
Discussion Regarding the Development of Lake Toba Geopark Tourism and Inter-Regional Cooperation with the Management Agency Toba Caldera UNESCO Global Geopark

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Abstract

The establishment of the Toba Caldera as a UNESCO Global Geopark provides opportunities for local village communities to promote culture and local products and create wider employment opportunities. The purpose of this community service activity is to gain an understanding of the importance of inter-regional cooperation in the development of the UNESCO Global Geopark Toba Caldera tourist area. This inter-regional cooperation can provide sustainable growth, thereby increasing the welfare of local communities. The activities were carried out by visiting the UNESCO Global Geopark Toba Caldera Management Agency, especially at the Samosir Regency Regional Government Office. The development of the Lake Toba area needs to be carried out jointly with the eight regencies around the Lake Toba area in an integrated and sustainable manner, and it cannot work alone. For example, in procuring and repairing roads as entrances to tourist areas, especially tourist villages in the Lake Toba Region. No region can provide for itself because each region has advantages and disadvantages that can be mutually beneficial through good cooperation.

Keywords: Geopark, Toba Lake, Toba Caldera, Regional Cooperation, North Sumatra

Abstrak

Dengan adanya penetapan Kaldera Toba sebagai UNESCO Global Geopark, memberikan peluang bagi masyarakat desa setempat untuk melakukan promosi budaya, produk lokal serta penciptaan lapangan pekerjaan yang lebih luas. Tujuan kegiatan pengabdian kepada masyarakat ini adalah untuk menggali pemahaman mengenai pentingnya kerja sama antar daerah dalam pengembangan kawasan wisata Toba Kaldera UNESCO Global Geopark. Kerjasama antar daerah ini dapat memberikan pertumbuhan yang berkelanjutan sehingga meningkatkan kesejahteraan masyarakat lokal. Pelaksanaan kegiatan dilakukan dengan mengunjungi Badan Pengelola Toba Kaldera UNESCO Global Geopark, terutama di Kantor Pemerintah Daerah Kabupaten Samosir. Pembangunan Kawasan Danau Toba perlu dilakukan bersama-sama dengan delapan kabupaten di sekitar kawasan Danau Toba secara terintegrasi dan berkesinambungan, tidak dapat berjalan sendiri-sendiri. Misalnya dalam pengadaan dan perbaikan jalan-jalan sebagai pintu masuk ke daerah-daerah wisata khususnya desa-desa wisata di Kawasan Danau Toba. Tidak ada daerah yang dapat mencukupi kebutuhannya sendiri. Karena masing masing daerah memiliki kelebihan dan kekurangan yang dapat saling menguntungkan melalui suatu kerjasama yang baik.

Kata kunci: Geopark, Danau Toba, Toba Caldera, Kerjasama antar Daerah, Sumatera Utara

INTRODUCTION

On July 4, 2020, the Toba Caldera was designated as a *UNESCO Global Geopark* at the Meeting of UNESCO member countries in Paris. It impacts the management of Toba Caldera, which must involve all the surrounding villages to benefit the welfare of the community. Changes in the approach to village development, from making the village which was previously only an object to turning the village into a subject and object simultaneously. "The designation of the Toba Caldera as a UNESCO Global Geopark provides an opportunity and responsibility for Indonesia, especially for the local community. This determination can encourage economic development and sustainable development in the region. Through the development of sustainable geo-tourism, opportunities are opened for local communities to promote culture and local products and create wider employment opportunities. At the same time, with the world's recognition and attention to the Toba Caldora, the Government and the local community are obliged to improve and maintain environmental sustainability and the integrity of the Toba Caldora Area." (KBRI in Paris, 2020).

It is also supported by "Law Number 6 of 2014 concerning Villages. Article 1, Paragraph (1) states that a village is a legal community unit with territorial boundaries authorized to regulate and manage government affairs, and the local community's interests are based on community initiatives. , origin rights, and traditional rights recognized and respected within the system of the Government of the Unitary State of the Republic of Indonesia. Furthermore, Article 1 paragraph (9) states that Rural Areas have main agricultural activities, including management of natural resources with the arrangement of area functions as rural settlements, government services, social services, and economic activities." Implementing this Village Law gives villages sovereignty and authority to regulate themselves through origin authority, local village scale authority, and assignments. (Jogloabang, 2020).

Since the inauguration of Lake Toba as a UNESCO global Caldera Geopark, the scope of the Toba caldera area, which has become a water catchment area (DTA), has been able to support it as a tourism destination for the Toba Caldera Geopark. The main recommendations are developing

educational strategies in partnership with other UNESCO Global Geoparks and increasing educational activities to facilitate the development of learning programs with interactive tools for students. It is necessary to be the direction and guideline for tourism development in the Lake Toba region amidst the massive development that is more economically oriented. It must maintain the beauty of culture, various

cultural sites, and biodiversity on an ongoing basis. Unesco's recognition of the Toba Caldera as a UNESCO Global Geopark is early evidence of the awareness that Lake Toba needs to be developed by relying on the concepts of *geodiversity*, *biodiversity*, and *cultural diversity*. In this case, building Toba Lake is only sometimes for economic reasons. (Bangun & Junita, 2020)



Figure 1. Tourism Area Bukit Singgolom is included in One Toba Caldera Unesco Global Geopark

Regencies around Lake Toba, such as Toba, Samosir, Simalungun, North Tapanuli, Humbang Hasundutan, Karo, Dairi, and Pakpak Bharat, need to cooperate, including in terms of funding support, local cultural potential, and regional biodiversity (Bangun & Junita, 2020). The Daily Chairperson of the Unesco Global Geopark Toba Caldera Management Body of North Sumatra Province, Ir. Mangindar Simbolon MM.

said that the development of the Lake Toba area needs to be carried out jointly with eight districts around the Lake Toba area in an integrated and sustainable manner and cannot work alone. So the development of the area, especially in the tourism sector, can significantly increase growth and provide benefits to the community, for example, in procuring and repairing roads as entrances to tourist areas,

especially tourist villages in the Lake Toba Region.

The Government has also regulated inter-regional cooperation with Law No. 32 of 2004, which was last amended by Law No. 23 of 2014. This law provides great legality for implementing development cooperation with third parties (public or private) and cooperation between neighboring regions. Article 195 (1) states that regions can cooperate with other regions based on the efficiency and effectiveness of public services, synergies, and mutual benefits to improve people's welfare. Article 196 (2) makes cooperation between regions even more explicit by stating that the regions are obliged to manage public services together with the surrounding areas to benefit the community and create efficiency. The fact shows that after regional autonomy it has been perceived and responded to in various ways by several Regional Governments. (Bangun & Junita, 2020)

From the explanation above, we carry out community service activities to understand the importance of inter-regional cooperation in developing the Unesco Global Geopark Toba Caldera tourist area. This activity is part of a series of research in Lake Toba's tourist

area, aiming to hold discussions with the Unesco Global Geopark Toba Caldera Management Agency.

METHOD

The implementation of this activity is carried out in three stages, namely:

- Stage I: Discussions with the Unesco Global Geopark Toba Caldera Management Body at the Samosir District Government Office. A short discussion was also continued with the Regent of Samosir Regency to strengthen the understanding of the vision and mission from the side of the Samosir Regency Regional Government.
- Stage II: Discussions with the Tourism Office of North Sumatra Province in Medan.
- Stage III: Discussions and talks on continuing cooperation between the Indonesian Christian University and the Unesco Global Geopark Toba Caldera Management Body through the Research and Development Division at the Faculty of Economics and Business at the Indonesian Christian University.

This paper was written using qualitative methods through literature

studies, documentation, and field observations coupled with unstructured

interviews with informants who were met during the activities.



Figure 2. Heading to the Samosir Regency Regional Government Office

DISCUSSION

Toba Caldera as UNESCO Global Geopark

Lake Toba is one of the largest caldera lakes in the world, located in North Sumatra Province, 176 km to the west of Medan City. Lake Toba (2.88° N - 98.52° E and 2.35° N - 99.1° E) is the largest lake in Indonesia ($90 \times 30 \text{ km}^2$). It is a volcanic-tectonic caldera (giant volcanic crater), the largest quarter in the world. This caldera was formed by a collapse process after the eruption of the ancient Toba volcano *supervolcano* 74,000 years ago, then filled with rainwater. Due to its uniqueness, the Toba Caldera is proposed to become a Geopark with the name Toba Caldera Geopark. A Team for the Acceleration of Submission of the Toba caldera

Geopark was formed to become a member of the *UNESCO Global Geopark Networking* by issuing a Decree of the Governor of North Sumatra, with 188.44/404/KPTS/2013 on June 26, 2013. (Fahrizal, Hendra, & Hidayat, 2020)

Geopark was developed to protect world heritage with the concepts of conservation, education, and community empowerment, as well as to increase the economy and welfare of local communities. The importance of conservation efforts for world heritage and the management of natural resources in geopark areas is very potential. The objects in the geopark area need to be preserved because their existence is non-renewable and can be damaged if not properly preserved. Besides having a rare beauty and uniqueness, this geopark

area is very useful for educational tourism, especially geology. The geopark concept was also created to encourage the public to care more about the surrounding environment and good use of natural resources, climate change, natural disasters, and how to deal with them. (Rahmasari & Parameswari, 2020)

Good planning in this area is necessary for the increased use of recreation (tourism) and services offered by local businesses to improve the living standards of these local rural communities (Pérez-Calderón, 2022). "Good governance does not only focus on building infrastructure for the conservation of heritage and tourism products but, more importantly, on developing critical needs for community resilience to various risks. Such as climate change, pandemics, and geological or technological hazards. In addition, community education to understand the need for environmental services needs to be improved to achieve sustainable livelihoods" (Martini et al., 2021).

UNESCO Global Geoparks, "empower local communities and allow them to develop cohesive partnerships with the common goal of promoting areas of geological significance,

geological processes, features, time periods, historical themes related to geology, or outstanding geological beauty. The UNESCO Global Geopark was established through a *bottom-up* process involving all relevant local and regional stakeholders and authorities in the area (e.g., land owners, community groups, tourism providers, indigenous peoples, and local organizations). This process requires a strong commitment from local communities, strong local multiple partnerships with long-term public and political support, and a comprehensive strategy to meet the community's objectives while displaying and protecting the area's geological heritage." (UNESCO, 2016)

The beauty of the Toba Caldera and its cultural wealth have made Lake Toba one of Indonesia's mainstay tourist destinations, which is included in the list of '10 New Balis' (Indonesian Embassy in Paris, 2020). The Toba Caldera geosite is inhabited by various ethnic groups, especially the Toba, Simalungun, Karo, and Pakpak. Likewise, in terms of natural resources, the caldera faces Lake Toba's shores, which are also inhabited by various biological flora such as aquatic plants and fauna, especially various types of freshwater fish and mammals.

Likewise, of course, on the mainland of the lake, there is also various flora in the form of forest vegetation and animals that are typical of Lake Toba. (Bangun & Junita, 2020)

As a Global Geopark, UNESCO firmly believes that the Toba Caldera has high geological and traditional heritage links with local communities and various biodiversity. Unesco gave six recommendations: a) Developing a relationship between the geological heritage and the local community, b). Develop a tourism activity partnership strategy with local product producers, c) Strengthen involvement in the *Global Geoparks Network* and the Asia Pacific Geoparks Network, d). Develop educational strategies by working in partnership, e) Improve educational strategies and activities to facilitate mitigation of natural hazards and climate change in schools for local populations. Moreover, f) Strengthen UGG's involvement in research studies, conservation, and promotion of local indigenous people and culture and languages. (Bangun & Junita, 2020)

The Executive Council of the United Nations Educational, Scientific and Cultural Organization (UNESCO) also agreed that the Toba Caldera was designated as a UNESCO Global

Geopark at the 209th Session of the UNESCO Executive Council in Paris (04/07/2020). Executive Board members designated 16 new UNESCO Global Geoparks, including the Toba Caldera. "Through this determination, Indonesia can develop the Toba Caldera geopark through the Global Geoparks Network and the Asia Pacific Geoparks Network. Especially in terms of empowering local communities, The Toba Caldera made it onto the UNESCO list after being assessed and decided by the UNESCO Global Geoparks Council at the IV UNESCO Global Geoparks International Conference in Lombok, Indonesia, on 31 August-2 September 2019." (KBRI in Paris, 2020).

The designation of the Toba Caldera as a UNESCO Global Geopark is a long process of joint efforts by various stakeholders, the Central and Regional Governments, and local communities living in the Lake Toba area. "The preparatory process for obtaining UNESCO recognition for the Toba Caldera, shows high commitment and good cooperation from all parties in Indonesia from the beginning of the process, from collecting data, holding various workshops, preparing and negotiating nomination documents to

be submitted to UNESCO." (KBRI in Paris, 2020)

The process of UNESCO's global geopark, to analysis and revalidation scheme reveals the interrelated sustainability management approaches. "In particular environmental quality management, strategic knowledge management, strategic management, and participatory management. Environmental quality management, stimulating UNESCO global geoparks to implement their mission, is ensured through a system of initial certification and regular revalidation. The global performance of UNESCO geoparks is coordinated at the continental and global levels. This network facilitates the effective implementation of knowledge management, which consists of the systematic sharing of knowledge and experience among individual geopark representatives. Participatory management is carried out not only through the participation of individual geoparks and representatives in the decision-making process of the Global Geoparks Network and continental networks but mainly through the participation of local actors in activities provided by UNESCO global geoparks. The

application of strategic management ensures the long-term balance of UNESCO's global geopark contribution to a given region's sustainable development and cultural identity." (Paskova & Zelenka, 2018)

UNESCO, an international organization in charge of education, science, and culture, has 5 (five) main programs: education, social and human sciences, natural sciences, culture, and communication and information. One of the programs that have been formed is geopark. According to UNESCO, a geopark is an area that is defined as a national-scale protected area that contains several geological heritage sites that have a certain beauty and rarity that can be developed as part of the integrated concept of conservation, education, and local economic development (Setyadi, 2012; Rahmasari & Parameswari, 2020)

The designation of the Toba Caldera as a UNESCO Global Geopark provides an opportunity and, at the same time, a responsibility for Indonesia, especially for the local community. "This determination can encourage economic development and sustainable development in the area. Through the development of sustainable geo-tourism, opportunities

are opened for local communities to promote culture and local products and create wider employment opportunities. At the same time, with the world's recognition and attention to the Toba

Caldora, the Government and the local community are obliged to improve and maintain environmental sustainability and the integrity of the Toba Caldora Area." (KBRI in Paris, 2020).



Figure 3. Tourism Area Huta Ginjang included Geopark is included in One Toba Caldera Unesco Global Geopark

Apart from the Toba Caldera, Indonesia already has 4 (four) other UNESCO Global Geopark sites, namely, Batur, Cileteuh, Mount Sewu, and Rinjani (KBRI in Paris, 2020). Mount Batur Geopark is the first geopark in Indonesia to be inaugurated as UGG in 2012 (Rahmasari & Parameswari, 2020). Gunung Sewu Geopark succeeded in obtaining UGG status in 2015. Ciletuh Geopark and Rinjani Geopark obtained UGG status in 2018 (Kumparan, 2020). The world knows the wealth and beauty of Indonesia's natural resources, which include biodiversity, geological sites, and cultural uniqueness in an area. It can be developed through sustainable

management and development (Rahmasari & Parameswari, 2020). Indonesia also has a lot of natural and cultural wealth on the UNESCO list, including ten intangible cultural heritage, 9 (nine) cultural and natural heritage sites, and 16 biosphere reserves recorded by UNESCO (KBRI in Paris, 2020). **Inter-Regional Cooperation** (Bangun & Junita, 2020)

As previously mentioned, inter-regional cooperation is needed from eight regencies around the Lake Toba tourism area, Toba Regencies, Samosir, Simalungun, North Tapanuli, Humbang Hasundutan, Karo, Dairi, and Pakpak Bharat. So that development becomes integrated and provides

increased welfare for the community, with the hope of increasing the number of tourists who come.

Several models of Inter-Regional Cooperation can be summarized with the basic principles of cooperation. In principle, in implementing these forms of cooperation, what needs to be maintained in the regions concerned are: a) The need for inclusivity in cooperation to bring services closer to the community and apply participatory principles., b) Maintaining commitment and a spirit of cooperation, c) Always studying options/alternatives and taking the most realistic options, d) Paying attention to technical details in cooperation, e) Periodic evaluation and maintaining cooperation corridors so that they continue to lead to the initial goals of cooperation, e) Responsive to problems that arise.

Aspects of legality in government organizations guide each personnel or other institutions and the public regarding each Government's duties, functions, and responsibilities. The basis for the implementation of inter-regional cooperation (KAD) in the management of the Toba Caldera tourism includes the following:

1) The Inter-Regional Cooperation provisions are regulated in the Law

on Regional Government which was last refined through Law no. 23 of 2014 concerning Regional Government in article 369, which states that inter-regional cooperation is needed for the efficiency and effectiveness of governance. Only a Inter-Regional Cooperation between Regencies in the Lake Toba area has been found in the form of a formal Inter-Regional Cooperation.

2) As an elaboration of Article 369 Law No. 32/2014, PP No. 28 of 2018 concerning Inter-Regional Cooperation states that Regional Cooperation is a joint venture between a region and another region, between regions and third parties, and between regions and institutions or regional governments. Moreover, abroad based on considerations of service efficiency and effectiveness mutually beneficial public. Collaboration, in this case, according to the program of the Ministry of tourism, especially on Lake Toba, is carried out through Tourist Attractions, Tourism Accessibility, and Tourism Amenities. Of course, this is also by Unesco's determination that the

- Toba Caldera has been designated as a UNESCO Global Geopark, which prioritizes tourism development based on local traditions and the preservation of biodiversity.
- 3) Government Regulation (PP) Number 26 of 2008 concerning National Strategic Areas, the National Strategic Areas established in the Province of North Sumatra, one of which is the Lake Toba Area, beside Berhala Island, the Medan-Binjai-Deli Serdang-Karo Urban Area (Medindingro) and the Leuser Ecosystem Area.
 - 4) Likewise, in addition to the Presidential Regulation of the Republic of Indonesia concerning the Spatial Plan for the Lake Toba area around it, it is explained that the National Strategic Area is an area whose spatial planning is prioritized. It has a very important influence nationally on state sovereignty, state defense and security, economy, society, culture, and the environment, including areas designated as world heritage.
 - 5) Then, it was emphasized in Presidential Regulation No. 49 of 2016 concerning establishing the Lake Toba Management Authority (BOPDT). In addition to having an Authoritative function that has the authority to manage Lake Toba tourism, it also has a Coordinative function at the ministerial, provincial, and inter-district levels in the Lake Toba district. Based on a study of literature and documents available at the North Sumatra Tourism Office, the Director of the Lake Toba Tourism Authority (BOPDT) plans to focus on developing 16 Lake Toba sites. This statement certainly spurred the enthusiasm of the district government to work together to advance the Lake Toba Caldera geosite as a whole, especially those in their respective regions.
 - 6) Of all the legal umbrellas mentioned above, inter-regional cooperation is necessary considering that no region can meet its own needs, and each region has advantages and disadvantages that can be mutually beneficial through cooperation or, in other words, through cooperation. Between regions will be able to occur efficiencies because they provide mutual benefits. This opportunity for Inter-Regional

Cooperation is increasingly open with the 2010-2025 Tourism Development Master Plan (Ripanas) and the efforts of MP3EI in mapping the main accesses for the development of Lake Toba tourism. It is hoped that all of this will be responded to well by the local Government in the 2012 program.

- 7) Through this Inter-Regional Cooperation it will create multi-fold economic impacts starting from direct, indirect, and induced impacts, which provide opportunities for business growth and the role of local communities in the tourism sector. Of course, in addition to the existence of the Lake Toba tourist area, it is not only to improve the economic sector but, more than that, what is no less important is to strengthen relations between local governments in the Lake Toba area.

Inter-regional cooperation can only be formed and run if it is based on the awareness that these regions need each other to achieve one goal. Therefore, the initiation of inter-regional cooperation can only run effectively when common issues, common needs, or common problems have been found.

This similarity is the basis for bringing together regions that will be partners. In addition, by working together, there are many benefits to be gained:

- a. Inter-regional conflict management. Inter-regional cooperation can become a forum for interaction and dialogue between the main regional actors. A forum like this can provide an understanding of problems and increase inter-regional tolerance so that inter-regional conflicts can be anticipated.
- b. Service efficiency and standardization. Regions can utilize inter-regional cooperation to develop joint action. In the context of public services, inter-regional cooperation greatly supports regions in applying efficiency and standardization of inter-regional services. It certainly supports optimal public services in the regions.
- c. Economic Development. Inter-regional cooperation will encourage economic development in a region. It is because the logic of economic development is sometimes different from the logic of controlling administrative areas.
- d. Environmental Management. Inter-regional cooperation encourages

environmental management, which is a common problem. Just like the previous point, conservation areas are only sometimes administrative territories. Without inter-regional cooperation, environmental management will not run synergistically so it can cause environmental problems, not only for the area but also for neighboring areas, such as forest fires, floods, and landslides.

Inter-regional cooperation needs to take advantage of the following: a) regulations for implementing inter-regional cooperation, b) financial

support from the central, provincial, and private sectors, and c). Local cultural potential and regional biodiversity. Need to take advantage of strengths in using existing opportunities, namely: a). The existence of a geosite as UNESCO Geopark Global, b). Enthusiasm in tourism, and c) Stimulus for world tourism actors). All Regency Regional Governments to show more seriousness in following up on the results of meetings or meetings regarding inter-regional cooperation in the development of the Lake Toba Area.



Figure 4. Discussion with the Unesco Global Geopark Toba Caldera Chairperson at the Regional Government Office of Samosir Regency, North Sumatra Province

The Regent of Samosir Regency enthusiastically welcomed the community service activities and supported many universities to visit Samosir Regency to carry out community activities. It is because the

local Government needs support from all parties, especially the community, to assist the community in mentoring and training on tourism and tourism businesses, especially living directly in tourist villages for a longer period until

the community gets the benefits. He criticized community service activities

that were only temporary but not sustainable.



Figure 5. Discussion with the Regent of Samosir Regency with the Expert Team

The discussion continued with the Tourism Office of North Sumatra Province, which emphasized the need for collaboration, not only between district governments. Collaboration is also needed between the central Government, regional governments at the provincial level, and local governments at the district level, especially regarding budgetary or funding issues in the development of Toba Caldera. Development should

synergize to support each other and cover various shortages of funds. The provincial Government hopes that the Central Government will provide an adequate budget. Moreover, Toba Caldera is preparing for re-certification and revalidation from UNESCO to avoid being thrown from the UNESCO Global Geopark list. Because Lake Toba is still included in the UNESCO Global Geopark, it has a strategic impact and has become known worldwide.



Figure 6. Discussion with the Tourism Office of North Sumatra Province

This activity continues in the spirit of increasing cooperation between the Indonesian Christian University (UKI) and the UNESCO Global Geopark Toba Caldera. Mr. Dr. Wilmar E. Simandjorang, Dipl. Ec., MSi. As *the Coordinator of the Division of Education, Research and*

Development, I visited UKI to further discuss the Toba Caldera UNESCO Global Geopark and further enhance cooperation through a *Memorandum of Understanding (MoU)*, especially for research and community service activities.



Figure 7. Discussion with the UNESCO Global Geopark Toba Caldera Management Body (Research and Development) with the Faculty of Economics and Business Universitas Kristen Indonesia

CONCLUSION

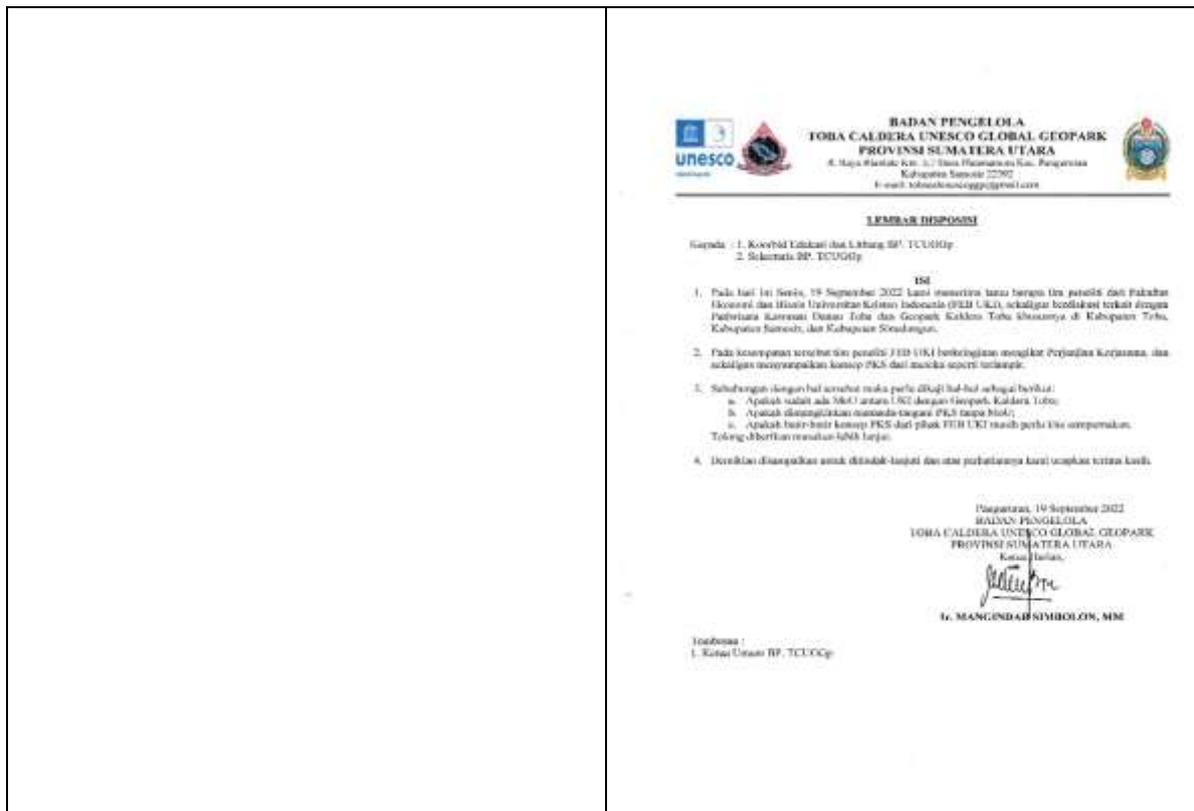
No region can meet its needs because each region has advantages and disadvantages that can mutually benefit through cooperation. Inter-regional cooperation will make policies efficient because they are integrated from one region to another on an ongoing basis. Establishing cooperation between 8 (eight) districts around the Lake Toba Region, Toba District, Samosir, Simalungun, North Tapanuli, Humbang Hasundutan, Karo,

Dairi, and Pakpak Bharat, is not an easy thing. It takes a common vision and thoughts and needs to let go of each other's regional egos. The institution that manages this cooperation must be strengthened to provide good coordination. In this case, it can be suggested that The UNESCO Global Geopark Toba Caldera Management Body can coordinate well between districts.

The implementation of this community service activity is a series of

research in the Lake Toba Region, which can run smoothly. The informants provided good and complete information so that an understanding of the importance of cooperation between districts in the Lake Toba area is important to implement. This activity also led to increased collaboration

through an MoU between the Indonesian Christian University and the UNESCO Global Geopark Toba Caldera Management Agency for research and community service activities so that they can be carried out on an ongoing basis.



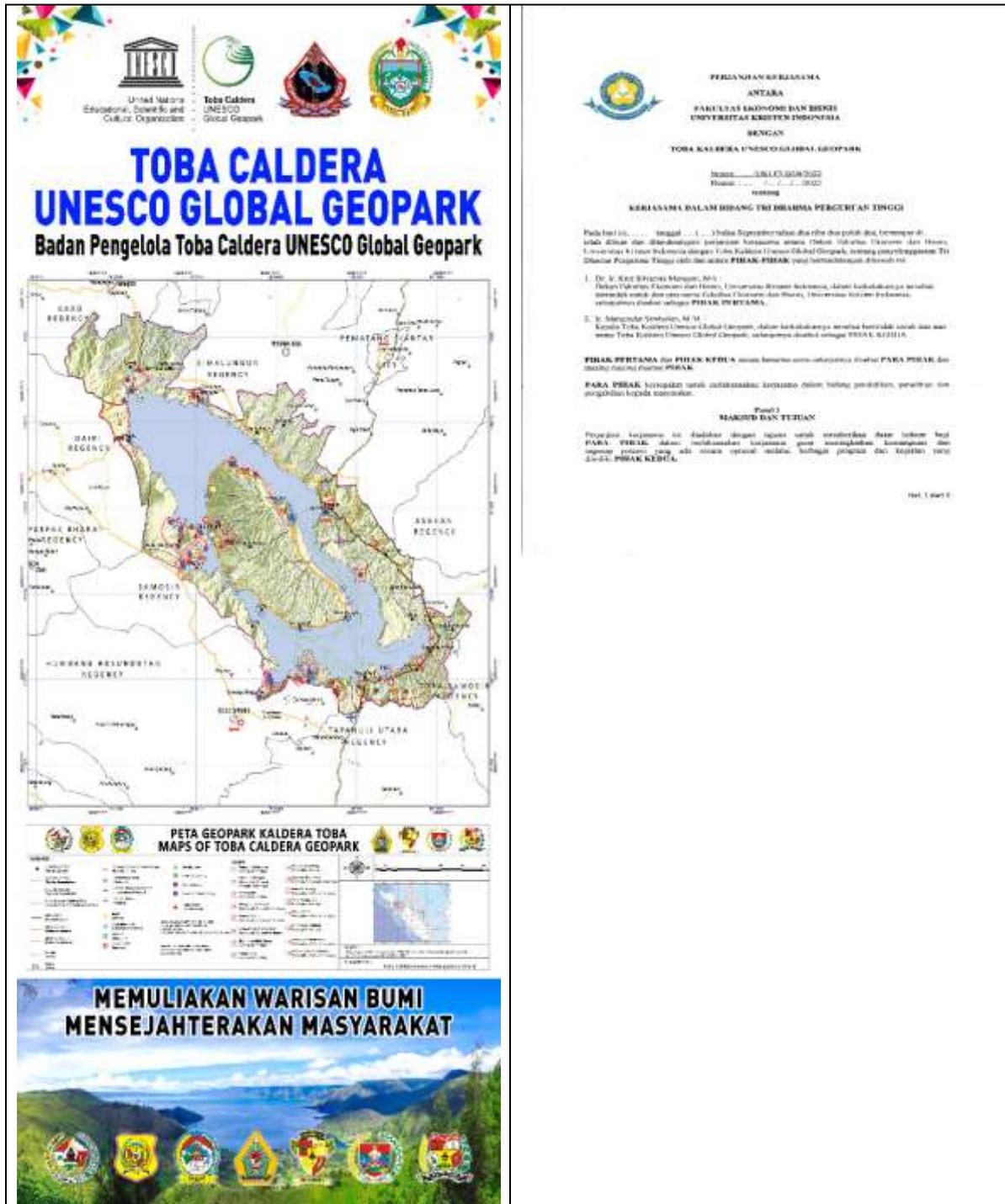


Figure 8. Planned MoU between Toba Caldera Unesco Global Geopark with Universitas Kristen Indonesia

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