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Primary Response and Concern of Sabah's Geopark Potential Economic Effects: Preliminary Study

Rafiq Idris*, Kasim Mansur

Faculty of Business, Economics and Accountancy, Universiti Malaysia Sabah,
88400 Kota Kinabalu, Sabah, Malaysia

*Email address: rafiq.idris@ums.edu.my

ABSTRACT

Sabah, Malaysia is moving steps forward by announcing the gazettement of some areas as geoparks. Part of the areas include the district of Ranau, Kota Marudu and Kota Belud. Some of the areas involved if not all are under a national park program prior to this. This gazettement undoubtedly has the potential to bring economic benefit to the state. It has the potential to increase land value, stimulating economic activities especially in the services sector via tourism activities, enhancing protection for environment and as a mean to control aggressive use of land for development. On the other hand, there are some concerns of stakeholders. Issues such as potential restriction for farmers to do agriculture related activities and relocation of village among others are potential concern among communities in Ranau, Kota Marudu and Kota Belud. In this regard, in order to examine the real concerns of various stakeholders, some series of roundtable discussions and interviews have been undertaken. Based on the preliminary assessment, very small number of individuals have worry about the geopark idea. Majority look at it positively.

***Keyword*:** Sabah, Malaysia, Geopark, Economic Effects, Concern, Response, Kinabalu

1. INTRODUCTION

National park is an area that the authority has designated for the preservation of the natural environment. Apart from being a public recreation area, national park is also important due to

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its historical, natural attractions and scientific interests, more so since most of its flora and fauna are invariably in its natural state. National park program has been in place over 100 years. For instance, Bogd Khan Mountain National Park has been gazetted over 200 years back. The United States of America (USA) has, for its part, started its national park program in the 1870s. USA gazetted Yellowstone National Park in Wyoming as its first national park in 1872.

The idea of setting up national park has become global ever since. Canada began in 1880s when it opened three national parks in mid 1880s. There were even more in the post-World War I and II. Britain followed suit in 1949. It implemented the program in some of its colonies. Mexico and Japan reported to have established their own respective national parks in the 1930s. In Malaysia, there are over 50 national or state parks. While Taman Negara or National park was gazetted in 1939, Kinabalu Park was gazetted in 1964.

Later, Endau-Rompin National Park was gazetted in 1993, Penang National Park in 2003 and Gunung Ledang National Park in 2005. As far as the administration of the parks in Malaysia is concerned, all parks and forest reserves in the Peninsular Malaysia fall under the jurisdiction of the Department of Wildlife and National Parks of Malaysia. In Sabah, the administration falls under Sabah Parks, Sabah Forestry Department and Sabah Foundation. In Sarawak, the administration falls under Sarawak Forestry Corporation.

In this regard, Sabah has moved a step forward with the gazettement of some areas in the district of Ranau, Kota Marudu and Kota Belud as a Geopark. Some of these areas are part of the state park. Specifically, the areas are the entire Kinabalu Park area, and the whole or part of Ranau, Kota Marudu and Kota Belud district. The step is that is to get Kinabalu Geopark recognised as a National Geopark Site (Malaysia) prior to being declared as a UNESCO GLOBAL Geopark Site. Kinabalu Park is a UNESCO World Heritage-Site covering around 75,370 hectares. Figure 1 shows the map of Sabah which shows the involved district. Figure 2 is the Mount Kinabalu which become the centre of attractions located in Kinabalu Park area.

Geopark is a unified area that advances the protection and use of geological heritage in a sustainable way, and promotes the economic well-being of the people who live there. UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development (UNESCO's website, 2020). To date, there are 147 UNESCO Global Geoparks in 41 countries. In addition, there are 195 Member States of UNESCO who ratified the creation of UNESCO Global Geoparks, during the 38th General Conference of the Organisation in 2015 (UNESCO's website, 2020). Table 1 is the list of UNESCO Global Geoparks (UGGp) generated from UNESCO's website.

Table 1. List of UNESCO Global Geoparks (UGGp).

Austria 1. Ore of the Alps UGGp 2. Styrian Eisenwurzen UGGp 3. Karawanken / Karavanke UGGp* (Austria and Slovenia) **Belgium** 1. Famenne-Ardenne UGGp	**Ireland** 1. Burren & Cliffs of Moher UGGp 2. Copper Coast UGGp 3. Marble Arch Caves UGGp Ireland & United Kingdom of Great Britain and Northern Ireland

Brazil
1. Araripe UGGp

Canada
1. Percé UGGp
2. Stonehammer UGGp
3. Tumbler Ridge UGGp

Chile
1. Kütralkura UGGp (new 2019)

China
1. Alxa Desert UGGp
2. Arxan UGGp
3. Dali-Cangshan UGGp
4. Danxiashan UGGp
5. Dunhuang UGGp
6. Fangshan UGGp
7. Funiushan UGGp (new 2019)
8. Guangwushan-Nuoshuihe UGGp
9. Hexigten UGGp
10. Hong Kong UGGp
11. Huanggang Dabieshan UGGp
12. Huangshan UGGp
13. Jingpohu UGGp
14. Jiuhuashan UGGp (new 2019)
15. Keketuohai UGGp
16. Leiqiong UGGp
17. Leye Fengshan UGGp
18. Longhushan UGGp
19. Lushan UGGp
20. Mount Kunlun UGGp
21. Ningde UGGp
22. Qinling Zhongnanshan UGGp
23. Sanqingshan UGGp (new 2019)
24. Shennongjia UGGp
25. Shilin UGGp
26. Songshan UGGp
27. Taining UGGp
28. Taishan UGGp (new in 2019)
29. Tianzhushan UGG
30. Wangwushan-Daimeishan UGGp
31. Wudalianchi UGGp
32. Xingwen UGGp
33. Yandangshan UGGp

Italy
1. Adamello-Brenta UGGp
2. Alpi Apuani UGGp
3. Beigua UGGp
4. Cilento, Vallo di Diano e Alburni UGGp
5. Madonie UGGp
6. Parco Geominerario della Sardegna UGGp
7. Pollino UGGp
8. Sesia Val Grande UGGp
9. Rocca di Cerere UGGp
10. Tuscan Mining Park UGGp

Japan
1. Aso UGGp
2. Itoigawa UGGp
3. Izu Peninsula UGGp
4. Mt. Apoi UGGp
5. Muroto UGGp
6. Oki Islands UGGp
7. San'in Kaigan UGGp
8. Toya - Usu UGGp
9. Unzen Volcanic Area UGGp

Malaysia
1. Langkawi UGGp

Mexico
1. Comarca Minera, Hidalgo UGGp
2. Mixteca Alta, Oaxaca UGGp

Morocco
1. M'Goun UGGp

Netherlands
1. De Hondsrug UGGp

Norway
1. Gea Norvegica UGGp
2. Magma UGGp
3. Trollfjell (new 2019)

Peru
1. Colca y Volcanes de Andagua UGGp (new 2019)

34. Yanqing UGGp
35. Yimengshan UGGp (new 2019)
36. Yuntaishan UGGp
37. Zhangjiajie UGGp
38. Zhijindong Cave UGGp
39. Zigong UGGp

Croatia
1. Papuk UGGp
2. Vis Archipelago UGGp (new 2019)

Cyprus
1. Troodos UGGp

Czechia
1. Bohemian Paradise UGGp

Denmark
1. Odsherred UGGp

Ecuador
1. Imbabura UGGp (new 2019)

Finland
1. Rokua UGGp

France
1. Beaujolais UGGp
2. Causses du Quercy UGGp
3. Chablais UGGp
4. Haute-Provence UGGp
5. Luberon UGGp
6. Massif des Bauges UGGp
7. Monts d'Ardèche UGGp

Germany
1. Bergstraße-Odenwald UGGp
2. Harz, Braunschweiger Land UGGp
3. Swabian Alb UGGp
4. TERRA.vita UGGp
5. Vulkaneifel UGGp
6. Muskauer Faltenbogen / Łuk Mużakowa UGGp (Germany and Poland)

Poland
1. Muskauer Faltenbogen / Łuk Mużakowa UGGp (Germany and Poland)

Portugal
1. Açores UGGp
2. Arouca UGGp
3. Naturtejo da Meseta Meridional UGGp
4. Terras de Cavaleiros UGGp

Republic of Korea
1. Cheongsong UGGp
2. Jeju Island UGGp
3. Mudeungsan UGGp

Romania
1. Haţeg UGGp

Slovakia
1. Novohrad-Nógrád UGGp (Hungary and Slovakia)

Slovenia
1. Idrija UGGp
2. Karawanken / Karavanke UGGp (Austria and Slovenia)

Spain
1. Basque Coast UGGp
2. Cabo de Gata-Níjar UGGp
3. Central Catalonia UGGp
4. Conca de Tremp-Montsec UGGp
5. Courel Mountains UGGp (new 2019)
6. El Hierro UGGp
7. Lanzarote and Chinijo Islands UGGp
8. Las Loras UGGp
9. Molina & Alto Tajo UGGp
10. Sierra Norte de Sevilla UGGp
11. Sierras Subbéticas UGGp
12. Sobrarbe-Pirineos UGGp
13. Villuercas Ibores Jara UGGp

Tanzania
1. Ngorongoro Lengai UGGp

Greece 1. Chelmos Vouraikos UGGp 2. Lesvos Island UGGp 3. Psiloritis UGGp 4. Sitia UGGp 5. Vikos - Aoos UGGp **Hungary** 1. Bakony-Balaton UGGp 2. Novohrad-Nógrád UGGp (Hungary and Slovakia) **Iceland** 1. Katla UGGp 2. Reykjanes UGGp **Indonesia** 1. Batur UGGp 2. Ciletuh - Palabuhanratu UGGp 3. Gunung Sewu UGGp 4. Rinjani-Lombok UGGp **Iran (Islamic Republic of)** 1. Qeshm Island UGGp	**Thailand** 1. Satun UGGp **Turkey** 1. Kula Volcanic UGGp **United Kingdom of Great Britain and Northern Ireland** 1. English Riviera UGGp 2. Fforest Fawr UGGp 3. GeoMôn UGGp 4. North Pennines AONB UGGp 5. North-West Highlands UGGp 6. Shetland UGGp 7. Marble Arch Caves UGGp Ireland & United Kingdom of Great Britain and Northern Ireland **Uruguay** 1. Grutas del Palacio UGGp **Viet Nam** 1. Dong Van Karst Plateau UGGp 2. Non nuoc Cao Bang UGGp

Figure 1. Map of Sabah, Malaysia

Figure 2. Mount Kinabalu in Sabah, Malaysia

In ASEAN, there are about eight UNESCO Global Geoparks. In Indonesia, four has been gazzeted as UNESCO Global Geoparks (UGGp) which are Batur UGGp, Ciletuh-Palabuhanratu UGGp, Gunung Sewu UGGp and Rinjani-Lombok UGGp. There is one in Thailand which is Satun UGGp. In VietNam, Dong Van Karst Plateau UGGp and Non nuoc Cao Bang UGGp are the two UNESCO Global Geoparks. In Malaysia, Langkawi was awarded UNESCO Global Geopark status in 2007 and was reported to be the first one in south-east asia. What are features of UNESCO Global Geoparks? Figure 3 gives a summary of the key features of UNESCO Global Geoparks obtained from UNESCO's website.

In many ways, Geopark has the potential to bring economic benefit to the state. On one hand, it could increase land value, stimulate economic activities especially in the services sector via tourism activities, enhance the protection of the environment as well as a mean to put under control on the aggressive use of land for development. On the other, Geopark may raise some concern. Therefore, in order to understand the concerns of the stakeholders, this study had conducted a series of meetings, focused group discussions and interviews.

2. MATERIALS & METHOD

Literature on Geopark in Sabah is limited. So far, only a few reports or studies had attempted to discuss the concerns and impacts of Geopark in Sabah, despite the availability of studies concerning Geopark in Peninsular Malaysia and other countries. Many studies on geopark are found such as in the work of (Brilha J (2016), Brilha J (2018), T, Brilha J, Díaz-

Martínez E (2020), Global Geoparks Network (2018), Henriques MH, Brilha J (2017), Henriques MH, Brilha J (2017), Thais S. Canesin, José Brilha & Enrique Díaz-Martínez (2020), Zouros NC (2004), E. M. Rosado-González, Artur A. Sá & J. L. Palacio-Prieto (2020), S. Mehdioui, H. El Hadi, A. Tahiri, J. Brilha, H. El Haibi & M. Tahiri (2020), El Hadi H, Tahiri A, Simancas JF, González-Lodeiro F, Azor A, Martínez-Poyatos D (2011), El Haibi H, El Hadi H, Tahiri A, Bensalah I, El Maidani A (2015), Fuertes-Gutiérrez I, Fernández-Martínez E (2010), Khoukhouchi M, Errami E, Hassou N, Irzan E (2018), Oukassou M, BoumirKh BK, Ouarhache D, Lagnaoui A, Charrière A (2019), Reynard E, Perret A, Bussard J, Grangier L, Martin S (2016), Dimitar Sinnyovsky, Dimitar Sachkov, Iliyana Tsvetkova & Nadezhda Atanasova. Geomorphosite Characterization Method for the Purpose of an Aspiring Geopark Application Dossier on the Example of Maritsa Cirque Complex in Geopark Rila, Rila Mountain, SW Bulgaria (2020), Lima FF, Brilha JB, Salamuni E (2010), Reynard E, Fontana G, Kozlik L, Scapozza C, Lausanne (2007), I. S. Carvalho, M. H. Henriques, A. R. S. F. Castro & Y. R. Félix (2020), Farsani NT, Coelho C, Costa C (2011) and Piranha JM, Del Lama EA, Bacci DLC (2011).

MANAGEMENT UNESCO Global Geopark hall be managed by a legal body having legal existence recognized under national legislation. This body should be appropriately equipped to address the entire area and should include all relevant local and regional actors and authorities. UNESCO Global Geoparks require a comprehensive management plan must be comprehensive, incorporating the governance, development, communication, protection, infrastructure, finances, and partnerships of the UNESCO Global Geopark.	**GEOLOGICAL HERITAGE OF INTERNATIONAL VALUE** To become a UNESCO Global Geopark, the area must have geological heritage of international value. This is assessed by professionals which is part of the "UNESCO Global Geopark Evaluation Team".
NETWORKING A UNESCO Global Geopark is about cooperation with the local people living in the UNESCO Global Geopark area and with other UNESCO Global Geoparks through the Global Geoparks Network (GGN), and regional networks for UNESCO Global Geoparks, in order to learn from each other and, as a network, improve the quality of the label UNESCO Global Geopark.	**VISIBILITY** UNESCO Global Geoparks need to provide information via a dedicated website, leaflets, and detailed map of the area that connects the area's geological and other sites. A UNESCO Global Geopark should also have a corporate identity.

Figure 3. UNESCO Global Geoparks' Fundamental Key Features

This study had held series of meetings, focused group discussions and interviews to understand the concerns of stakeholders in Ranau, Kota Marudu and Kota Belud. As at January 2020, there is neither a clear guideline with regards to the best practices nor law and regulation pertaining Geoparks, as it is still a new thing. The findings do not represent the majority view of stakeholders in all selected areas as this is a preliminary study. Table 2 gives an overview on the number of people being interviewed and or involved in focused group discussion, either at individual capacity or representative/resource person of an organization.

Table 2. Summary of key concerns raised by selected stakeholders.

DISTRICT	NO OF PEOPLE INVOLVED
Ranau	20
Kota Marudu	15
Kota Belud	15

3. FINDINGS & DISCUSSIONS

Table 3 summarizes the key concerns highlighted by stakeholders. The preliminary inquiry revealed that there were still many things that were not clear because Geopark, as an idea or as a program, was still considered new for Sabah.

Table 3. Summary of key concerns raised by selected stakeholders.

CONCERNS/RESPONSE	DISCUSSIONS
All stakeholders being approached support the Kinabalu Geopark	Despite some concern, all look the geopark idea as positive and has the potential to give benefits to community. Hence, support the idea of gazettement.
Geopark was still not a very clear program to villagers and business communities	Some stakeholders had questioned, what were the details of the program? Still not clear to many people.
Law or regulation on Geopark details are not available to the public	Some had questioned on the policy, law or regulation with regard to Geopark. Where are the details?
Restriction for access or land use for economic activities in Geopark gazetted areas	To some people, Geopark was still not a clear thing. Would villagers be restricted completely to enter Geopark area? Could they still do economic activities?
Good vs Bad for the economy?	There was a concern on how the Geopark gazettement can affect economic activities negatively despite all believe there will be positive

	effects. Positive impacts include positive effects on tourism sector and other services sector. This will benefit micro and small enterprises in areas involve should there be huge tourists traffic as a result of geopark gazettement at national and international level (UNESCO Global Geopark).
Land ownership	There is a concern on land ownership after Geopark gazettement as national or UNESCO heritage. State government or Federal government own the land?
Who is the gatekeeper or who would take charge of the entire Geopark area?	Some had highlighted that there might be overlapping jurisdiction in the management of Geopark.

Based on the preliminary stakeholders engagement, very small number of individuals have worry about the geopark idea. Despite having concern, all support the initiative and look at it positively.

3. CONCLUDING REMARKS & RECOMMENDATIONS

Geopark has the potential to bring in positive effects to the economy of Sabah and particularly Geopark areas in Kundasang, Ranau, Kota Belud and Kota Marudu. Based on a series of meetings, interviews and focused group discussions, it is apparent that stakeholders still did not get a clear understanding of a Geopark, especially villagers and business community. Despite that, very small number of individuals have concern about the geopark idea. All look at it positively. This findings is a preliminary one as it is not a comprehensive study. It is recommended that the relevant authority to come up with the draft of a proposed policy, law or regulations, best practices and other details and make them available and accessible to the public. More roadshows, talks, townhalls, roundtable or focused group discussion involving various stakeholders are important to obtain inputs as well as educating the stakeholders. In addition, consultation with key stakeholders such as business community is important. Close engagement will provide a chance for business players to propose the best business model that is workable for the geopark and surrounding areas. Cooperation and support by business communities shall complement whatever economic objectives that is being aspired. Moreover, comprehensive studies which examine the potential effects of the gazettement on the economy, villagers, business community, farmers and other detail aspects are important. Moreover, there is a need to study and do a benchmarking of Geopark in the Peninsular Malaysia such as Langkawi Geopark and even those of other countries such as China and Spain which have the highest number of UNESCO global Geoparks in the world. Issues, challenges, policies and regulations in other countries related to geopark must be reviewed. Lessons from the experience of other geoparks must be taken as a guide. Furthermore, efforts to meet the requirement for UNESCO Geopark must be intensified. Key features on area related to management, networking, visibility and geological heritage of international value mentioned earlier should be further enhanced from the perspective of Kinabalu Geopark.

The concerns highlighted in this study does not present the majority view of people in the selected areas. The study is just a preliminary concern being pointed out by some stakeholders which represent a small group of people. Despite that, all support the move for gazettement and believe it shall create tourists traffic flow which eventually have positive effects on tourism and other services sector especially the micro and small enterprises.

References

[1] Brilha J. Inventory and quantitative assessment of geosites and geodiversity sites: a review. *Geoheritage* (2016) 8: 119-134

[2] Brilha J. Geoheritage and geoparks. In: Reynard E, Brilha J (eds) Geoheritage: assessment, protection and management. Elsevier, Amsterdam, (2018) pp 323-335

[3] Canesin T, Brilha J, Díaz-Martínez E. Best Practices and Constraints in Geopark Management: Comparative Analysis of Two Spanish UNESCO Global Geoparks. *Geoheritage* (2020) 12: 14

[4] Sinnyovsky, D., Sachkov, D., Tsvetkova, I. *et al.* Geomorphosite Characterization Method for the Purpose of an Aspiring Geopark Application Dossier on the Example of Maritsa Cirque Complex in Geopark Rila, Rila Mountain, SW Bulgaria. *Geoheritage* 12, 26 (2020). https://doi.org/10.1007/s12371-020-00451-w

[5] Rosado-González, E.M., Sá, A.A. & Palacio-Prieto, J.L. UNESCO Global Geoparks in Latin America and the Caribbean, and Their Contribution to Agenda 2030 Sustainable Development Goals. *Geoheritage* 12, 36 (2020). https://doi.org/10.1007/s12371-020-00459-2

[6] El Hadi H, Tahiri A, Simancas JF, González-Lodeiro F, Azor A, Martínez-Poyatos D. Geoheritage in Morocco: the Neoproterozoic Ophiolite of Bou Azzer Central Anti-Atlas. *Geoheritage* (2011) 3: 89-96

[7] El Haibi H, El Hadi H, Tahiri A, Bensalah I, El Maidani A. Les roches magmatiques et pyroclastiques du conglomerat strunien de l'oued tiflet meseta nord occidentale marocaine : petrographie, geochimie et provenance. *European Scientific Journal* (2015) 11(5): 171-186

[8] Farsani NT, Coelho C, Costa C. Geotourism and geoparks as novel strategies for socio-economic development in rural areas. *International Journal of Tourism Research* (2011), 13(1): 68-81

[9] Fuertes-Gutiérrez I, Fernández-Martínez E. Geosites inventory in the Leon Province (northwestern Spain): a tool to introduce geoheritage into regional environmental management. *Geoheritage* (2010) 2(1-2): 57-75

[10] Henriques MH, Brilha J. UNESCO Global Geoparks: a strategy towards global understanding and sustainability. *Episodes* (2017) 40(4): 349-355

[11] Carvalho, I.S., Henriques, M.H., Castro, A.R.S.F. *et al.* Promotion of the Geological Heritage of Araripe Unesco Global Geopark, Brazil: the Casa da Pedra Reference Center. *Geoheritage* 12, 17 (2020). https://doi.org/10.1007/s12371-020-00452-9

[12] Khoukhouchi M, Errami E, Hassou N, Irzan E. The geomorphological heritage of the Oualidia and Sidi Moussa lagoons: assessment and promotion for a sustainable human and socio-economic development. *Journal of Scientific Research and Studies* (2018) 5(4): 73-87

[13] Lima FF, Brilha JB, Salamuni E. Inventorying geological heritage in large territories: a methodological proposal applied to Brazil. *Geoheritage* (2010) 2(3-4): 92-99

[14] Oukassou M, BoumirKh BK, Ouarhache D, Lagnaoui A, Charrière A. The Tichoukt massif, a geotouristic play in the folded Middle Atlas Morocco. *Geoheritage* (2019) 11(2): 371-379

[15] Piranha JM, Del Lama EA, Bacci DLC. Geoparks in Brazil - strategy of geoconservation and development. *Geoheritage* (2011) 3(4): 289-298

[16] Reynard E, Fontana G, Kozlik L, Scapozza C, Lausanne. A method for assessing "scientific" and "additional values" of geomorphosites. *Geol Helvetica* (2007) 62(3): 148-158

[17] Reynard E, Perret A, Bussard J, Grangier L, Martin S. Integrated approach for the inventory and management of geomorphological heritage at the regional scale. *Geoheritage* (2016) 8: 43-60

[18] Mehdioui, S., El Hadi, H., Tahiri, A. *et al.* Inventory and Quantitative Assessment of Geosites in Rabat-Tiflet Region (North Western Morocco): Preliminary Study to Evaluate the Potential of the Area to Become a Geopark. *Geoheritage* 12, 35 (2020). https://doi.org/10.1007/s12371-020-00456-5

[19] Canesin, T.S., Brilha, J. & Díaz-Martínez, E. Best Practices and Constraints in Geopark Management: Comparative Analysis of Two Spanish UNESCO Global Geoparks. *Geoheritage* 12, 14 (2020). https://doi.org/10.1007/s12371-020-00435-w

[20] Zouros NC. The European geoparks network: geological heritage protection and local development. *Episodes* (2004) 27(3): 165-171