all areas of Indonesia. Identity of LSM in Indonesia increasingly strong and clear, if previously NGO just focus on the practical needs and the development

[8] Hans Antlöv, et al., 2005, Ngo Governance and Accountability In Indonesia: Challenges In A Newly Democratizing Country, *http://www.icnl.org/research/library/files/Indonesia/Peter_NGO%20accountability%20in%20Indonesi%20July%2005%20version.pd,* accessed in December 15, 2015

[9] Roganda, "Peran KSPPM dalam membangun Prakarsa Masyarakat di Tapanuli Utara (1985-1994)," Skripsi, Universitas Sumatera Utara, 2009

of joint business group, now extends began to; from environmental issues, human rights, issues relating to repression and other gender, the issues of culture rights, and the indigenous peoples knowledge, the exploitation of laborers and the association of laborers rights.

According to the World Bank, definition of civil society refer to "the wide array of non-governmental and not-for-profit organizations that have a presence in public life, expressing the interests and values of their members or others, based on ethical, cultural, political, scientific, religious or philanthropic considerations. CSOs therefore refer to a wide of array of organizations: community groups, non-governmental organizations (NGOs), labor unions, indigenous groups, charitable organizations, faith-based organizations, professional associations, and foundations"[10].

Factually, the forerunner of LSM or CSOs has long been known. Budi Utomo organization and Taman Siswa established since 1908, has the same characteristics as the current NGO. As an organization Budi Utomo was not oriented to financial interests. In other words, Budi Utomo work together with the community, comes from the people and activity is done to bring prosperity for the people.

In North Sumatra, the NGO was heard in the decade of the 1980s. Most were born in the name of religion under service mission and community development, in the sects of the Church in Northern Sumatra. The presence of NGOs are indispensable in developing countries, and therefore, not surprising that the numbers are still growing up to nowadays. In democracies country such as Indonesia, the role of NGOs are taken into account in government policies. Its existence is quite important to do a variety of community initiatives development activities, economic and social-political, such as organizations that bridge the interests of the people and the government, and as an organization that is active in the empowerment of the communities. In this study I will focus on local and national

[10] Defining Civil Society, *http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/CSO/0,,contentMDK:20101499~menuPK:244752~pagePK:220503~piPK:220476~theSitePK:228717,00.html*, accessed in October 10, 2015.

CSOs, which concern about social and environmental issues of Lake Toba region, and life in it.

2.4 The Brief History of Toba Geology

Lake Toba is the largest caldera in the world created of gigantic volcanic eruptions (super-volcano). Lake Toba located in the Barisan Mountains, near to the Great Sumatra fault which stretches from the Sunda Strait to Banda Aceh, 176 km to the west of the provincial capital, Medan, Northern Sumatra. It is located on the coordinate point 2.88 ° N 98.52 ° E to 2.35 ° N 99.1 ° T.

According to Van Bemmelen (1949), the Toba volcano occurred at the peak of the geology of Northern Sumatra is called the Batak Tumor, which is a stands alone on plateau measuring 150 x 275 km. Based on the topography and geology, Van Bemmelen (1949) propounded the evolutionary formation of volcanoes started at about 13 million years ago when the elevation of Barisan mountains tectonic was processed. This elevation continues and in about 2 million years ago created the Batak Tumors.

Based on modern research, Toba catastrophe volcano eruption occurred at 74,000 years ago, (Chesner & Rose 1991; Rampino and Self 1993). The supervolcano eruption engendered geological diversity (geodiversity) area of Lake Toba. The lake covers an area of 1.130 km^2, Samosir Island has a land area of 647 km^2, smaller pardepur 7 km^2,[11] collects rainwater 240 km^3, height about 900 m above sea level, with a maximum depth reaches 505 m.

The first time eruptions (OTT, Oldest Toba Tuff), which is known as Sibaganding Caldera, in the southeastern part of Lake Toba, occurred in 840,000 years ago (Diehl et al., 1987). The OTT eruption spewed a 500 km^3 of magma (Rose & Chesner, 1987). The second time eruption (MTT, Middle Toba Tuff) known as Haranggaol Caldera, in the northern part of Lake Toba, happened in 501,000 years ago (Chesner and Rose, 1991), spewed 60 km^3 of magma.

[11] "Experience and Lessons Learned Brief for Lake Toba," Haryatiningsih Moedjodo, Peter Hehanusa, et al., 2006

The third generation eruption so-called supervolcano (YTT, Youngest Toba Tuff) known as Sibandang Caldera, in the west-southwest of the lake, about 74,000 years ago (Ninkovich et al. 1978a; Chesner 1991), spewed 2800 km^3 of magma. Thick ignimbrite covered up to 30,000 km of Northern Sumatra.

2.5 The Global Impacts of Toba Super-volcano Eruptions

The Toba super-volcano eruptions happened during the week. The ashes reached heights more than 50 km above sea level, spread to half of the earth, from mainland China to South Africa (Rose & Chesner 1987; Chesner 1991; Bühring et al. 2000). The eruption created global climate change, a volcanic winter, especially in northern hemisphere, a massive death of *homo sapiens* and extinction of several species of flora and fauna. According to some DNA evidence, this eruption also reduced the number of man up to 60% of the total human population at that time (60 million), according to Endicott, et al. (2003).

The spread of volcanic ash was very spacious, found almost all over the world. Allegations that then leads to Mount Toba, as evidence of molecular forms of the same volcanic ash in 2100 point (location), up to 3,000 miles from the source of the eruption. In fact, surprisingly, the spread of ash also recorded up to the Arctic. This is reminiscent of the experts, how powerful volcanic eruption of the Toba super-volcano that time.

2.6 The Concept of Geopark

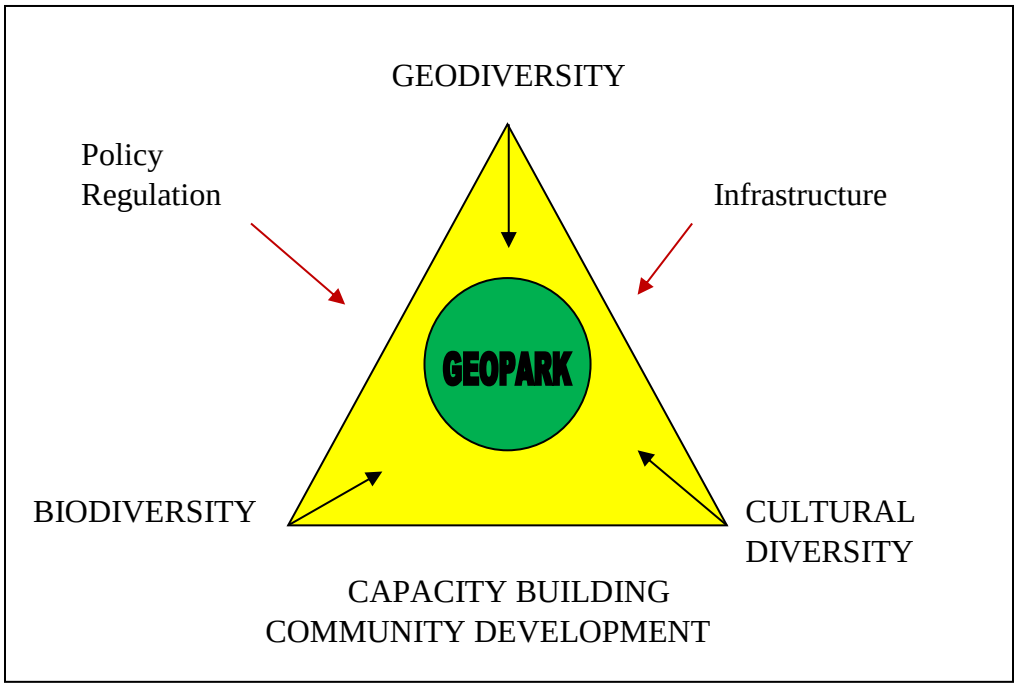
"A geopark is a nationally protected area containing a number of geological heritage sites of particular importance, rarity or aesthetic appeal. These earth heritage sites are part of an integrated concept of protection, education and sustainable development," (UNESCO, 2006). However, one of the essential establishment of a geopark should be based on strong community support and local involvement, developed though a "bottom-up" process, (UNESCO, 2010).

Geopark, in other meaning is a concept management of sustainable development in the region that combine three diversities: geodiversity, biodiversity and culture diversity. These

three components are managed based on conservation, education of earth science and economy development of local communities.

Currently, the geological park concept is considered most appropriate for the conservation of geology, because it can include all components of existing space and the relationship between these components, it can be seen in the diagram below.

Figure 1: The three pillars of geopark development



Source: Handbook of Merangin Jambi Geopark document, 2012.

The diagram show-up clearly these component in the geopark and management of the area as an inseparable unit.

1. Geodiversity is a geological diversity that exists in a region: including the presence, distribution and the condition so that it can represent the geological evolution of the area. Diversity studies limited to any geological elements (including geomorphology), but does not include other elements such as climate and land use.
2. Biodiversity, is a term to state their level of biological diversity: including the deployment of ecosystem diversity, species diversity, and genetic.

3. Cultural diversity is a kind of art and culture of the surrounding community is the result of human interaction with the natural surroundings. So the notion of cultural diversity here is how the understanding of local communities (around the site geology) in addressing the existing natural conditions. It becomes interesting to be in the geological conservation efforts.
4. Management of the region. In the management geopark areas, there are three major elements:
    a) Regulation, namely to restore human behavior or society with rules or restrictions. Regulation can be done in various forms, such as for example: regional regulations, zoning and so forth, regulation of self-regulation by institutional, social regulations, norms, and co-regulation. In principle, the regulation in a concept of geopark should be based on the principle of pro-growth, pro-poor, and pro-environment.
    b) Infrastructure, ease of accessibility and comprehensiveness of facilities owned by the region into a major requirement in its development. Infrastructure area can be divided into four parts, namely: transport infrastructure, economic infrastructure, social infrastructure and environmental infrastructure. These infrastructure are the key to the success of geopark development, especially in improving the regional economic sector.
    c) Community development, is a major prerequisite in the geopark as the path that will lead society towards a sustainable economic, social and ecological dynamic. Community empowerment is well aligned with sustainable development. Through empowerment, community members are encouraged to have the ability to utilize its resources optimally, and be fully involved in the management structure of the geopark, economic, social and ecological.

So as we saw thoroughly the diagram described, then we can answer the question: "Is a global geopark only about geology?" No![12] While, geopark must show geological heritage international significance, the objective of geopark is to explore, develop, and identify relationships between geological heritage with all aspects of natural, cultural and intangible heritages (UNESCO, 2012).

Despite an area/region has geological heritage values that are well-known and universal, that area may not necessarily be a Global Geopark unless it has a sustainable tourism plan, for example, master plan development of the area; such as building pedestrian or cycling facilities, training local people to become tour guides, attracting investors to join to construct supporting facilities as well as attracting the accommodation service providers that implement sustainable environmental practices.

Based on the above understanding, the conservation, utilization, management concepts through a program offered by UNESCO, it is known benefits arising when an area joins in the UNESCO's GGN. First, the policy for ecosystem conservation, particularly are susceptible of environmental damage. Second, as a media campaign to the entire world, especially for UNESCO's GGN members, so it can increase the number of foreign tourists visiting. Third, to increase research and development of the area, allowing exchanges of researchers, technology and knowledge transfer, and references for the development of science (natural laboratory) for experts and scholars in various parts of the world. Fourth, the development of regional planning and supervision of sustainable development, especially in the economic improvement of the local community as well as cooperation among members of GGN. Then, the international recognition of the uniqueness of geological heritage, and its relation to social-cultural diversity, and biodiversity of a nation.

2.7 The UNESCO GGN

"GGN, is an international, non-governmental, non-profit and voluntary network, which provides a platform of cooperation among geoparks, brings together government agencies,

[12] "Is a UNESCO Global Geopark only about geology?" *http://www.unesco.org/new/en/natural-sciences/environment/earth-sciences/global-geoparks/*, accessed in November 17, 2015

non-governmental organizations, scientists, and communities from all countries around the world in a unique worldwide partnership and operates according to UNESCO regulations," (UNESCO, 2008).[13]

Quoted from Margarete Patzak as *Division Ecological and Earth Sciences of UNESCO:*

> *The Global Network of National Geoparks provides a platform of cooperation and exchange between experts and practitioners in geological heritage matters on a worldwide scale. Under the umbrella of UNESCO and through cooperation with the global network partners, important local, national geological sites gain worldwide recognition and profit through the exchange of knowledge and expertise with other geoparks[14].*

GGN was founded in 2004. Since 1998-1999, UNESCO has been formed Geopark ad-hoc Programmes. Then, the European Geopark Network (EGN) was established in 2001 and Asia-Pacific Geopark Network (APGN) in 2007. Working together with international partners is the main reason for UNESCO Global Geoparks (UGG)[15] to be a member of international network such as the GGN. *UNESCO and the GGN develop models of best practice and set quality standards for territories that integrate the preservation of geological heritage into strategies for regional sustainable economic development.*

Geopark is strongly supported by UNESCO through the GGN or Global Network of National Geoparks. GGN is a dynamic network where members have committed to work together and exchange ideas on best practices. The cooperation is realized in common projects, aimed at improving the quality standards of all products and activities of the implementation of the Global Geopark. UNESCO offers support for GGN on ad-hoc basis through requests from Member States.

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[13] *http://www.globalgeopark.org/portals/1/documents/2008ggn-guidelinesjuneendorsed.pdf*, accessed in November 17, 2015

[14] UNESCO Cooperation, *http://www.europeangeoparks.org/?page_id=629*, accessed in December 20, 2015

[15] On 17 November 2015, the 195 Member States of UNESCO ratified the creation of a new label, the UNESCO Global Geoparks (UGG)

Currently, the development of geopark in the world is growing quite rapidly. In many countries, after obtaining the status of National Geopark, then proposed to UNESCO recognition as a Global Geopark. Indonesia first became a member of GGN through Global Geopark Batur, Bali, in September 20, 2012. Therefore, Indonesia has become the third country in Southeast Asia GGN members, after Malaysia and Vietnam.

Recently, there are 120 geoparks in 33 Member States of the GGN assisted by UNESCO. Following APGN Symposium in Japan, there are forty-six APGN got UNESCO's status. These Global Geoparks are spread over 6 countries; China has thirty-three of newly designated UGGs, eight are in Japan, two are in Indonesia, and there is one each in Malaysia, Vietnam and the Republic of Korea[16].

Table 1: Members of GGN's assisted by UNESCO

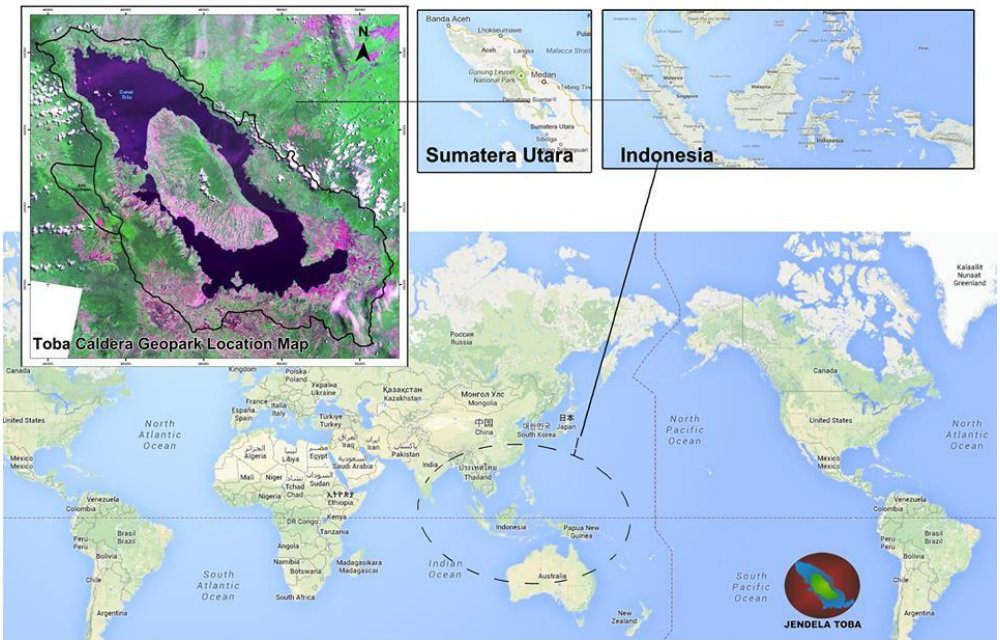
Year	UNESCO's GGN members
2004	21
2005	32
2006	44
2007	52
2009	61
2010	74
2011	84
2012	90
2013	100
2014	111
2015	120

Source: compiled from UNESCO website, *http://www.globalgeopark.org/homepageaux/tupai/6513.htm*, accessed in November 17, 2015.

2.8 The Brief of Environmental Governance upon Lake Toba Region

[16] *http://www.unescobkk.org/news/article/forty-six-asia-pacific-global-geoparks-get-unesco-status/,* accessed in January 17, 2016

Figure 2: Toba Caldera Geopark Location Map



Source: Unpublished-document of Jendela Toba association, 2012.

2.8.1 Regional Government Characteristics

In governance, there are 7 Kabupaten included in the ecosystem of Lake Toba region, consisting of 43 *Kecamatan* (sub-districts)[17]. The lake catchment area of 3,704 km^2, comprising a land area of 2,602 km^2 and 1,102 km^2 surface area of the lake[18]. There are 2 Kabupaten/cities along the Asahan River which is the only outlet of Lake Toba, the Kabupaten Asahan and Tanjung Balai City. Asahan River has a length of 150 Km (Loebis, 1999), which flows through the city Porsea to the Straits of Malacca.

Table 2: Number of Populations

No.	Kabupaten	Populations
1.	North Tapanuli	280,677
2.	Humbang Hasundutan	171,687

[17] Kecamatan Dalam Angka (2007)

[18] Document of Lake Toba Ecosystem Management Plan (LTEMP), 2004

3.	Toba Samosir	172,933
4.	Samosir	144,843
5.	Simalungun	817,720
6.	Karo	350,479
7.	Dairi	270,053
Total		2,208,392

Source: The Central Bureau of Statistics (BPS) of North Sumatra Province; North Sumatra in numbers, 2012.

a. Kabupaten North Tapanuli

North Tapanuli administratively is consists of 16 Kecamatans with an area of 364,557.79 ha, and number of populations are 280,677 people. North Tapanuli regions that included into the area of Lake Toba Ecosystem are consisted of three Kecamatans; namely Muara, Siborong-borong and Sipahutar.

b. Kabupaten Humbang Hasundutan (Humbahas)

This Kabupaten is consists of 9 Kecamatans, with total area 233,533 ha, and total of populations are 171,687 people. Humbang Hasundutan area that included into the ecosystem of Lake Toba is comprises 5 Kecamatans; namely Paranginan, Lintong Nihuta, Bakti Raja, Dolok Sanggul, and Pollung.

c. Kabupaten Toba Samosir

Kabupaten Toba Samosir administration is consists of 16 Kecamatans. Total area is 2,021.80 km^2, with a populations are 172,933 people. Toba Samosir region that included into the ecosystem is consists of 16 Kecamatans; Ajibata, Lumban Julu, Porsea, Bona Tua Lunasi, Uluan, Parmaksian, Siantar Narumonda, Sigumpar, Silaen, Balige, Laguboti, Bor-bor, Tampahan, Pintu Pohan Meranti, Nassau, and Habissaran.

d. Kabupaten Samosir

This district is consists of the whole Samosir Island and partially on the Sumatra Island, with an area covering 243,415 ha. The district is 110,260 ha of water area of

the lake, and 133,155 ha of the Samosir Island. The total population of 144,843 people are consisting of nine Kecamatans; namely Sitio-tio, Harian, Pangururan, Palipi, Onan Runggu, Simanindo, Sianjur Mula-mula, Nainggolan, and Ronggur Nihuta.

e. Kabupaten Simalungun

The district administration is consists of 21 Kecamatans, with total area of this district is 4,386.60 km², and populations of 817,720 people. Areas included in the ecosystem covering 6 Kecamatans; namely Girsang Sipangan Bolon, Pematang Sidamanik, Dolok Pardamean, Haranggaol, Purba, and Silimakuta.

f. Kabupaten Karo

Karo district is divided administratively into 13 Kecamatans. The total area of the district is 2,127.25 km², with populations of 350,479 people. Areas included into the ecosystem only one Kecamatan; namely is Merek.

g. Kabupaten Dairi

Dairi district is divided administratively into 13 Kecamatans. The total area is 1,927.8 km², with a population of 270,053 people. Areas included into the ecosystem covering 3 Kecamatans; namely Silahi Sabungan, Sumbul, dan Parbuluan.[19]

2.8.2 Ethnology

The Batak ethnic groups are the indigenous people living around Lake Toba area. Bataks culture is one of the most unique in Indonesia. Specifically their own customs, language and script writes, in which there are only two ethnic groups famous in the country which has their own scripts, namely the Javanese and the Bataks. Ethnic groups were categorized into 5 sub-groups; Toba Batak (the largest group), Simalungun, Karo, Pakpak and Mandailing. The Toba ethnic generally lives in Kabupaten North Tapanuli, Humbang Hasundutan, Samosir and Toba Samosir. Meanwhile, Simalungun concentrated in

[19] LTEMP, 2004

Kabupaten Simalungun, Karo settling in Kabupaten Karo, Pakpak live in Kabupaten Dairi, and Mandailing concentrated in the southern part of Lake Toba, the Kabupaten South Tapanuli.

Based on the census of the Central Bureau of Statistics in 2010, the estimated number of Batak reached 8,466,969 people, or the third largest population in Indonesia, according to ethnic nations group. The Batak people as mentioned in the many literature came from a clump of Proto-Malay (the Ancient Malay), and the Batak language classified as part of the Austronesian language family.

2.8.3 Principles of World's Lakes Management

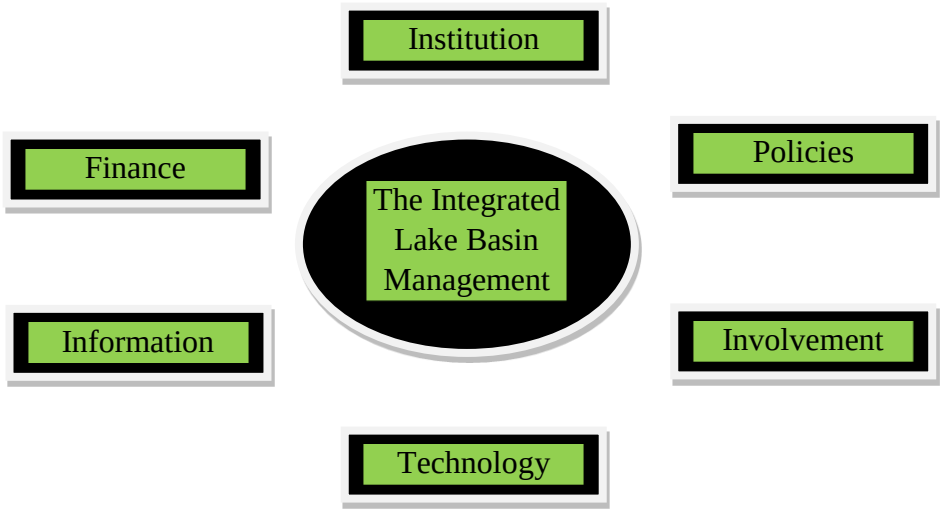
In the international environment, the lake basin management has become an important issue in many countries. In the 3rd world water forum in 2003, has set out 7 principles of the road map of the lakes area management into the so-called World Lake Vision[20]. The forum has led everyone responsible for the safety and health of the people around the lake, the principle in details are:

1. A harmonious relationship between humans and nature is essential for the sustainable use of lakes.
2. A lake drainage basin is the logical starting point for planning and management actions for sustainable lake use.
3. A long-term, preventive approach directed to preventing the causes of lake degradation is essential.
4. Policy development and decision making for lake management should be based on sound science and the best available information.
5. The management of lakes for their sustainable use requires the resolution of conflicts among competing users of lake resources, taking into account the needs of present and future generations and of nature.
6. Citizens and other stakeholders should be encouraged to participate meaningfully in identifying and resolving critical lake problems.
7. Good governance, based on fairness, transparency and empowerment of all stakeholders, is essential for sustainable lake use.

[20] "World Lake Vision a Call for Action," *http://www.ilec.or.jp/en/wp/wp-content/uploads/2013/03/wlv_s_english.pdf*, accessed in November 25, 2015

According to the international lake environment committee (2005), good lakes management requires the interaction of the following 6 components to be well-integrated[21]:

Figure 3: The Integrated Components of Lake Basin Management (ILBM)



Source: ILEC. 2007. Integrated Lake Basin Management: An Introduction. International Lake Environment Committee Foundation: Kusatsu, Japan. ILBM is a conceptual framework for assisting lake basin managers and stakeholders in achieving sustainable management of lakes and their basins.

1. Institution to manage the lake and its basin for the benefit of all lake basin resource users. They are sanctioned by society to give them the necessary authority and longevity to operate effectively. They can operate at the local level (such as local councils), at the regional level (such as a lake basin authority), at the national level (such as sectoral government department), or at the international level (such as international commissions for transboundary lakes). Institution requires leadership from committed and visionary individuals, as shown in some of the case studies.
2. Policies to govern people's use of lake resources and their impacts lakes. At the national level, they can be encoded in formal laws, statutes, and regulations and implemented by formal institutions. They can also be informal, often being developed and accepted among traditional groups of people living in the lakes basin and at the lake. At the local level, policies are implemented through rules of behavior, incentives and disincentives, and education to change people's behaviors.

[21] ILEC. 2005. Managing Lakes and their Basins for Sustainable Use: A Report for Lake Basin Managers and Stakeholders. International Lake Environment Committee Foundation: Kusatsu, Japan. *http://www.worldlakes.org/uploads/LBMI_Main_Report.pdf* , accessed in November 27, 2015

3. Involvement of people is central to lake basin management. They decide the uses for, and values to be obtained from, the lake's resources; they provide knowledge and experience of management; they form informal organization for management; they provide support for enforcing rules; and they can be a source of the finance needed to operationalize management. They can be demand accountability for the decisions made and resources used in managing lake basins.
4. Technology is not always essential for management. However, investments in technical responses can sometimes dramatically increase access to a lake resources and contributed to the resolution of sometimes of problems. For example, embankments can significantly add to a lake's ability to buffer floods, while sewage treatment plants can be very effective at removing contaminants from point sources of pollution.
5. Information both traditional knowledge and scientifically acquired knowledge, promotes efficient management. The more that reliable and demonstrable knowledge is identified and used in management, the more likely it is that the goals of those groups using a lake's resources will be meet efficiently. This report places considerable emphasis on scientific knowledge, primarily because it is obtained via a process that is open to scrutiny and leads to incremental improvements in understanding.
6. Finance is necessary to fund the operations of management institutions and the implementations of technological solutions, the involvement of stakeholder groups, and the collection and application of monitoring information. However access to finance is often the weakest of point of lake basin management in developing countries.

Principles of World's Lake Management insights can be as notices for Lake Toba management forward. Regarding on this, there were two institutions that managing Lake Toba during this time, namely BKPEKDT/Lake Toba Area Ecosystem and Conservation Coordination Agency (North Sumatra Governor Decree No. 062.05/245/K/2002) and Lake Toba Regional Management (Memorandum of Understanding of 7 Districts, December 8, 2006). However, these two institutions known did not provided a concrete benefits for the development of the Lake Toba region. And even, most of the local peoples around the lake did not know about the two institutions are. In other words, these two institutions are not have a leadership commitment and visionary individuals for regional development. Although, it is also due to the lack of authority, and funding owned.

2.9 The Lake Toba Stakeholder's

Freeman on his book titled *Strategic Management: A Stakeholder Approach*, defined stakeholder as any group or individual who can affect or is affected by the achievement of the organization's objective. This definition called as classical definition of stakeholder, and one of the broadest definition of stakeholder literature (Mitchell et al. 1997:856)[22]. By this means, stakeholders can be individuals, communities, social groups, or organizations.

Currently, the stakeholder approach is often used as a tool of analysis of policies, programs and projects of the government.[23] However, stakeholder analysis is a tool for clearly defining key stakeholders for a project or other activity, understanding where stakeholders stand, and developing cooperation between the stakeholders and the project team. The main objective is to ensure successful outcomes for the project or the changes to come[24].

Stakeholder can be categorized into primary stakeholders, secondary stakeholders and the key stakeholders. Primary stakeholders are those who have a direct affected either positively or negatively of a policy, program and project. They should be placed as a major determinant in the decision-making process that is people's and community leaders. Community identified here is that will benefit or gets impact of a project. Community leaders are members of the community by the community regarded as their leader in the region as well as to represent the aspirations of the people (Hayaruddin Siagian, 2010: 6).

Secondary Stakeholder those who are indirect affected either positively or negatively of policy, program and project, but have a care and concern so that they participate, voices and influence on public attitudes and government legal decisions. They are government

[22] K. Mitchell et all, 1997 "Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts" Academy of Management, *http://www.jstor.org/stable/259247*, accessed in October 10, 2015

[23] Hayaruddin Siagian, 2010. "Pola Hubungan Stakeholder dalam Mengelola Sumber Daya Air Danau Toba di Sumatera Utara," *Laporan Akhir, Program Insentif Peneliti dan Perekayasa LIPI*, Pusat Penelitian Kemasyarakatan dan Kebudayaan, Lembaga Ilmu Pengetahuan Indonesia.

[24] "Stakeholder Analysis", *http://asq.org/service/body-of-knowledge/tools-stakeholder-analysis*, accessed in October 10, 2015

agencies in an area but do not have direct responsibility and authority in decision-making. Here also including non-government organization that "concern," to an issue; including a College, a group of academics who have important influence in the government decision-making and business-related (Hayaruddin Siagian, 2010: 6).

The key stakeholders are who have a power and legal authority in decision-making, such as the executive of the appropriate level, legislative and related agencies (Hayaruddin Siagian, 2010: 7). At the present, the Lake Toba management is done by those stakeholders who have an interests related to the National Strategic Areas of Lake Toba. In the following of Lake Toba as the National Geopark, and proposed to GGN, essentially, the Local People is the key stakeholder in management of geopark in which mandate by UNESCO GGN. Here is a list of stakeholders and their interests.

Table 3: Matrix Stakeholder (Stakeholder Analysis)[25]

No	Stakeholders	Interests
Provincial level		
1	Governor	Management of the Lake Toba Area, covering economic sectors (agriculture, industry, tourism, mining, plantations), social, cultural, and environmental.
2	Regional Development Planning Board (Bappeda)	Development Planning of the region.
3	Regional Environmental Agency (BLH)	Controlling the use and preservation of the environment of Lake Toba Area.
4	Lake Toba Area Ecosystem *and Conservation* Coordination *Agency* (BKPEKDT)	Coordinating of Lake Toba ecosystem. Since June 6, 2004, collaborates with the Asahan Authority on the lake water quality and quantity improvement and also the clarity of community access to BKPEKDT.
5	DPRD I (Provincial Legislative Council*/Dewan Perwakilan Rakyat Daerah Tingkat I)*	Legislation, budget and supervision within the framework of the representation of the people in the province.

[25] These tables are developed from the document "Roadmap Management Board Preparation of National Strategic Areas of Lake Toba," 2014

Kabupaten/City Level		
1	Bupati/Regent (District Head)	Management of a part territory of Lake Toba Area (economic, socio-cultural, environmental).
2	Regional Development Planning Board (Bappeda)	Development planning in the part of the Lake Toba Area.
3	Office of Tourism	Tourism sector, environmental preservation of Lake Toba Area.
4	Regional Environmental Agency (BLH)	Environmental sector (conservation and controlling forest of Lake Toba Area, controlling waste/water pollution).
5	Public Works Service (PU)	Regional support infrastructure
6	DPRD II (Regional Legislative Council/ Dewan Perwakilan Rakyat Tingkat II)	Legislation, budget and supervision within the framework of the representation of the people in the Kabupaten/district.
Non-Government		
1	Society and Community Leaders	Local wisdom, economic and socio-cultural values.
2	CSOs	Those CSOs who are concerned about the environmental preservation of the lake, cultural, care about justice and democracy.
3	Private sector	Economic advantages, the ecosystem value of goods and services.

Source: Unpublished-document of "Roadmap Management Board Preparation of National Strategic Areas of Lake Toba," 2014.

Chapter 3

Between the Idea and Practice

3.1 Aspiring Toba Caldera Geopark

As discussed in Chapter 1 and 2, the initiative Toba Caldera Geopark discourse started in 2011 through the Ministry of Tourism and Creative Economy, because the history of its formation has global impacts. In 2012[26] the Ministry of Tourism and Creative Economy began intense preparation, and then changed its name into Toba Caldera Geopark, the reason to add 'caldera' was because Toba Caldera has significant world heritage which was the result of super-volcano eruptions. At the beginning this initiation was welcomed by Local Government, Kabupaten Samosir, and then followed by North Sumatra Provincial Government as well as 7 districts around Lake Toba.

In order to accelerate the proposing process of Toba Caldera Geopark in becoming a member of UNESCO's GGN, North Sumatra Governor issued a Decree "Geopark Caldera Toba acceleration Team" with decree No.188.44/KPTS/2013, dated June 26, 2013. The initiative Toba Caldera Geopark has officially inaugurated by President Susilo Bambang Yudhoyono as a National Geopark on March 27, 2014. Then preparing it to be included in UNESCO's GGN with other National Geoparks in Indonesia, such as Merangin in Jambi, Mount Rinjani in West Nusa Tenggara, Raja Ampat in West Papua, and the Sewu Karst regions in Central Java.

Geopark is developed in a sustainable manner that harmoniously blends three diversities; namely geology (geodiversity), biology (biodiversity) and culture (cultural diversity). In summary, the management goal is to build and develop the local economy with the protection of geological, biological and cultural diversity contained in the region[27].

[26] On March 5, 2012, through the Directorate General of Tourism Destination Development, Ministry of Tourism and Creative Economy the Republic of Indonesia, has established Toba Geopark as National Geopark of Indonesia, Director General Degree *(SK Dirjen),* No.20/KEP/DPDP/III/2012. In September 30, 2013, National Toba Geopark revised into National Toba Caldera Geopark of Indonesia, (Document of Toba Caldera Geopark Acceleration Team, 2013)

[27] Batur Global Geopark, *http://www.globalgeopark.org/aboutGGN/list/Indonesia/6802.htm*, accessed in September 19, 2015

Toba Caldera Geopark program is expected by some parties to be a way to protect Lake Toba's area from environmental degradation, including elements of geology, biology and culture from surrounding people. In other words, people expect that through UNESCO GGN institution can resolve environmental matters around the lake. On the other hand, people are also concern about how geopark discourse can work in terms of implementation such as involving, and also prospering local communities, and whether the program will benefit local people or only benefit the elites. Will geopark discourse be just a kind of investment that might be harmful to their own lands, as they have experienced it from the government's policies toward the region? These perceptions turn up, because of the lack of information and involvement of local communities on the discourse. While, according to UNESCO GGN, geopark does not have any threat to local people and their lands, instead, local community acts as the key of stakeholder in the geopark concept.

The main idea of Toba Caldera Geopark proposing to be a member of UNESCO's GGN is expected through UNESCO, Toba Caldera will be known to the world's community, working together with international partners, increasing concern for maintaining Toba Caldera's heritage and enhancing local community welfare in a sustainable manner.

3.2 The Spirit of Toba Caldera Geopark

Lake Toba is the largest volcano-tectonic lake in the world and the largest lake in Southeast Asia. Located in the Province of North Sumatra, measuring 100 x 30 km, with depth reach of 505 meters. Lake Toba Caldera is the result of volcanic eruptions, which occurred about 74,000 years ago, that changed the world's climate and almost destroyed the human race. Erupting at least 2800 km^3 of magma, qualifying as an 8,8 magnitude eruption[28]. Mount Toba super-eruption, sent hot massive clouds covering almost the entire East end to the West of Sumatra. Millions of cubic ash spewed out, covering the Indian Ocean to the Arabian Sea and parts of the Pacific Ocean. Sulfuric acid aerosols are released later spread to cover the Earth's atmosphere and to create total darkness for six years.

[28] The Toba Caldera Complex, Quaternary International (2011), doi:10.1016/j.quaint.2011.09.025

Due to the devastating eruptions, Earth's temperature dropped down to five degrees Celsius. The Sun was covered with Toba's eruption ash. Volcanic eruptions (volcanic winter) caused a global winter. Photosynthesis stopped, plants died, and even animals' ability to hunt decreased. Homo sapiens, the ancestors of modern humans, became scarce, there were only 15,000 people left. Human migration stopped and they were isolated in Africa, as recorded in the semblance of modern human genetics around the world.[29]

Mount Toba super-eruption left a natural phenomenon that is extraordinary and unique in every corner. Caldera region has landscapes, rock types, bio diversities and human cultures that live in it. Bring the people who have local knowledge to live in harmony with the nature. It was a gift to have those geological diversities as the world's geological heritage (geo heritage). This gift should be the base of Toba development which must be utilized and synergized with its natural environment, local wisdom and character of culture. The region is very potential as a world class tourist destination. Therefore, Indonesian government earnestly proposed Lake Toba's area to become a member of UNESCO GGN. The public perceptions including some of regional governments in the other side also expected after Toba Caldera Geopark is accepted in GGN, UNESCO will automatically reduce environmental degradation in the region, which will prosper the society. But in fact, based on the experience of Batur Global Geopark in Bali, the rock mining that harmed Batur Geopark landscapes, has not changed drastically, it is even still happening although it has been accepted in GGN[30]. Hence, the geopark program is exactly only about the process to preserve the region. That means, the role of UNESCO's GGN as an institution for conservation is limited, only to assess whether the region management promotes sustainable development in its geopark territory.

Delineation of Toba Caldera Geopark region is made based on the highest points of Toba Caldera wall which is also the watershed of Lake Toba. Taken data from Toba Caldera Geopark's dossier to UNESCO's GGN, 2014, there are four geo areas of Toba Caldera

[29] Kompas Ring of Fire Expeditions, "Toba Changed the world," Kompas TV, 2011

[30] *http://www.tribunnews.com/regional/2015/05/25/tiap-hari-500-truk-penambang-batu-gerogoti-kawasan-batur-geopark*, accessed in December 27, 2015

Geopark, with total of 45 geo sites. These geological sites are grouped into geo area in order to make it easier for the geo site management. The groups of geological sites are,

1. Porsea Caldera Geoarea

   This area is the part of formation trails of Toba caldera's first generation which occurs 840,000 years ago (Diehl et al., 1987), covering a vast area of 1,220 km², which is a portion of the Toba Samosir dan Tapanuli Utara districts.

2. Haranggaol Caldera Geoarea

   This area is the part of second generation trail of Toba caldera formation 501,000 years ago (Chesner and Rose, 1991), covering an area of 585.6 km² which is part of the Simalungun, Karo and Dairi districts.

3. Sibandang Caldera Geoarea

   This area is the part of the third generation trail of Toba caldera formation (74,000 years ago (Ninkovich et al., 1978a; Chessner., 1991) or also known as 'supervolcano' eruption, covering an area of 497km² which is part of the North Tapanuli and Humbang Hasundutan districts.

4. Samosir Resurgent Caldera Geoarea

   Samosir Geoarea is part of Toba caldera which shows phenomenal geological sequence, especially related to traces of the 'supervolcano' caldera eruption. This area is part of the trail Samosir island formation from the lake bottom that occurred since 33,000 years ago, covering an area of 1481km², which is part of the district of Samosir[31].

3.3 Batak Culture in Managing Environment

[31] Unpublished-document of Application Dossier of Toba Caldera Geopark for Membership in the GGN, North Sumatra Province, Indonesia, 2014

Patterns of human relationship with the Creator, with fellow human beings and the environment had been established in Batak's culture. According to Batak mythology, there was message from "Siboru Deak Parujar[32]" to their generation to keep the earth and everything on it, it means 'take advantage' of the earth and everything on it wisely and prudently[33]. Humans and his descendants were apprised that anyone who tries to destroy the earth and everything in it will be punished by 'Mulajadi Nabolon' (The High Creator God, in Batak traditional religion).

The first Batak village found by Si Raja Batak[34] (The King of Batak) in Sianjur Mula-mula, which is located on the slope of mountain Pusuk Buhit on the western side of Lake Toba. Si Raja Batak established Lake Toba and the surrounding soil into a place where later his descendants got a prosperous and harmonious life under the customs and life orders, as stated in the Book of Pustaha Agong[35] and Pustaha Tumbaga Holing that were brought[36].

This was the beginning of life of Batak people who loved the environment as a spiritual place. In the Batak people's traditional beliefs, water is the beginning of physical life. Every human body that has been born shall be introduced to their origin, namely water. Water is the main source of life before recognizing everything on earth. Batak people in the *Bataklands* that tells the lake is a source of energy for its surroundings. Community's strong dependence on the environment can initially develop arrangements in the form of environmental ethics, norms, customs, mythology, wisdom values, belief systems,

[32] In Batak mythology, Si Boru Deak Parujar was the first human on the earth planet. She was married with Raja Odap-odap which sent by his father, Mulajadi Nabolon.

[33] Monang Naipospos, 2007. "Kearifan Budaya Batak Mengelola Lingkungan," Balige, Sumatera Utara, accessed from, *https://tanobatak.wordpress.com/2007/06/20/kearifan-budaya-batak-mengelola-lingkungan/*, in September 20, 2015. According to Naipospos (2007), the story based on oral story from generation to generation from their ancestors, Naipospos then attempt to write it.

[34] Si Raja Batak was the son of the twins Raja Ihat Manisia and Boru Ihat Manisia, the ancestor of all Batak

[35] The book Pustaha Agong contains shamanism, courageous power, art of self-defense and the science of deceit. The book Pustaha Tumbaga Holing containing kingdom, legislation, agriculture, trade and handicraft skill

[36] Jans S Aritonang, (1994), *Mission Schools in Batakland (Indonesia): 1861 – 1940*, E.J Brill*:* New York, Leiden, Koln, pp. 49

arrangement positions and roles that can maintain integrity and preservation (Naipospos, 2007).

Over time, these systems are becoming increasingly fading. Every issue in community is no longer effective to be resolved in the customary law entity, such as environmental degradations around Lake Toba. According to Naipospos (2007), only love for the wisdom of their ancestors could be thought-provoking for Batak people to develop their value especially in managing environment surrounding Lake Toba areas. Is there any possible chance and opportunity through the Toba Caldera Geopark discourse? However, by some means, according to guidance from UNESCO's GGN, geopark in the region can be a re-calling spirit of wisdom to the locals in managing environment.

3.4 Toba Caldera Geopark and Indigenous Peoples

One of the goals of the geopark area program, is to call back the local knowledge in an appropriate way to preserve the region. It is also required for UGGs that the local community, particularly indigenous people, should be actively involved in the managing, preserving and celebrating their culture as the key stakeholder in the geopark. *By involving local and indigenous communities, UGGs recognize the importance of these communities, their culture and the link between these communities and their land.* Taking notions from the criteria for UGG direction, local and indigenous knowledge, practice and management should be included, alongside with science, in the planning and management of the area. Indeed, this is the prominent essential undertake of a geopark and should be a strong support of local community initiatives, developing through a "bottom-up" process. Taking that view, the conception of geopark sees its respect to the principle of free, prior, and informed consent (FPIC) that stated by United Nations Declaration on the Rights of Indigenous Peoples. FPIC is one of the most important principle related to indigenous people's lives, which can protect their participation right, self-determination right and right to determine the outcome of decision making that affects them.

Written in Article 19, "States shall consult and cooperate in good faith with the Indigenous People concerned through their own representative institutions in order to obtain their free,

prior and informed consent before adopting and implementing legislative or administrative measures that may affect them." FPIC in essence, is the highest standard for involvement of indigenous peoples on the process of decision-making about large project, for example Toba Caldera Geopark.

Geopark philosophy, in other words is clear about the role of indigenous people, from engagement to active participation in the planning and development, which in return increases the concern for the live-able environment. It is a reminder that "Geoparks are not just about rocks, they are about people. It is crucial that they get involved. We want to see as many people as possible getting out and enjoying the geology of the area. Our aim is to maximize geotourism (...) for the benefit of the local economy and to help people to understand the evolution of their local landscape," (Chris Woodley-Stewart, Geopark Manager, North Pennines AONB, United Kingdom)[37].

Reflections on the existence of indigenous people in Lake Toba within and around Toba Caldera National Geopark, needs much more serious attention, because it is very sensitive, especially in Kabupaten Samosir, many problems are prolonged in this case (Togar Nainggolan, 2012). Therefore, Toba Caldera Geopark management is required to be very careful, such as to find and establish location needed for geopark delineation. Geopark management should involve all elements in the society to participate in supporting this program.[38]

In general, it is understood Toba Caldera Geopark will increase tourist attraction by displaying the uniqueness of an outstanding geological site, biodiversity and culture of the people who live in the vicinity, as well as the connections between them. However, the fact today, in terms of tourism, it actually becomes a problem, because the main income for public welfare is not from tourism but rather from agriculture (Togar Nainggolan, 2012). The majority of the people in 7 districts surrounding Lake Toba are farmers, the other

[37] *http://www.unesco.org.uy/ci/fileadmin/ciencias%20naturales/ciencias_de_la_tierra/Geoparques_2011/Bergstrasse.pdf*, accessed in January 15, 2016

[38] Togar Nainggolan, 2012, *Budaya Masyarakat Menuju Geopark,* Seminar Sosialisasi dan Pameran tentang Geologi dengan tema "Spirit of Toba Geopark", Samosir, July, 2012

fishermen and small traders, only a small part works in the tourism sector. That is also why socialization of the geopark becomes difficult.

In summary, the relation between geopark program and the existence of indigenous people in the region are indispensable, or otherwise it cannot be determined as Global Geopark. Indeed, Toba Caldera Geopark discourse should be a strategic call back of local knowledge in the context of Batak's culture wisdom in managing environmental life.

3.5 Lake Toba as a National Strategic Area

Lake Toba as a National Strategic Area (KSN) set by Government based on the interest of the function and environmental support since March 10, 2008. It was stated in the Government Regulation No. 26 of 2008 on National Spatial Planning. National strategic areas are those areas with prioritized spatial arrangement because it has a very important influence on the national sovereignty of the state, national defense and security, economic, social, cultural, and or the environment, including areas designated as world heritage[39]. The following reasons are why Lake Toba area meets the criteria function and carries capacity of the environment[40], i.e.:

1. It is a refuge of biodiversity;
2. It is a national asset in the form of protected areas as a protection of ecosystems, flora or fauna that are endangered or on the verge of extinction which must be protected or conserved;
3. Provide protection to the water system balance that each year likely to cause loss to the state;
4. Provide protection against macroclimate balance;
5. In accordance with high priority of improving the quality of the environment;
6. National natural disaster-prone; and
7. It is decisive in changing the natural hue and extensive influence on survival.

Although this status has been declared, it did not have any significant affect for reducing environmental degradation around the region. In other words, this policy still only exists on the paper. One reason of this situation is the overlapping authority and lack of coordination

[39] Presidential Regulation No. 81/2014 on Spatial Planning area of Lake Toba and the surrounding, Article 1

[40] Government Regulation No. 26/2008 on National Spatial Planning, Article 80

of the seven Regional Government areas of Lake Toba, including Provincial Government of North Sumatra.

On August 13th, 2014, as a follow up of the government's commitment to Lake Toba as KSN, Presidential Regulation No. 81 of 2014 has been assigned on Spatial Planning area of Lake Toba and the surrounding. There are two essences of this rule, first, to preserve Lake Toba's area as *'Mual Natio'* (drinking water) for the people of North Sumatra, and to preserve the cultural heritage of indigenous Batak people. Second, the development of international tourism area that is integrated with the control of cultivation area, in accordance with the carrying capacity of the environment and adaptation to natural disasters.

Through this Presidential Regulation, it can be said that the government intends to preserve Lake Toba environment, especially water quality of the lake as 'freshwater resources' and promote Lake Toba tourism area on national and international level. Simultaneously with this regulation, the government will provide facilities and infrastructures such as tourism infrastructure facilities, accommodation and other tourism support facilities[41].

Previously, Indonesian Government had also set out Lake Toba as a National Strategic Tourism Areas (KSPN) alongside with fifteen other KSPN priorities throughout Indonesia. The KSPN is the area that has primary function of tourism development and has significant influence in one or more aspects, such as economic growth or social and tourism, and have the potential for national tourism development, which has a significant impact on economic growth, social and other aspects such as culture, empowerment of natural resources, environmental support, as well as defense and security[42].

Furthermore, it is known that the Ministry of Tourism and Creative Economy was seeking for a serious agenda of sustainable tourism development, since 2012, through the Directorate General of Tourism Destination; in particular, Directorate of Tourism

[41] Presidential Regulation No. 81 of 2014 on Spatial Planning area of Lake Toba and the surrounding, Article 112 D

[42] Peraturan Pemerintah Republik Indonesia No.50 Tahun 2011 tentang Rencana Induk Pembangunan Kepariwisataan Nasional Tahun 2010-2025, Bab I Ketentuan Ketentuan Umum , Pasal 1, ayat 6

Destination Design and Investment, which was established on December 21th, 2011 based on Presidential Regulation No. 92 of 2011. They sought to develop tourism with a comprehensive approach, integrative, environmental friendly, as well as participatory, by involving the local community for social and economic welfare.

Thus, it was not surprising that the Government through the Ministry of Tourism and Creative Economy then developed special interesting tourism such as geotourism (geological tourism) and geopark (geological/earth science park) which promoted by UNESCO with the principles of sustainable development. Since the beginning of 2011, Ministry of Tourism had begun to prepare Lake Toba as a Global Geopark candidates were welcomed by Kabupaten Samosir Government, (Kompas, 2011). As said, Lake Toba was finally confirmed by the President as a National Geopark on March 27, 2014.

3.6 Lake Toba Degradations

It is undeniable, that in general Lake Toba had been damaged, although it still looks beautiful. This environmental degradation, obviously, is caused by human's actions in economics activities, which were intentionally left by the Government. From year to year catchment area of Lake Toba's forests continue to decrease, which directly affects the sustainability of water reservoir of the lake. Water quality of the lake is also getting more polluted. This problem started since the presence of large-scale companies, such as PT Aquafarm Nusantara. PT Aquafarm Nusantara is a foreign capital company, from Switzerland, is in the ownership of the Swiss Regal Springs Holding AG, it started operation in 1998 and employed 5,000 people in the region[43].

According to the study of Pohan Panjaitan (2009), "*Aquafarm Nusantara is the largest company that has cage fish culture in Lake Toba which does not have any unit treatments of its waste even though it uses 200 tons of feed per day."* This study revealed that activities of Aquafarm Nusantara for cage fish farming has a high potency in deteriorations of Lake

[43] The Jakarta Post, January 23, 2013

Toba's environment which produced 6.9 and 2.4 tons of nitrogen and phosphor every day respectively[44].

Taken from Kompas news data 2013, in Lake Toba there are 8,922 fish culture in floating cages or 'karamba' in local language, spreading over 13 locations (Silalahi II, Silalahi III, Paropo, Tongging, Haranggaol, Tigaras, Sibaganding, Soalan, Panahatan, Sirungkungon, Silimalombu, Lontung, Pangambatan). Feed of fish culture in floating cages reaches 446 tons per day, with a count of 40-50 kilograms of fish feed per cage[45]. That means it reaches an amount of 4282.56 to 5353.32 tons per year. This feed is contaminating the lake. According to the manager of PT Aquafarm, as quoted from Kompas, the space used for cage fish culture in the lake covers an area of nine hectares. There are 521 cages owned by PT Aquafarm in Lake Toba in squares and circles sizes. In one cage, there are around 10,000 fishes.

Besides polluting the lake, the existence of cages fish culture also pollutes the aesthetics of Lake Toba as a tourism area. Chemist from the University of North Sumatra (USU), Jamahir Gultom (2009), said fish feed triggers pollution of the lake, because fish feed is not organic. The feed fish called pellets, just float when they're sown, and then after a long time will sink. One indicator of this phenomenon is the flourishing growth of water hyacinth. Each water hyacinth is derived from the remaining fish feed.

The increasing populations of water hyacinth can potentially cause eutrophication, decreasing the amount of light that enters to the water, resulting in a decreasing level of dissolved oxygen in water. The dead water hyacinth plant will fall to the bottom of the lake so as to accelerate the process of silting, thereby disrupting shipping activities. Sedimentation causes silting in downstream areas and floods in the rainy season.

Table 4: Pollutions from fish farming in Lake Toba based on data of the Ministry of Environment

[44] Pohan Panjaitan, (2009), *Kajian potensi keramba jaring apung PT. Aquafarm Nusantara mencemari ekosistem perairan Danau Toba,* Seminar, Medan, Sumatera Utara, February, 2013

[45] Kompas, November 12, 2013

Pollutions	The society and others/tons/year	PT. Aquafarm Nusantara/tons/year
Phosphor	1165	1910
Nitrogen	409	672

Source: Ministry of Environment Republic of Indonesia, RCTI TV.com, August 2, 2015.

Since 2009, Lake Toba has been included as one of the rescue region of 15 lake ecosystems in Indonesia that are threatened by environmental degradation. This lake preservation movement was even coordinated by 9 ministries, which assigned Ministry of Environment as the leader. But the result was not satisfying. Pollution continues, and yet the tourism activities are still stagnant.

Another threat is deforestation activities by PT Toba Pulp Lestari (formerly known as PT Inti Indorayon Utama Tbk/PT IIU) for the raw materials in its industry activities. Officially established on April 26, 1983, PT IIU managed smoothly in gaining its domestic investment status, covering 200 hectares of plant location permit in Sosor Ladang, Porsea, and 150,000 hectares of forest concession rights (HPH), including merkus pine in North Sumatra. The company is identified as the main reason for the lake's decreasing water level (Hehanusa et. all, 2006). The company's factories located in the Porsea (Kabupaten Toba Samosir), which started its commercial production in 1989, have the capacity to produce 240,000 metric tons of paper pulp, in addition to 60,000 tons of rayon fiber a year[46]. The company was listed on Jakarta and Surabaya Stock Exchanges and has its American Depository Shares floated in New York[47]. Its pulp and paper products are exported to European countries, Japan and United States.[48]

[46] The Jakarta Post, December 2, 1999

[47] The Jakarta Post, January 27, 2000

[48] The Jakarta Post, May 29, 2002

As a producer of pulp, PT TPL uses wood, especially pine and eucalyptus trees which are known by society to consume water more greedily. To get the wood, this company obtained the industrial forest concessions right from Minister of Forestry, Ir. Hasjrul Harahap, No.493/Kpts-II/1992 dated June 1, 1992 with a total area of 269,060 hectares, which was last revised through a decree of Minister of Forestry SK.58/Menhut –II/ 2011, dated February 28, 2011, and has become 188,055 ha[49].

The concession areas are generally located in areas around Lake Toba regencies (Kabupaten Simalungun, Toba Samosir, Humbang Hasundutan, Samosir, North Tapanuli, Dairi and Pakpak Barat), North Sumatra. Since it got its concession, natural forest was turned into industrial production forests (monoculture), natural wood turned into a eucalyptus forest. Conflict between PT. TPL and communities is also very high, not only because of environmental pollution (air, water, soil) caused by company's waste, but also land grabbing (land/custom forest). In March 19, 1999, President of Indonesia B.J. Habibie completely suspended the company's operation following its massive protests and violence practices. But three years later the Government's decision to permit PT IIU to reopen, with its "new paradigm" to minimize environmental deterioration.

According to the data Ministry of Environment, 2015, the Lake Toba forest catchment area supposed to be 143,840 ha or 51 %, but in fact the forest area continues to decrease. In 1985, forest catchment area of the lake was 78,558 hectares or 28.14%, and yet in 1997 it decreased significantly to 62,400 hectares, or 22.15%. Whereas, in 2012 the number was reduced quite dramatically to only 18,000 hectares or 12.67%.

Back to the lake's matter, although in some locations, Lake Toba's water is already polluted, people living in the surrounding areas still use lake's water as clean water. Pollution of lake water by fish feed waste and other pollutions had caused the lake to be no longer suitable to be consumed for drinking water, because some chemical properties such as pH (acidity level), phosphate, sulphate, and physical nature such as smell and taste that has exceeded the water quality standard for drinking water.

[49] Correspondence via email, with the Senior Staff of KSPPM (Study Group for the Development of People's Initiative), November 2, 2015

Some worries that further degradation of Lake Toba could be a threat to the world's ecosystems. The name and history of Lake Toba as a world's heritage could be lost at any time. However, the government in fact has made an effort through regulations in order to prevent this threat, but has not genuinely taken decisive actions. In addition, the government has officially declared Lake Toba as National Geopark and proposed to be a member of UNESCO GGN. The main task of a geopark is to conserve and promote the geological feature in the region, including water and biology in there. Thus, through Lake Toba's proposal as a geopark, it is expected to reduce environmental degradation around the lake.

Table 5: Summary of Government regulations relate to Lake Toba water
Source: compiled by author from many sources. The table clearly shown government regulations regarding to Lake Toba environment management, however none of these regulations implemented so far, in other words, that Lake Toba environmental degradations are still occurs even up until now.

No.	Government policy on Lake Toba areas	Summary
1.	North Sumatra Provincial Regulation No.1 of 1990, in regards to the arrangement of Lake Toba area, *(Perda No.1, Tahun 1990)*	Making Lake Toba's water as first class in water classification, which is drinkable water
2.	North Sumatra Governor Regulation, No. 1 of 2009, on Water Quality Standard of Lake Toba, *(Pergub No.1 Tahun 2009)*	North Sumatra Provincial Government wants to restore the quality of Lake Toba water to be qualified as drinkable water
3.	Government Regulation No. 26 of 2008 on National Spatial Planning	Making Lake Toba as a fresh waters *"Aek Natio"*
4.	Government Regulation No. 50 of 2011 on National Tourism Development Master Plan	Lake Toba as a *National Strategic Tourism Areas*, one of the condition, to ensure quality of Lake Toba water is clean
5.	Presidential Regulation No. 81 of 2014 on Spatial Planning area of Lake Toba and the surrounding, *(Perpres No.81, Tahun 2014)*	Preservation of Lake Toba region as the water of life *"Aek Natio"*

3.7 Toba Caldera Geopark in Pursuing Global Geopark Heritage Site

As mentioned in the previous chapter, Indonesian Government had proposed Gunung Sewu Geopark in Central Java together with Toba Caldera Geopark to be included in the UNESCO's GGN members. In September 19, 2015, during the 4th APGN Symposium held in San'in Kaigan Geopark, Japan, Gunung Sewu Geopark Indonesia, became the second to be recognized as Global geopark. Unfortunately, Toba Caldera Geopark was not accepted successfully as a Global Geopark, as it was considered immature.

The unsuccessfulness of Toba Caldera Geopark in pursuing the status of UNESCO's GGN member is being questioned by the public to the government, the lack of engagement from the society in the discourse is another problem. Public analyst said, not only because the programs and activities of Toba Caldera Geopark have not yet fulfilled the standard of UNESCO GGN[50], but it is also because of environmental degradation around Lake Toba still happening. The concept of bottom-up process, involvement and participation of local communities which are the guidance of UNESCO's GGN still also vague and unclear.

At this time, the Provincial North Sumatra Government is still preparing the National Toba Caldera Geopark for GGN for the third application. Following recommendation from UNESCO that gives 2 years, to complete all of document required, it is highly demanding for all stakeholders to work together for Toba Caldera Geopark development, solving environmental degradation matter, and the lack of infrastructure as well. For the time being, it can be said that the Toba Caldera Geopark discourse is not really familiar for the local community.

3.8 Geopark as a new tool of Sustainable Development

Sustainable development as a notion became fashionable in the 1980s. One of the things that the proponents of all of Clapp and Dauvergne's (2005) positions tend to share is a rather static account of the relationship between political system and environmental degradation[51]. In the Earth Summit of the United Nations Conference on Environment and

[50] *http://www.koran-sindo.com/news.php?r=6&n=0&date=2015-09-23*, accessed in January 20, 2016

[51] Matthew Paterson, 2009, "Green Theory," Theories of International Relations, p.277

Development (UNCED) that took place in Rio de Janeiro, Brazil, 1992, it explicitly provided a tool for adopting big plans related to environmental conservation efforts. On the other hand, provides prosperities to the mankind who lives in it through sustainable development.

However, UNCED approved the concept of geopark as its spirit to boost the role of science in the development environment and local communities, in related to 'Agenda 21'. The concept of geopark strengthened and reconfirmed on the World Summit on Sustainable Development (WSSD), 2002, in Johannesburg, South Africa. The geoparks initiation adds a new dimension to the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage by highlighting the potential for interaction between socio-economic and cultural development and conservation of the natural environment[52]. Thus, UNESCO has officially adopted the concept of geopark as a method of geosciences in nature conservation in geological heritage sites around the world.

UNESCO supports the development of this initiative, among others, in order to put the geosciences back on the agenda of politicians and decision-makers of the government and local actors, as well as private enterprises. Sustainable development consists of three pillars: economic development, social development and environmental protection.[53] The geoparks are becoming very popular due to their combination of conservation, sustainable development and community involvement. We had seen, the sustainability embedded for the geoparks to fulfill their goals.

In practice, the geopark is an initiative that can achieve international recognition for geological sites of local and regional importance. According to UNESCO, Global Geopark is an integrated area with a significant international geological heritage which is used to promote the development of local communities in a sustainable manner. The issues of geopark has become an international issue to preserve the geological heritages which are

[52] *http://www.globalgeopark.org/UploadFiles/2012_9_6/GGN2010.pdf*, accessed in December 19, 2015

[53] Sustainable Development, *http://www.un.org/en/ga/president/65/issues/sustdev.shtml*, accessed in December 19, 2015

tied to the re-establishment of the earth. The concept of geopark was born as the tool, to help promote global environmental sustainability.

Indonesia has become a member of GGN, since Batur Global Geopark in the province of Bali, accepted by UNESCO as one of the members of GGN the 89th[54] September 2012. Then, Indonesian Government submitted another region, which are Gunung Sewu Geopark in Yogyakarta, central and East Java and Toba Caldera Geopark in North Sumatra to UNESCO in September 2014. It should be acknowledged that the key point of a series of environmental degradation around Lake Toba are due to the weakness of government protection policy. Therefore, although Lake Toba region was confirmed by President Indonesia, Susilo Bambang Yudhoyono as National Geopark, the public is not so aware about it, the government's approach for socialization of this concept also tends to top-down. The history of its formation, consisting geological heritage, including archaeological, ecological or cultural value were the reason that Lake Toba region was promoted by government. On the other hand, the massive environmental degradation of it is still neglected up to nowadays. Public perceptions, of course, doubted government's commitment in achieving the goal of geopark in environmental sustainability, and sustaining local communities.

The creation of GGN under the umbrella of UNESCO can be fitted as a kind of international community behavior guidance, common values and interests for geo-conservation and preservation trough international cooperation. This cooperation is root on the view of liberal institutionalism project which clearly motivated environmental problems solution through an improvement and extension of international cooperation (John Vogler, 2014). The public expects through GGN institution, it is able to help Lake Toba area protection and promotion, by influencing Indonesian Government’s behavior to change its policy over Lake Toba region.

[54] In September 2014, 111 Geoparks in 32 member States are currently member of the Global Geoparks Network assisted by UNESCO, *http://www.globalgeopark.org/homepageaux/tupai/6513.htm*, accessed in December 19, 2015

Chapter 4

Toba Caldera Geopark Discourses

4.1 The Response of the CSOs and the Government

There are a number of social and ‘environmental CSOs’ that are concerned about Lake Toba’s environment. Meanwhile, the Toba Caldera Geopark programs which were promoted by government is a rather new language for them. Since many years ago,

Indonesian governments were more likely to let environmental degradations in Lake Toba's surrounding areas. Yet for the geopark discourse, which sounds like a good concept for conservation of the region, they made an attempt to respond. Whether they knew about the concept of geopark or not, they certainly did an effort of taking parts in the issue. As one of the stakeholders of Lake Toba area, they were automatically taking concern in the process, some criticized it, the other took initiatives to hold, learn and use. However, how their interest and response in discourses of geopark can be described and examined by a so-called CDA insight.

1. Jendela Toba

   Jendela Toba association can be defined as one of the CSO which has had the first concern specifically in the development of geopark in Lake Toba region. This institution was found as a collective apprehension about the condition of the lake, and their participation on the development of geopark program. They joined this organization which consisted of a variety of educational background, namely geologist, cultural expert, activists, and journalists. Formally it established in July, 2012, in Medan, the capital of North Sumatra Province. Previously, Jendela Toba activists had worked together as voluntary participants in the Earth Society Community since 2008, which has a vision to realize Lake Toba areas to become world's historical sites, managed by local wisdom, yet prospering the society, and ensures sustainable living.

   > *"First of all, we read on the newspaper, that Kabupaten Samosir was establishing a cooperation with Ministry of Tourism of the Republic of Indonesia to discuss how Kabupaten Samosir can be proposed by government to become a member of UNESCO GGN. Responding to news, we regularly held discussion at Jendela Toba to learn and discuss about the concept, with regard to recovery of environmental degradation of Lake Toba area," stated MM the Chairperson of Jendela Toba association*[55].

[55] Correspondence via email, December 9, 2015

Then they discussed and considered that the seven districts in surrounding Lake Toba must be proposed as well, as it is an integral part of the Lake Toba Caldera in accordance with the history of Toba Mountain super-volcano eruption. In doing so, they accidentally followed to study, discussed with other elements of society and CSOs, did talk show in the radio, campaigned in the Media and Social Media, working together with provincial government of North Sumatra as well as districts government of surrounding Lake Toba.

2. KSPPM (Study Group for the Development of People's Initiative)

   KSPPM was founded in February 1985 for the development of people's initiative and to push rule of law, located in Parapat, Simalungun District, eastern side of Lake Toba. KSPPM is the oldest advocacy NGO in North Sumatra and one of the oldest advocacy in Indonesia, (Situmorang, 2003). KSPPM activists worked together since 1983 with the previous name KSPH (Study group for the development of legal awareness). The KSPPM consistent advocate of the community in the surrounding Lake Toba, through organizing, policy advocacy (structural case), and providing education, legal awareness to the society. The name 'Development People's Initiatives' means foster community initiatives, as the subject of change and development for a prosperous and equitable life.

   In principle, KSPPM highly appreciates the efforts and interest of the various parties, including government, within the framework of improving society welfare, preserve the culture and recover Lake Toba environment.

> *"There is no reason for KSPPM to reject Lake Toba as National Geopark and pursuing its status to be Global Geopark. However, it should be noted that the program should recognize and respect the existence of local communities (indigenous peoples), does not violate human right, and respect to the principle of Free Prior Informed Consent (FPIC)," SM said, Director of KSPPM*[56].

[56] Correspondence via email, November 2, 2015

According to KSPPM, as far as public see, that Toba Caldera Geopark discourse and submission process is still dominated by government and elites, it was very less involving local peoples. From the discussion KSPPM have done in village (KSPPM assisted group) especially in Kabupaten Samosir, the society did not receive socialization about Toba National Geopark or proposed to be Global Geopark as well. Yet, because of the lack of information about discourse, of course, raising concerns in the society, eventually whether the program will benefit local people or otherwise, it being the critical point.

3. YPDT (Toba Lake Lovers Foundation)

YPDT founded since August 17, 1995, was born of thought and action in a comprehensive Lake Toba preservation, serves to bridge together all the lovers, who cared and loved the area of Lake Toba region. YPDT was founded by a number of Batak leaders in Indonesia, with its Head Office in Jakarta, the capital city of Indonesia. Since 2014, they reorganized the board, including board representation in Medan, North Sumatra, and in 7 districts around Lake Toba area, with a renewed vision of 'the Lake Toba area will become the paradise city on the hill'. At recent times they have put more attention in the Lake Toba development, to oversee the implementation of Presidential Regulation No. 81 of 2014 on Spatial Planning area of Lake Toba and the surrounding, including the development of Lake Toba area as National Geopark.

> *"We saw, Toba Geopark discourse is good for raising awareness on the lake, it will give attention to the Toba Caldera sites, more attention about preservation of Lake Toba environment, however it should prepared by cooperation together with 7 districts in the region as well as local communities," Maruap Siahaan said, director of Toba Lake Lovers Foundation*[57].

[57] Interviewed via Skype, October 22, 2015

Siahaan emphasized, that it is important, however, not only good in document, but how it also good in the ground, following of unsuccessfulness of Toba Caldera Geopark in GGN, YPDT hopes Toba Caldera Geopark can succeed in the GGN institution for the next submission.

4. Save Lake Toba Foundation (SLTF)

   SLTF established by individual honorees because they are considered to have contribution on preservation of environment (called Kalpataru) in surrounding Lake Toba areas, it was declared in February 2014. The main purpose of established this foundation was to resume their role in collective solidarity and preserve the environment to realize Lake Toba authenticity return.

   According to SLTF, regarding to Toba Caldera Geopark discourse that the Indonesian government did not really commit for conservation of Lake Toba region as promoted in the geopark, mainly addressed of the current condition of the lake's which still degraded, from the forest, water, and culture. For instance, Tele Forest in Kecamatan Harian[58] as the last biodiversity area of Kabupaten Samosir has been severely damaged caused deforestation activities.

   > *"SLTF is strongly agreed within Lake Toba as geopark and to be Global Geopark, because it can one path or opportunity to restore 'integrity of creation' in the Lake Toba area, but first, the Indonesian government should be a role model for conservation, it should start from own willingness," EG said, Director of the SLTF*[59].

5. RE Foundation

[58] Tele forest in Kecamatan Harian, near to Pusuk Buhit Mountain, the western side of Lake Toba, also known as Lake Toba vegetation forest which remaining 12%. District Government of Samosir gave permits (Timber Utilization Permit/IPK) for PT Gorga Duma Sari (PT GDS) over an area of 800 hectares, in February 2012. However, local people fought this clearance and now operationalization PT GDS stopped temporarily *(Kompas, November 11, 2013)*

[59] Interviewed via Phone, October 22, 2015

RE Foundation was founded in 2012 as quoted from local newspaper. Since in the mid-2014, or after Toba Caldera Geopark inaugurated by President of Indonesia, Susilo Bambang Yudhoyono as the National Geopark, the Foundation participated actively to discuss and socialize Geopark Toba Caldera program, through intensive seminars and discussions, with the local newspapers. However, in the discussion was done by RE Foundation invited all of Lake Toba stakeholders including company such as PT.TPL[60].

6. The Kabupaten Samosir

The Kabupaten Samosir was born in January 2004, which was divided from Kabupaten Toba Samosir. As the new district, covering 9 sub-districts (3 of them were located outside of Samosir Island), this district refers to poor district because of it small local revenues. The majority of the population is farming, only a small number of society having income from tourism activities. As a district that has the largest administration area of Lake Toba, then, it has the greatest potential for tourism development, therefore the Kabupaten has a vision of becoming national and international tourism destination (2010-2025).

This district government is known having the most active role in Toba Caldera Geopark discourse. As central government also did first approach to this district such as building the Central Building Toba Caldera Geopark Information in Sigulatti, Sianjur Mula-Mula, Samosir, early 2013. Former Head of Tourism of Kabupaten Samosir, explained why the government of Samosir was strongly support the idea of geopark, as she stated:

> *"I learn and understand that the Land of Samosir Island is a fragile soil. Therefore, tourism type that can be developed is special interest, or special interest tourism not mass tourism. It will be new problems, for instance, if 500,000 people come into the island with its fragile physical conditions. That is why this program (special interest tourism) is the best option for*

[60] Analisadaily, December 20, 2014

Samosir. However, at that time, I found document from Ministry of Tourism that Samosir will be geopark, yet, I immediately support it[61]*."*

That is, the Samosir Government seeing this program as new icon for Samosir tourism development, appropriate with its vision, and further for Lake Toba conservation, such in geo-tourism (one of the special interest tourism of geopark/knowledge-based tourism).

According to Samosir Government, the lack of involvement and participation from local people in the discourse is not only a responsibility for the Government, but it is also the responsibility of all Lake Toba's stakeholders. Moreover, the reason is why there is a lack of socialization of geopark in society, for example, in Samosir District, is due to budgeting problem for the socialization of geopark itself. It began in 2014 for the implementation in 2015. Somehow, even though the Provincial Government of North Sumatra also supports the development of Lake Toba as National Geopark, they still have not give concrete supports, especially in the budgeting.

4.2 Analyzing of the CSOs and Government Roles and Interests

Table 6: Reading of CSOs and Government roles and interest in the Toba Caldera Geopark discourse

No.	CSOs	Characteristics of their main actions in the discourse	Their interests and goals
1.	CSO 1	1. Regularly discussions and studies. 2. They wrote a book, Baktiraja Geotourism report plan, Kabupaten Humbang Hasundutan, 2013. 3. Actively campaign the Toba Caldera Geopark through News report and social media.	- Environmental conservation around Lake Toba area. - Sustaining local communities.

[61] Interviewed via Skype, October 10, 2015

		4. Joint to help Toba Caldera Geopark accelerate Team for UNESCO GGN, since June 2013.	
2.	CSO 2	- Not really interested, they saw the Government was not properly having a commitment to promote Lake Toba in sustainable manner. Moreover, they also criticized the terms of 'bottom-up process', and seen it seems likely elite project. - They still only follow by news report, and social media.	- Environmental conservation around Lake Toba area. - Human rights of local communities, social and ecological justice. The local people should be the central of regional development.
3.	CSO 3	Involved by seminar as key speaker on the geopark discourse. They also actively promotes conservation and restoration of Lake Toba forest.	Conservation of Lake Toba authenticity return.
4.	CSO 4	Involved by discussion, seminar, and conference.	Their vision based on concern and loves for Lake Toba area including people lives within.
5.	CSO 5	1. Socialization of Toba Caldera Geopark discourse together with other stakeholder including company. 2. Actively campaign of Toba Caldera Geopark discourse through news report.	Tends to project orientations, and their own interest itself.
6.	Government 1	- Actively promotes the idea of Toba Caldera Geopark discourse since the beginning.	- The vision of regional government to be national and international tourism destination.

Source: compiled from many sources of local and national news report by way of monitoring Toba Caldera Geopark discourse throughout the year (2012-2015), including interviewed of above CSOs actor leader.

The table presented the role of state and non-state actor in the Toba Caldera Geopark discourse. Through CDA, it can be described, and detected social inequality produced and enacted in the discourse by government and elite actors in order to achieve their goals. One of the most criticized by society and CSO in the Toba Caldera Geopark discourse is the engagement of the PT TPL for socialization of Toba Caldera Geopark into GGN[62]. PT TPL want to maintain its industry activities by way of joined to support in the discourse. It would inevitably damage the image of conservation ideas in the geopark discourse itself, and eroded trust of the people, because it was promoted by one of the company that is considered publicly have massive contributions for the Lake Toba degradations.

In another side, the lack local community involvement and participation in the discourse is being one of critical point in the public, using discourse for justification of environmental degradation activities is another. From the government side, for example Samosir District, the reason of lacking socialization into society, is mainly due to the budget for the socialization of geopark itself which it is very limited, that is why the participation of the people is very low. Whereas, society's involvement and support are highly required as they are the key stakeholder in the geopark. From the interview of CSO also known, that the government have not yet asked its local community about the development of their region into the program of geopark.

From the discussion above, it can be concluded that in principle all of CSO are agree with the idea of Toba Caldera Geopark discourse such in conservation, education and involvement of local communities, but the problem on that, how these ideas can be implemented at the ground. It is reasonable that so far, society is confused and less concerned about the discourse, if the government still does not have intention to evaluate all policies have done upon environmental degradation in Lake Toba region, while at the same time promoting conservation in the geopark. In addition, we can see as presented in the Table 6, that CSOs are more having active roles to socialize Toba Caldera Geopark ideas especially to the local people's contrast to the government. Therefore, it is necessary

[62] *http://www.tobapulp.com/ina/Berita/tobapulp-dukung-kaldera-toba-jadi-jaringan-geopark-unesco.html*, accessed in September 29, 2015

that the government taking cooperation with all stakeholders which have a genuine concern for Lake Toba development. Likewise CSOs could continuing to enhance its role and commitment as the government partners to develop the region in sustainable manner.

4.3 Critical Discourse Analysis of the CSOs and Government in the Toba Caldera Geopark Discourse

As stated in the second chapter, each discourse contains opinions and messages. Moreover, any discourse also reflects the logic of thinking and knowledge systems. Discourse is not only discourse, there are power, ideology and interest behind them, therefore every discourse needs to be criticized and sued, and instead the discourse can also be used. CDA can help to describe, explain and analyze Toba Caldera Geopark discourse existed in the ground. Furthermore, CDA studies want to make changes as the prescriptions both to state actor and non-state actor who involved and enacted at Toba Caldera Geopark discourse.

Geopark and UNESCO GGN is the western ideas which share a unifying philosophy that guided how to manage the diverse stories that landscape, geology and biodiversity can tell us. Reflecting and celebrating of the relationship of human beings with its natural surroundings. Essentially, it can be identified, its root on the liberal institutionalism ideology or institutionalism, as collective action and strategic interaction of states, was taken over by UNESCO which appropriate with ‘Agenda 21’, and sustainable development goals.

In the case of Toba Caldera Geopark discourse, that despite it has been introduced since 2011, the society, in general did not understand what, and how geopark ideas about. The society was not aware about geopark program in their region because the government’s approach tend to be top-down process, although UNESCO’s GGN guiding, and the government has always admitted geopark’s ideas are about the local people roles in which bottom-up process.

Moreover, how then the society welfare will be increased as promised in the geopark discourse, if the community participation are very low, this is also the important question

pointed out in the public, as stated by Sarma Hutajulu, Provincial Legislative Council member of North Sumatra:

> *"If Toba Caldera Geopark accepted as a member of UNESCO's GGN, they said would affect about community welfare's, and further its aims for conservation, but the question on that is the preparations rarely involves the local community. Even if it was there, it was only represents of elites, and unfortunately, it was promoted by one of company that harm in the region."*[63]

In short, the geopark discourse with its ideas, seems likely to be difficult in implementation. This study somehow does not merely exist to prove who is wrong in this process, but rather to see in terms of how the discourse can work, and examine each actor involved. However, at the process, as presented in Table 7, there is a number of social and environmental civil society organizations as well as government actor involved and enacted in the discourse. The study highlighted at three things: first, the lack of local communities involvement and participation in the discourse, second, using discourse for justification of environmental degradation activities and third, at that time, there is no seen fundamental changes related to State policies commitment in addressing environmental degradation around the lake.

Trough CDA insight can identify and evaluate for those of the state actor and non-state actor, with whom they support, or even pretend to support, the environmental conservation of Lake Toba region and local communities that live in it, and those the actor having potential to deteriorate inequalities.

Table 7: CDA based on the news and interviews the actors who supports the conservation and local communities

No	**Name of CSOs and Government**	**Pro conservation, and local communities**	**Pretending to support of conservation and local community life**
1.	CSO 1	✓	

[63] Interviewed via Phone, October 31, 2015. She was elected from Electoral District IX North Sumatra (2014-2019), which include four districts in the Lake Toba area, namely Humbahas, Samosir, North Tapanuli, and Toba Samosir

2.	CSO 2	✓	
3.	CSO 3	✓	
4.	CSO 4	✓	
5.	CSO 5		✓
6.	Government 1		✓

Source: compiled by many sources of local and national news by way of monitoring Toba Caldera Geopark discourse throughout the year (2012-2015) as well as interviewed above CSOs actor leader.

In other cases, government policies to promote Lake Toba can be viewed from a variety of existing regulations, such as Lake Toba as a KSN, and Presidential Regulation No. 81 of 2014, all boils down to the conservation area of Lake Toba region in realizing sustainable development goals as in the 'Agenda 21'. In summation, the Toba Caldera Geopark discourse is a good concept for Lake Toba development, however, above all, environmental conservation area of Lake Toba, and enhancing local people's initiative is absolutely necessary: from planning, participation, and operation, so that to ensure the program can succeed.

4.4 Analyzing the Compliance in UNESCO GGN

Compliance is usually defined as "the extent to which the behavior of a state party of international treaty actually conforms to the conditions set out in this treaty" (Faure and Lefevere 2005: 164). Following Weiss and Jacobson (1998), we note three different types of compliance related behavior. First, procedural compliance means that state actors fulfill their obligations to treaty process, for example, by preparing national reports. Second, substantive compliance refers to action taken to fulfill treaty obligations. Finally, compliance with the "spirit" of the treaty refers to actions that fulfill the broad normative framework of the treaty, often spell out in the treaty preamble, for example, a country's commitment to placing biodiversity protection in the context of broader goals of conservation or sustainable development.

In turning point of compliance for UNESCO GGN, the Toba Caldera Geopark initiative strongly requires that government policies engage with local people as well as other

stakeholders who have concern on the Lake Toba environmental life. Protects the entire of Lake Toba region, not only geological, or biodiversity heritage, but it is also cultural heritage, and sustains local community life. The UNESCO's GGN notices, the existing of geopark that will be evaluated after four years period, whether the dossier is implemented in accordance with the principle of sustainable development plans. UNESCO's GGN membership must be revalidated by re-examining its activities as a geopark through "revalidation" mission. Yet, the status of Global Geopark will be continued after GGN assessors visited on the geo-sites in the geopark areas.

If in case, the practice does not promote environmental sustainability such as environmental degradation in the region, the status will be lost. Moreover, as part of revalidation, if the geopark comply with all criteria on the dossier then will be awarded so-called "green card"; if no longer fulfill the criteria, the management will be notified to take appropriate action within a two year period so-called "yellow card"; if after receiving a "yellow card," the management of geopark does still not fulfill the criteria then the area will be lost its status as a UGG so called "red card" [64].

By this means, we think, that international institution (UNESCO GGN) can change the behaviors of Indonesian government in order to solve environmental degradation around Lake Toba areas as well as to strengthen its local communities. In short, rebranding of Toba Caldera Geopark is about commitment of government to manage the role of local people and inevitably their welfare, protect geological heritage, biological and cultural-historical heritage in a sustainable manner.

4.5 Analyzing International Cooperation under UNESCO GGN

As described in Chapter 2, the mainstream position in the study of international environmental politics is cooperation which bases on the liberal institutionalism. *Institutions may emerge as result of interdependence, collective action and strategic*

[64] Revalidation Process of UNESCO Global Geoparks, *http://www.unesco.org/new/en/natural-sciences/environment/earth-sciences/unesco-global-geoparks/revalidation-process/,* accessed in January 25, 2016

interaction of states. Moreover, Robert Keohane (1993) notions, that international institution can reduce the transaction cost of cooperation. The international community's ability to preserve the quality of the planet for future generations depends on international cooperation, which in turn, negotiations effective international institutions to guide international behavior, (Robert O. Keohane; Peter M. Haas; and Marc A. Levy, 1993).

International institution of UNESCO GGN, provides an international framework to conserve and enhance the value of the Earth's heritage, trough creations of GGN. The creation of geoparks will inevitably de facto provide coordination of conservation, sustainable use and complementary social and economic development. This cooperation improves by number of meeting, conference, exchange ideas, well-practices, and publications. The history geopark discourse as can be said is the western ideas has been growing globally following the number of UNESCO's GGN members from 21 in 2004 to 120 in 2015. That means this cooperation will continue increases in the future.

The international partnership developed by UNESCO, brings the advantage of being a member of, and profiting from, this worldwide network[65]. It has been viewed by Indonesian Government (especially the Ministry of Tourism) that being a member of UNESCO GGN will be a media campaign to the entire world; reduce the cost of cooperation, for example, the cost promotions of the region to world's community. However, the problem is how far the role of the UNESCO GGN institution in assisting its member to pursue the goals. For instance, in developing countries like Indonesia, it is difficult to pursue environmental sustainability or to solve environmental degradation with international standard. Therefore, it is necessary to overcome collective action problems, and mitigate what is the effect of interdependence (Kate O'Neil, 2009: 12). Developing countries also have generally argued that without financial and technological assistance, it is difficult for them to meet the cost of mitigating environmental problems[66].

[65] The Declaration, accessed from *(http://www.globalgeopark.org/UploadFiles/2012_9_6/GGN2010.pdf)*, accessed in December 20, 2015

[66] Lorraine Elliot, 2004, *"The Global Politics of the Environment,"* p.178, New York University Press

This is also the weakness of the implementation of international-based institutions in local area, the expectation of changing environment problems is hard to achieve. UNESCO GGN can influence the behavior of state, but does not guarantee to solve environmental problem in the geopark region whatsoever. This is because the actor in international politics is still depends on the power of state. The international political system is anarchic, and that the primary actors within this system are sovereign nation states, (O'Neill, 2009:9). By anarchy, there is no state overarching authority that can dictate to individual states, and even in international courts and tribunals, no state can ever be forced to appear before them[67]. Therefore, the way to make environmental policy changes is that they must be willing with the policies they have made.

In the case of Toba Caldera Geopark discourse, there are massive environmental exploitations over the region, in which geological, biodiversity as well as culture diversity existing within are threatened. This region needs international collective awareness by raising international concern. However, at the same time, the Indonesian government also must resolve the problem by changing environmental policy-making in the principle of sustainable development, and geo-conservation that promoted by UNESCO institutions. That means, the solution environmental problems is addressed for national governments who have responsibility to put them into effect.

Chapter 5

Conclusion and Recommendation

5.1 Conclusion

The idea of Toba Caldera Geopark which was promoted by government is the new approach and language for Lake Toba development. Following the rich history of geology

[67] DeSombre, R. Elisabeth, 2002, *The Global Environment and World Politics: International Relations for 21th Century.* New York, NY: Continuum, p. 7

formation as the result of devastating super-volcano eruption about thousand years ago, Lake Toba considered as a geopark and further to be included in UNESCO's GGN. This institution provide a framework of international cooperation, develop models of best practice, set quality standard, and based on strong community support, so this network can be one path for Lake Toba to be known to the world's community, and raising concern for Lake Toba preservation. On the other hand, it is obviously that so far, the Indonesian government has been negligent in maintaining the environmental quality of surrounding Lake Toba, due to the poor government policy and protection, causing massive environment degradation, exploitations of water, forest and landscape within the last 3 decades, and even up to nowadays, this study found that government does not have decisive action, although promoting conservation such in geopark discourse.

Geopark as one of the tool of sustainable tourism development is a serious agenda seeking by Indonesian government, since 2011, based on Presidential Regulation No. 92 of 2011. They seek to develop tourism with a comprehensive approach, integrative, and environmentally friendly, as well as participatory by involving the local community for social and economic welfare. Moreover, according to Government Regulation No. 26 of 2008 on National Spatial Planning, Lake Toba also has got National Strategic Area status, and then followed by Presidential Regulation No. 81 of 2014 on Spatial Planning area of Lake Toba and the surrounding. These regulations were distinctly provided a way for preservations of Lake Toba *(the water of life),* and development into an international tourism destination. Thus, it was not surprising, if the Government through the Ministry of Tourism and Creative Economy then develops special interest tourism such as geotourism and geopark which was promoted by UNESCO within the principles of sustainable development.

Therefore, the idea of geopark to celebrate the harmonious relationship between human with their nature through conservation, education, and cultural revitalization is one way to preserve and restore the 'integrity of creation' around of Lake Toba areas. But, again, it should be emphasized that this can only succeed if local communities take an active role and take the initiative. Since the local communities experienced living in the area, they

have knowledge and know-how, the management to preserve its region, their culture and ritual, for example: indigenous people of Batak in water management *(life is water),* so that it is merely needed government supports. Communities with a little help and support from the government, or NGO, have the capacity to improve their quality of life and can solve problems by their own efforts. In short, the local peoples should be the subject of Lake Toba area development.

However, this study found that socialization of Toba Caldera Geopark discourse is still quite limited, besides because of the wide area of Lake Toba in which consists of 7 districts, also due to the lack of Government's intention, for example, to accommodate specific budget for it. Thus, it can be said that in general the local community does not understand what, and how geopark itself. Moreover, this study viewed, the government's approach in the discourse still tending to top-down rather than bottom-up process, which it is less local people's involvement, and participation. Besides, it is seen, the UNESCO GGN guiding bottom-up process for geopark region does not clear in detail, likewise the Indonesian Government especially Regencies Government are lacking capacity of human resources for community development.

Regarding on CDA insight, the Toba Caldera Geopark discourse can be explained and detected social inequality produced and enacted in the discourse by government and elite actors in order to achieve their goals. Basically, the Indonesian Government is still less responsible for Lake Toba area conservations. In the same way, others actor playing discourse for getting own project, for example, the company for justification of its environmental degradation activities. Those actions are potentially to continue deteriorations and inequalities in the region.

In another side, reading responses of CSOs at Toba Caldera Geopark discourse can be concluded, that they absolutely agree with the idea of conservation, education, and local community involvement in geopark. But in reality, they see it is still quite far from implementations. Nevertheless, these also a challenge for those CSOs including educational institutions who have a genuinely concerned for the development of region, calls initiative with individuals government facing opportunity working together. Also, it is necessary

notes, that geopark program or UNESCO's GGN member is not a final goals of the region, instead, geopark is about process for maintaining and protecting the nature. That is why, Toba Caldera Geopark discourse should be followed preparation of the local communities.

From environmental politics viewed, the international cooperation under umbrella of UNESCO GGN is about share a unifying philosophy that guided how to manage the diverse stories that landscape, geology and biodiversity can tell us. Essentially, it can identified, it is root on the liberal institutionalism ideology or institutionalism, as collective action and strategic interaction of states, was taken over by UNESCO which appropriate within 'Agenda 21' and sustainable development goals. It is clearly motivated, that improvement and extension cooperation will lead to solve environmental problems. That means, the status of Lake Toba as a geopark can used advocates solving environmental degradation in Lake Toba region. In other words, global geopark status can be a basis to re-evaluate the policy building over the region. But it should be admitted, however, the UNESCO institution according to this study, it is quite limited role's to assist its member. So that, the expectation of the people that after Toba Caldera Geopark accepted in GGN, for instance, will automatically reduce environmental degradation and prospering local community are not guarantee at all. UNESCO GGN in other words, is only to facilitate the international cooperation, coordination, and promotion of its members.

As North Sumatra government preparing Lake Toba to be member of GGN after 2015 again, therefore it is highly recommended taking seriously to improve all of deficiencies, together making strong commitment with all stakeholders. In addition, it is very important to explore and revive local knowledge of Batak culture in managing environments which highly appreciate the preservation of the Lake Toba ecosystem, and then modify it to modern approach of earth science knowledge. In the end, the aims of geopark to glorify nature and enhance community welfare can be realized.

5.2 Recommendation

Indeed, further recommendation of this study are very needed to address some of the important key, as follows: firstly, in order to ensure the Toba Caldera Geopark discourse

can succeed, all activities that harm in the Lake Toba environment must be evaluated, and even stopped, such as deforestation, pollution, and other exploitations. The government must be resolute against all environmental destruction activity according to the rules and regulations which applicable. Secondly, for those state actor and non-state actor who involved and enacted in the Toba Caldera Geopark discourse, should be avoid the involvement of companies that are considered has caused environmental degradation of Lake Toba area. Instead, the aims of this discourse will become blurred and failed.

Thirdly, the Toba Caldera Geopark discourse management should be calls of local people participations, however the best possible strategy in the present time are combination of strong bottom-up approach, and top-down as well, in specific circumstance. Meanwhile, at the same time strengthening civil society roles, together making cooperation with other individual-institutional who have committed to the region. Socialization of this discourse should completely done so that people can understand it properly and eventually determine the choice: receive or otherwise, take on the role and commitment.

Finally, one of the foremost important thing else, is that Management Board of Toba Caldera Geopark itself. Taken ideas from the world's lake management (ILBM 2007), this institution should be an individual who have strong committed and visionary for the development of the region into geopark. Strengthening the institution of geopark management is very needed, since geopark in essence is turned to how to manage of the region; strong institution will be inevitably the indicator of geopark program is durable, and effective in the years to come. Institution here also means the local people or indigenous people's institutions, it should be more strengthened, including access in technology, information and finance.

In order to develop a solid research on this particular issue, the concept of used in this study is strongly need for development. A similar study with a more detailed analysis would get a big picture of the problem, as the aims of CDA research not only a scholarly practice, but also expected to be a scholarly program of research (Van Dijk 1995). Future research has to consider, such as: analyzing Toba Caldera Geopark compared to other Global Geopark in

which succeeds in conservation of the area, and enhance its local community welfare. The last, how can the idea of geopark translated and modified it to be a policy.

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