



Stakeholder Analysis in the Implementation of Giam Siak Kecil - Bukit Batu Biosphere Reserve Concept, in Riau Province, Indonesia

Nurul Qomar^{a*}, Sambas Basuni^b, Rinekso Soekmadi^c, Herwasono Soedjito^d

^a*Department of Forestry, Faculty of Agriculture, University of Riau, Pekanbaru, Indonesia*

^{b,c}*Department of Conservation of Forest Resources and Ecotourism, Faculty of Forestry, Bogor Agricultural University, Academic Ring Road, Campus IPB Dramaga, PO Box 168, Bogor, 16680, Indonesia*

^d*Research Centre for Biology, Indonesian Institute of Sciences (LIPI), Cibinong, Indonesia*

^a*Email: nqomar@lecturer.unri.ac.id*

^b*Email: sambas.basuni@gmail.com, r.soekmadi@yahoo.co.id*

^c*Email: herwasonosuedjito@yahoo.com*

Abstract

Biosphere reserve concept is an inclusive approach to integrate conservation of biodiversity and sustainable development in landscape scale. The implementation of biosphere reserve concept requires an integrated management strategy and engages stakeholder. The aims of this study were to analyze the importance and the influence of stakeholder, as well as how they interact in applying Giam Siak Kecil - Bukit Batu (GSKBB) Biosphere Reserve concept in Riau Province, Indonesia, and propose stakeholder management strategies. The data were collected by document study, field observation, and indepth interviews with informants who were selected through snowball sampling. The data was analyzed qualitatively and descriptively. The study has identified 37 stakeholder of GSKBB Biosphere Reserve, which consist of 10 key players, 9 subjects, and 7 context setters, and 11 crowds.

* Corresponding author.

The key players were BBKSDA Riau, SMF, BAPPEDA of Riau Province, BAPPEDA of Regencies of Bengkalis, Siak, and Dumai, Community Empowerment and Rural Development Agency of Riau Province, Research and Development Agency of Riau Province, Environmental Agency of Riau Province, Regency Environmental Agency, the Indonesian MAB National Committee, and the Indonesian Institute of Science. The Indonesian MAB National Committee has actively established collaborations with the SMF, BBKSDA Riau, and local government during proposal phase of GSKBB area to UNESCO to become a Biosphere Reserve, but the level of cooperation decreases in the implementation phase. The coalition between BBKSDA Riau with SMF still exists in conducting several programs and activities in the core areas and buffer zones. On the other hand, conflicts in land uses still occur between local community and BBKSDA Riau and SMF. The Indonesian MAB National Committee should play an active role in empowering other stakeholder, especially local governments by facilitating secretariat of management coordination agency of GSKBB Biosphere Reserve to drive communication among stakeholder and gain access to government and international facilities.

Keywords: Giam Siak Kecil – Bukit Batu Biosphere Reserve; stakeholder analysis.

1. Introduction

The concept of Biosphere Reserve is an innovation in the management of protected areas, which is previously oriented more to protection of key species in core areas and then later on it is directed to an integration of biodiversity conservation and development at landscape level. After the Second International Congress of Biosphere Reserves in Seville, Spain in 1995, the biosphere reserve concept has a vision to provide support to the needs of communities in and around it, with activities that ensure a future that is more sustainable in order to obtain balance in relationship between human and the environment [1]. The implementation of inclusive model of conservation in this vast area requires an integrated and comprehensive (holistic) management strategy which involves stakeholder.

In addition to a good zoning system, the implementation of the biosphere reserve concept also requires partnerships with and participation of many stakeholder. The involvement of stakeholder will increase the efficiency, accuracy, and legitimacy of the conservation and management efforts [2]. In related to this, UNESCO's MAB has recommended managers of biosphere reserves to conduct survey on interests of different stakeholder and fully involve them in planning and decision-making regarding of the management and use of protected areas to achieve the Objective of 2.1 of the Seville Strategy [3]. Therefore, it is necessary to conduct a stakeholder analysis [4, 5, 6, 7].

Giam Siak Kecil - Bukit Batu (GSKBB) Biosphere Reserve is the 7th biosphere reserve in Indonesia which was declared by UNESCO in 2009. However, presently the biosphere reserve is threatened by changes in land use, including in the core area, causing destruction of natural resources and threatening biodiversity and its ecosystem. This situation will disturb the achievement of the 2nd Target of the Seville Strategy, namely using the reserves as models of land management and sustainable development approach. The main constraint faced over the years was lack of common vision among stakeholder in the management of GSKBB Biosphere Reserve. This study aims to identify and analyze the interest and influence of each stakeholder, the interaction among them in the

management of GSKBB Biosphere Reserve, and propose stakeholder management strategies.

2. Methods

The study was conducted in the period of September 2014 to December 2015 in GSKBB Biosphere Reserve which is located in Regencies of Bengkalis and Siak, and City of Dumai, Riau Province, Indonesia (Figure 1). The stakeholder analysis was done in three steps [7]: 1) identifying stakeholder and their interests, 2) grouping and categorizing stakeholder, and 3) investigating interaction among stakeholder. The identification of stakeholder was done repeatedly based on examination of documents, interviews with informants, and observations in the field. The informants were selected purposively (purposive sampling) and by snowball sampling from those who really know the problems of the management of GSKBB Biosphere Reserve or who interacts with the existing natural resources [8].

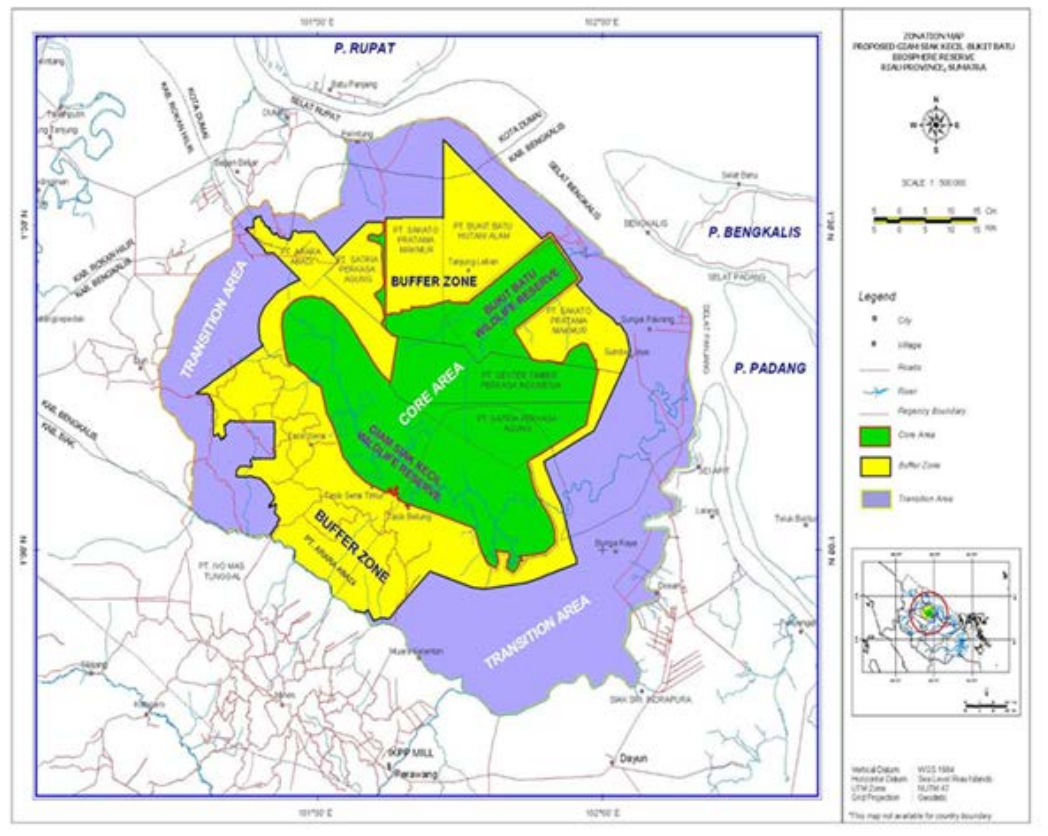


Figure 1: Zonation map of GSKBB Biosphere Reserve area

Source: Indonesian MAB National Committee 2008

The identification of interest was based on rights, needs, hopes, and desires of the stakeholder, and benefits that can be obtained by the stakeholder from the GSKBB Biosphere Reserve, and function of ecosystems in it which include: regulatory function, habitat function, production function, function of information, as well as carrier function [9]. Stakeholder influence was measured based on instruments of power derived from some opinions: [7, 10, 11, 12], which include: 1) authority in decision-making, 2) power to put pressure on other parties

(coercive), 3) conditioning ability through manipulation of trust or opinion formation, 4) possession of science and technology, labor, capital and other strategic resources, 5) social, economic, and political status/identity, and 6) possession of cooperative networks. Measurement of interest and influence of stakeholder was expressed in scores using Likert scale, with intervals from 1 (very low) to 5 (very high).

The accumulation of interest and influence of stakeholder were presented in an interest-influence matrix [13, 14]. With this method, the stakeholders were classified into four quadrants, namely: key players, subjects, context setters, and crowds. Further investigation was conducted to determine interactions among stakeholder in the management of GSKBB Biosphere Reserve. The results were displayed in form of a matrix to show conflicts and degree of cooperations among them.

3. Results and Discussion

3.1. Identification of Stakeholder of GSKBB Biosphere Reserve

Some experts define stakeholder as parties that can affect or be affected by the achievement of organizational goals, policies, programs, or activities of development, with diverse interests, whether individuals, groups and organizations [10, 15, 16]. Stakeholder influence refers to power to control the process and the outcome of a decision, while interest refers to the needs of stakeholder in the achievement of outputs and objectives [7]. According to [17], different interests, needs, and viewpoints of the stakeholder must be properly managed so that the objectives can be realized.

In accordance with the Decree of the Governor of Riau (SKpts. No. 920/V/2010) on the Establishment of GSKBB Biosphere Reserve Management Coordination Agency (Pembentukan Badan Koordinasi Pengelolaan Cagar Biosfer GSKBB), there were 56 agencies and community elements listed as trustees and members of the coordinating body. Previous studies have identified 31 stakeholder of the GSKBB Biosphere Reserve [18], and then has increased to 36 stakeholder [19]. Based on those information and results of in-depth interviews with key informants, this study identified 37 stakeholder of the GKSBB Biosphere Reserve, by taking into account the nominal marginal stakeholder to maintain social justice.

3.2. Classification of Stakeholder

To determine which stakeholder to be involved in the management of resources in the GSKBB Biosphere Reserve, the stakeholder were grouped based on their specific effects and interests [7, 13]. Stakeholder who are in the category of key players, subjects and context setters are core stakeholder that need to be considered to achieve the success of a program/project [10]. The all 37 stakeholder of the GSKBB Biosphere Reserve can be classified into as follows: 10 stakeholder as key players, 9 stakeholder as subjects, 7 stakeholder as context setters, and 11 stakeholder as crowds (Figure 2).

Key players were active and critical stakeholder because they have high levels of both interest and influence on the implementation of the concept of GSKBB Biosphere Reserve. They have direct interests on the GSKBB Biosphere Reserve to achieve biodiversity conservation and sustainable development. The key players stakeholder were: BBKSDA Riau, SMF, BAPPEDA of Riau Province, BAPPEDA of Regencies of Bengkalis,

Siak, and Dumai, Agency of Community Empowerment and Rural Development of Riau Province, Research and Development Agency of Riau Province, Agency of Environment of Riau Province, Agency of Environment of Districts, Indonesia MAB National Committee, and the Indonesian Institute of Sciences.

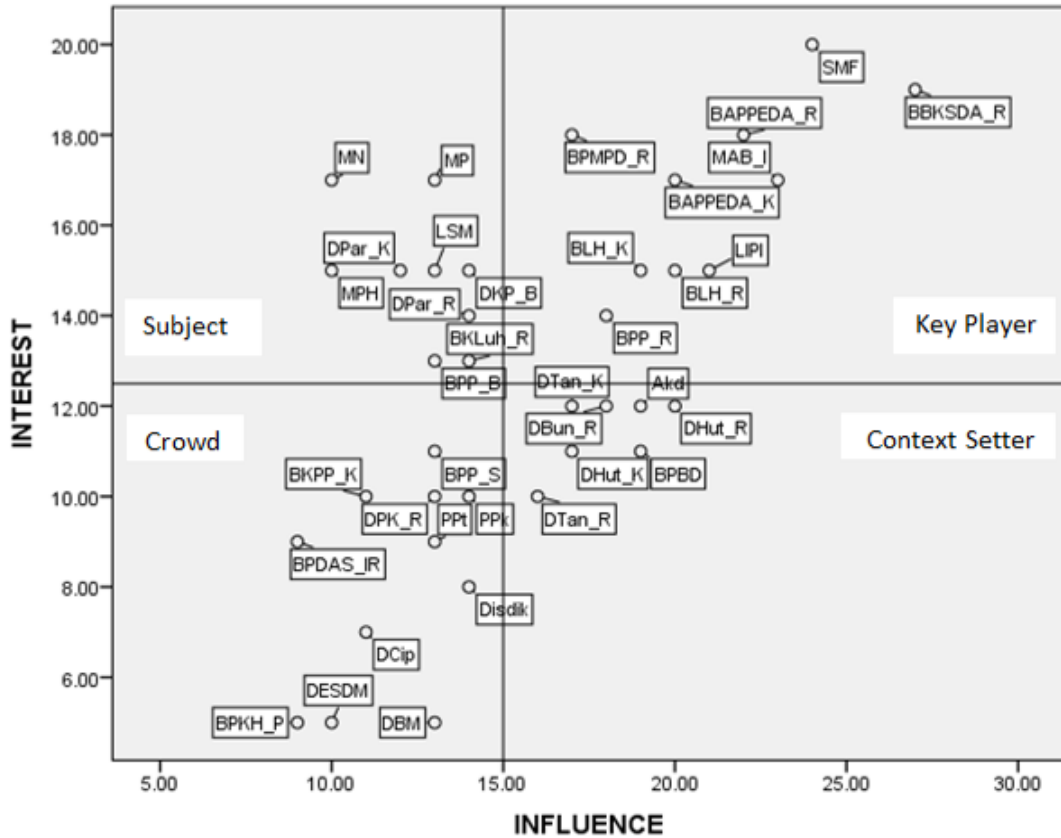


Figure 2: Classification of stakeholders of GSKBB Biosphere Reserve

Remarks:

BBKSDA_R: Conservation of Natural Resources Agency of Riau; SMF: Sinar Mas Forestry; LIPI: Indonesian Institute of Sciences; MAB_I: Indonesian MAB National Committee; BAPPEDA_R: Agency of Regional Planning and Development of Riau Province; BAPPEDA_K: BAPPEDA of Regency/City of Bengkalis, Siak, and Dumai; BPMPD_R: Agency of Community Empowerment and Rural Development; BLH_R: Agency of Environment of Riau Province; BLH_K: BLH of Regency/City of Bengkalis, Siak, and Dumai; BPP_R: Agency of Research and Development of Riau Province; BPP_B: BPP of Bengkalis Regency; BPP_S: BPP of Siak Regency; DHut_R: Forestry Service of Riau Province; DBun_R: Plantation Service of Riau Province; DHut_K: Plantation and Forestry Service of Regency/City; DTan_R: Agriculture and Livestock Service of Riau Province; DTan_K: DTan of Regencies of Bengkalis and Siak; DPK_R: Fishery and Marine Service of Riau Province; DKP_B: Marine and Fishery Service if Bengkalis Regency; BKLuh_R: Agency of Coordination of Extension of Riau Province; BKPP_K: Agency of Food Security and Extension of Regency; BPBD: Regional Agency of Disaster Management; DPar_R: Tourism and Creative Economy Service of Riau Province; DPar_K: Culture and Tourism Service of Regencies of Bengkalis and Siak; Akd: Akademics; LSM: Non-governmental

Organizations; MP: Community of Farmers; MN: Community of Fishermen; MPH: Community of Gatherers of Forest Product; PPK: Plantation Company; PPT: Mining Company; DCip: Human Settlements Service; DBM: Public Works and Road Service; DESDM: Energy and Mineral Resource Service; Disdik: Educational Service; BPKH_P: Centre of Forest Area Establishment Region XIX Pekanbaru; BPDAS_IR: Centre of Management of Watersheds of Indragiri Rokan;

BBKSDA of Riau, SMF, and some elements of the Local Government have legal authority in decision making in their respective areas so that they become key stakeholder, as commonly found in every natural resources management project [20, 21, 22]. BBKSDA of Riau and SMF get access or power in controlling the management of natural resources in, respectively, the core area and buffer zone, while the regional government has authority to manage the resources in transitional area. They control important natural resources for the realization of the concept of biosphere reserves, and they have great influence in determining everything regarding these resources [23]. BBKSDA of Riau as a government element has a big influence because it has power to enforce wildlife reserve management policy. BBKSDA of Riau has an interest in maintaining conservation function of the biosphere reserve, namely to provide contribution in the conservation of genetic, species, ecosystem and landscape resources, so that it is highly concerned about the security of the core area of the GSKBB Biosphere Reserve.

Stakeholder from local government components were BAPPEDA of Riau Province, BAPPEDA of district/city level, Agency of Community Empowerment and Rural Development of Riau Province, and Forestry Agency of Riau Province. They have interest to realize the function of biosphere reserve establishment, which is to accelerate sustainable economic development and human welfare. Those institutions have a great influence because such organizations have authority in determining development policy in buffer zone and transitional area of GSKBB Biosphere Reserve. Their position is quite strategic because if regional policy and development program are not integrated with conservation objective a sustainable development would be hard to achieve.

Sinarmas Forestry (SMF) is a private sector that took part in the initiation of GSKBB Biosphere Reserve establishment. SMF has a big interest for the existence of biosphere reserve, i.e. to build a new image in international market as a corporate that cares about conservation of peat swamp forest and biodiversity. SMF and its partners have a great influence because they hold an area of IUPHHK-HT with the size of 215,038 ha in the buffer zone and in the core area. With the permit given by the Minister of Environment and Forestry, SMF can restrict other parties that use the natural resources on the concession area.

LIPI has interest in scientific development through research activities in biological resources, social, economy, and community culture in GSKBB Biosphere Reserve. This is related to the function of biosphere reserve in providing logistical supports to support demo projects in environmental education and training, and research and monitoring related to conservation issues and sustainable development. LIPI is the focal *point* of MAB-UNESCO in Indonesia and plays a strategic role as scientific authority, so LIPI has a great influence in formulation management policy of biosphere reserves in Indonesia.

The Indonesian MAB National Committee has an interest in the implementation of biosphere reserve concept in

the field to develop a synergy of biodiversity conservation and sustainable development, as it was mandated by the Seville Strategy [3]. The Committee has a great influence at national level and obtains power because the conservation discourse rose by global actor, namely the UNESCO. Because of its strategic position, local stakeholder hope that the National Committee of MAB can play an active role in improving communication among stakeholder, and facilitating access to government facilities, including laws, funds, and communication with international organizations [24].

Subjects are stakeholder who have high levels of interest but low levels of influence in the management of GSKBB Biosphere Reserve. The stakeholder who were categorized as subjects include: The Coordinating Agency for Extension and Food Security of Riau Province, Agency for Research of Development and Statistics of Bengkalis, Marine and Fisheries Agency of Bengkalis, Agency of Culture and Tourism of Riau Province, Agency of Culture and Tourism of Bengkalis and Siak Regencies, NGOs, and communities of farmers, fishermen, and forest product gatherers. Communities are stakeholder who are directly affected by the policy and implementation of the GSKBB Biosphere Reserve concept because they have economic and social-cultural dependency on resources in it [25]. They have interest in using directly the resources in transitional area and buffer zone as well as in core area of the GSKBB Biosphere Reserve. There were three groups of community, namely: forest product gatherers, fishermen and farmers. With the strength of large number of people, the community can pressure the reserve area administrator, both in the core area and buffer zone that often creating conflicts of land and resources. However, legally they were weak because they did not have strong basis of rights, so that frequently they lost if the area administrator conduct repression action followed by law enforcement. This kind of positioning of communities was also occur in the establishment of Forest Management Unit in Maros [26] and also in the development of Community Timber Plantation [27]. Therefore, it is necessary to conduct community empowerment and place them as subjects of the management of GSKBB Biosphere Reserves to increase community participation in the management of biosphere reserves. NGOs who worked in GSKBB Biosphere Reserve have less influence because their presence in the region was not on the basis of genuine vision and ideas of their own but based on facilitation by the SMF. This contrasts with the position of NGOs in Sentarum National Park [28], Teluk Cenderawasih National Park [21], and Turtle Beach Coastal Park of Pangumbahan [29], which put them as key player and context setter. The NGOs were also unfit to the picture made by [30] as they do less in facilitating community organization or applying pressure to the government for implementing the program based on the planned target. NGOs that were working in GSKBB Biosphere Reserve are Sumatran Tiger Rescue Foundation (YPHS), Siak Cerdas Foundation, Community Forestry Communication Forum (FKKM) of Riau, YAPEKA Society, and the Indonesian Environmental Information Center (PILI). Context setters are the stakeholder who have low levels of interest but high levels of influence so that they can provide significant benefits or risks in bridging the making of opinion and decision. Stakeholder who were context setters were: Riau Forestry Service, Riau Plantation Service, Riau Agricultural Service, Regional Disaster Management Agency of Riau Province, Agriculture and Livestock Agencies of Regencies/City of Bengkalis, Siak and Dumai, Plantation and Forestry Agency of Regency/City, and Universities (University of Riau, Riau Islamic University, IPB and UGM). Some of these elements of local government have great influence because they have authority in overseeing permit holders so that the management of forests and plantations in GSKBB Biosphere Reserve can meet government standards, and in

facilitating agricultural and plantation development programs in the buffer zone and the transitional area. University academics have interests related to the functions of biosphere reserves in providing logistical support. Academics have a role in preparing and formulating recommendations or decision, and bridging opinions in the management [21]. University of Riau and Riau Islamic University have conducted researches in biology and social economy to help the management of the biosphere reserve [3, 32]. The Faculty of Forestry of IPB has conducted a research "Model of Public-Private Partnership in Addressing Forest Degradation and Deforestation" in GSKBB Biosphere Reserve with funding from National Development Planning Agency [19]. Faculty of Forestry of UGM, in cooperation with the Ministry of Environment and Forestry, has conducted a feasibility study on tiger conservation in Bukit Batu Wildlife Reserve.

3.3. Interaction among Stakeholder

Interaction among stakeholder always imply to affect and/or to be affected [33], and can be either in cooperation or in conflict [7]. Cooperation between stakeholder can develop in several levels [34], namely: coexistence, communication, cooperation, coordination, coalition, collaboration, and coadunation. Interaction among dominant stakeholder in GSKBB Biosphere Reserve presented in Table 1.

Table 1: Matrix of interaction and level of cooperation among stakeholder of the GSKBB Biosphere Reserve

<i>Stakeholder</i>	SMF	Regional Gov	Farmer Community	Fishermen Community	Academics	MAB Committee	LIPINGO
BBKSDA Riau	5	4	(-)	1	3	4	2 1
SMF		4	(-)	2	3	6	3 3
Regional Government			3	3	3	4	1 1
Farmers Community				5	3	2	1 2
Fishermen Community					3	1	1 2
Academics						3	3 2
MAB Committee							7 2
LIPI							

Remarks: (-)=conflict, 1,2,3 ... levels of collaboration between stakeholder: 1=coexistence, 2=communication, 3=cooperation, 4=coordination, 5=coalition, 6=collaboration, 7=coadunation [34].

The Indonesian MAB National Committee has actively established collaborations with the SMF, BBKSDA Riau, and local government during proposal phase of GSKBB area to UNESCO to become a Biosphere Reserve. The collaborations between the Indonesian MAB Committee with the SMF is still exist to this day. The Indonesian MAB National Committee also encouraged BBKSDA of Riau and the local government to play a role in implementing the Five Action Plan on GSKBB Biosphere Reserve. The BBKSDA of Riau is expected to improve its performance in the management of the core area, and local governments are expected to play a major role in implementing sustainable development in the buffer zone and the transitional area. However, the cooperation built with the two parties are now decreasing in the level of coordination, meaning that they often communicate and share information and resources, but only some decisions are made together [34].

The cooperation between BBKSDA Riau and SMF has already reached the level of coalition in conducting several programs and activities in the core area and buffer zone. PT. Arara Abadi as one management units of IUPHHK-HT that represents the SMF has agreed with the BBKSDA Riau in Cooperation Agreement to optimize the functions of Giam Siak Kecil Wildlife Reserve and Bukit Batu Wildlife Reserve, and part of a production forest area of $\pm 72,255$ ha in work area of SMF business partner. SMF also helps in monitoring of the core area, both in the production forests and in the conservation forest. In addressing encroachment problem in Giam Siak Kecil Wildlife Reserve, SMF also assists in providing equipment, fuel, and consumption in the field.

SMF has established cooperations with some NGOs and universities to run a community empowerment program around industrial timber estates (HTI). SMF cooperates with FKMM Riau, Riau University and Riau Islamic University to conduct a diagnostic study of villages around the industrial timber estates (HTI). SMF also cooperates with Riau Islamic University to develop fish cage culture of *selais* (*Ompok hypophthalmus* Bleeker) and *baung* (*Mystus nemurus* Cuv. & Val.) fishes in Temiang and Tasik Betung villages. SMF cooperates with Smart Siak Foundation to carry out duck raising activity and with the YAPEKA in an activity of processing biogas from cow manure in Tanjung Leban and Temiang villages.

The interaction between SMF and local community was not so harmonious. Land conflicts between communities and SMF has occurred since the beginning of land clearing for plantation in 1994 by PT. Arara Abadi. The conflicts between the two parties often occur because of differences in values, status, power, and resource scarcity [35]. In concession area of the timber estate, which is the buffer zone of GSKBB Biosphere Reserve, there were community settlements and agricultural land, which spread across several villages. The conflict began to emerge after the monetary crisis and the crisis of governmental political reformation in 1998, when the people began to reoccupy lands which was believed had been utilized for cultivation by their parents in the past. Open conflicts between the community and PT. Arara Abadi had happened in the period of 2007 - 2008 [35]. Local communities and migrants accompanied by Serikat Tani Riau (STR) has encroached the timber estate area of $\pm 1,000$ ha in Melibur, Beringin, and Tasik Serai villages, Regency of Bengkalis.

Until recently, the open land conflicts still occur sporadically. Migration of people has increased encroachment

into remaining naturally forested part of the protected area of the HTI. Encroachment continues to extend into the Giam Siak Kecil Wildlife Reserve so that the community was also in conflict with BBKSDA Riau. Most of the community members argue that they did not know the existence of boundaries of the area, nor did the management of wildlife reserves conducted by BBKSDA Riau.

3.4. Proposed Stakeholder Management Strategy

Conservation is sustainable use that should not separate people from the sustainable use of forest resources by reason of the preservation of biodiversity resources. Some research suggests that the presence of local people with local knowledge plays a role in the utilization of forest sustainability [18, 19, 20, 21, 22]. Traditional communities around Forest Todo more prosperous than the Forest Ruteng (Table 1). Conservation initiated by the government in Ruteng Forests seeks to preservation by separating the management of community interaction on forests. This is understandable because the legislation is not yet possible utilization of biodiversity resources in the region except for nature tourism, research and resources to support the cultivation of germplasm.

The interests of the key players are the highest priority to be taken into account in formulating the strategy [33], so that it is necessary for them to be fully involved in the implementation of the concept of GSKBB Biosphere Reserve. Good relations among them should be promoted through increased communication and cooperation. Here, the Indonesian MAB National Committee should play an active role in facilitating the secretariat of GSKBB Biosphere Reserve Management Coordination Agency to drive communication among stakeholder and gain access to the government and international facilities. Other key players also need to develop subjects and context setters to support the management of resources in GSKBB Biosphere Reserve in a sustainable manner.

The position of subjects was quite strategic so that they need to be empowered and properly informed to increase the capacity of their resources in order to be able to participate in the implementation of the concept of GSKBB Biosphere Reserve. If not properly managed, they tend to resist and can become a cause of conflict [21]. Here, the Riau Provincial Extension Coordinating Board should be given sufficient information about the biosphere reserve concept in order to integrate the ideas of conservation and sustainable development into extension materials. BBKSDA Riau and SMF should also join the efforts to empower farmers and fishermen in the vicinity, under coordination of the Agency for Community Empowerment and Rural Development of Riau Province, which should be integrated with conflict resolution efforts.

Relations with context setter must also be maintained to keep them happy and satisfied with the existence of GSKBB Biosphere Reserve. The BAPPEDAs in the province and regencies need to improve coordination with respective local government units for mainstreaming sustainable development in the buffer zone and the transitional area. Indonesian Institute of Sciences and the Research and Development Agency of Riau Province also need to encourage studies that support the sustainable development efforts in the region.

4. Conclusion

The study has identified as many as 37 stakeholder of GSKBB Biosphere Reserve. They were classified into 10 key players, 9 subjects, 7 context setters, and 11 crowd. The key player stakeholder were BBKSDA Riau, SMF,

BAPPEDA of Riau Province, BAPPEDA of Regency of (Bengkalis, Siak, Dumai), Agency for Community Empowerment and Rural Development of Riau Province, Research and Development Agency of Riau Province, the Environment Agency of Riau Province, the Environment Agency of District, the Indonesian MAB National Committee, and the Indonesian Institute of Sciences. The Indonesian MAB National Committee has actively established collaborations with the SMF, BBKSDA Riau, and local government during proposal phase of GSKBB area to UNESCO to become a Biosphere Reserve, but the level of cooperation decreased in the implementation phase. The coalition between BBKSDA Riau and SMF still existed in conducting several programs and activities in the core areas and buffer zones. However, open conflict was still going on in the fight and defend the land between the community on one side and BBKSDA Riau and SMF on the other side. Proposed stakeholder management strategies were: increasing communication and cooperation among key players, empowering subjects, and maintaining good relations with the context setter. The Indonesian MAB National Committee should play an active role in empowering other stakeholder, especially local governments.

Acknowledgements

The author would like express his gratitude to BBKSDA Riau who has given permission to enter the area of wildlife reserve and to the Ministry of Research Technology and Higher Education of the Republic of Indonesia which has provided scholarship and budget support in completing this study.

References

- [1] MAB - UNESCO. The Seville Strategy for Biosphere Reserve. Biosphere Reserves: The First Twenty Years. Paris, Fr: UNESCO, 1996a.
- [2] L. Schultz, A. Duit, C. Folke. "Participation, adaptive co-management, and management performance in the world network of biosphere reserves". *World Development*, vol. 39, pp. 662–671, 2011, DOI:10.1016/j.worlddev.2010.09.014.
- [3] MAB - UNESCO. The Statutory Framework of the World Network of Biosphere Reserves. Paris, Fr: UNESCO, 1996b.
- [4] J. Mayers. *Power Tools: The Four Rs*. London, UK: International Institute for Environment and Development, 2005.
- [5] Z. Varvasovsky, R. Brugha. "How to do (or not to do) ... A stakeholder analysis". *Health Policy and Planning*, vol. 15, pp. 338-345, 2000.
- [6] K. Schmeer. (1999) *Guidelines for Conducting a Stakeholder Analysis*. Bethesda, MD: Partnership for Health Reform, Abt Associates Inc. [On-line]. Available: [www.who.int/management/partnerships/overall/Guidelines Conducting Stakeholder Analysis.pdf](http://www.who.int/management/partnerships/overall/Guidelines_Conducting_Stakeholder_Analysis.pdf). [2 Juli 2016].
- [7] M.S. Reed, A. Graves, N. Dandy, H. Posthumus, K. Huback, J. Morris, C.H. Prell, C.H. Quin, L.C. Stringer. "Who's in and why? A typology of stakeholder analysis methods for natural resources management". *Journal of Environmental Management*, vol. 30, pp. 1-17, 2009, DOI:

- 10.1016/j.jenvman.2009.01.001.
- [8] C.J.P. Colfer, R. Prabhu, M. Gunter, C. McDougall, N.M. Porro, R. Porro. Who Counts Most? Assessing Human Well-Being in Sustainable Forest Management. Vol. 8, The Criteria & Indicators Toolbox Series. Bogor, ID: Center for International Forestry Research, 1999.
- [9] R. de Groot, M. Wilson, R. Boumans. "A topology for the classification, description and valuation of ecosystem goods and services". *Ecological Economics*, vol. 41, pp. 393–408, 2002.
- [10] L. Groenendijk. *Planning and Management Tools*. The International Institute for Geo-Information Science and Earth Observation ITC, 2003.
- [11] G.A. Yukl. *Kepemimpinan dalam Organisasi*. Budi Supriyanto, (Trans.); Eli Tanya, (Editor). Jakarta, ID: Penerbit Indeks. Translation from: *Leadership in Organizations*. Ed. 5, 2005.
- [12] J.C. Ribot, N.L. Peluso. "A theory of access". *Rural Sociology*, vol. 68, pp. 153-181, 2003.
- [13] C. Eden, F. Ackermann. *Making Strategic: The Journey of Strategic Management*. London, ENG: Sage Publications, 1998.
- [14] F. Ackermann, C. Eden. "Strategic management of stakeholder: theory and practice". *Long Range Planning*, vol. 44, pp. 179-196, 2011, DOI:10.1016/j.lrp.2010.08.001.
- [15] R.E. Freeman. *Strategic Management: A Stakeholder Approach*. US: University of Minnesota, 1984.
- [16] G.T. Savage, T.W. Nix, C.J. Whitehead, J.D. Blair. "Strategies for assessing and managing organizational stakeholder". *Academy of Management Executive*, vol. 5, pp. 51-75, 1991.
- [17] A. Friedman, S. Miles. *Stakeholder: Theory and Practice*. Oxford, ENG: Oxford University Press, 2006.
- [18] Y. Pramana. *Bentuk dan Tingkat Partisipasi Stakeholder dalam Pengelolaan Cagar Biosfer Giam Siak Kecil - Bukit Batu, Provinsi Riau* [Undergraduate Thesis]. Bogor, ID: Institut Pertanian Bogor, 2012.
- [19] B. Rushayati, A. Sunkar, R. Hermawan, Masganti, R. Meliani. *Model Public Private-Partnership dalam Mengatasi Degradasi dan Deforestasi Hutan*. Bogor, ID: Fakultas Kehutanan IPB, 2014.
- [20] L. Sundawati, Sanudin. "Analisis pemangku kepentingan dalam upaya pemulihan ekosistem daerah tangkapan air Danau Toba". *Jurnal Manajemen Hutan Tropika*, vol. 15, pp. 103-108, 2009.
- [21] R. Bawole. "Analysis and mapping of stakeholder in traditional use zone within marine protected area". *Jurnal Manajemen Hutan Tropika*, vol. 18, pp. 110-117, 2012, DOI:10.7226/jtfm.18.2.110.
- [22] B. Maguire, J. Potss, S. Fletcher. "The role of stakeholder in the marine planning process-stakeholder analysis within the Solent". *Marine Policy*, vol. 36, pp. 246-257, 2012.
- [23] J. Frooman. "Stakeholder influence strategies". *Academy of Management Journal*, vol. 24, pp. 191-205, 1999.
- [24] J.P. Isacch. "Implementing the biosphere reserve concept: the case of Parque Atlántico Mar Chiquito Biosphere Reserve from Argentina". *Biodiversity Conservation*, vol. 17, pp. 1799–1804, 2008, DOI: 10.1007/s10531-007-9224-0.
- [25] LIPI. *Laporan Akhir Kerjasama LIPI – PT. Arara Abadi; Kajian Sosial, Ekonomi, dan Budaya di Kawasan Giam Siak Kecil Bukit Batu, Riau*. Bogor, ID: LIPI, 2008.

- [26] P. Kusumedi, A. Rizal. "Analisis stakeholder dan kebijakan pembangunan KPH model Maros di Provinsi Sulawesi Selatan". *Jurnal Analisis Kebijakan Kehutanan*, vol. 7, pp. 179-193, 2010.
- [27] T. Herawati, N. Widjayanto, Saharuddin, Eriyatno. "Analisis respon pemangku kepentingan di daerah terhadap kebijakan hutan tanaman rakyat". *Jurnal Analisis Kebijakan Kehutanan*, vol. 7, pp. 13-25, 2010.
- [28] E. Roslinda, D. Darusman, D. Suharjito, D.R. Nurrochmat. "Analisis pemangku kepentingan dalam pengelolaan Taman Nasional Danau Sentarum Kabupaten Kapuas Hulu, Kalimantan Barat". *Jurnal Manajemen Hutan Tropika*, vol. 18, pp. 78-85, 2012, DOI: 10.7226/jtfm.18.2.78.
- [29] S. Harteti. *Peningkatan Kinerja Konservasi Penyu Melalui Strategi Manajemen Konservasi* [PhD dissertation]. Bogor, ID: Institut Pertanian Bogor, 2013.
- [30] N. Uphoff, L. Buck. *Strengthening Rural Local Institutional Capacities for Sustainable Livelihoods and Equitable Development*. Washington DC, US: World Bank, 2006.
- [31] D. Zul, B.L. Fibriarti, M. Yunita, S. Halimah, S. Komariah. "Dampak alih fungsi lahan terhadap biomassa mikroba: Studi kasus di areal Bukit Batu, Riau". *Prosiding Semirata 2013*. Lampung, ID: FMIPA Universitas Lampung 2013, pp. 173-179, 2013.
- [32] H. Gunawan, A. Muhammad, N. Qomar. "Konservasi indigenous species ekosistem hutan rawa gambut Riau". *Prosiding Semirata 2013*. Lampung, ID: FMIPA Universitas Lampung, pp. 333-338, 2013.
- [33] S. Manullang. *Teori dan Teknik Analisis Stakeholder*. Bogor, ID: Nata Samastha Foundation, 2015.
- [34] B.B. Frey, J.H. Lohmeier, S.W. Lee, N. Tollefson. "Measuring collaboration among grant partners". *American Journal of Evaluation*, vol. 27, pp. 383-392, 2006, DOI: 10.1177/1098214006290356.
- [35] Suporahardjo. *Inovasi Penyelesaian Sengketa Pengelolaan Sumber Daya Hutan*. Bogor, ID: Pustaka LATIN, 2000.
- [36] Serikat Tani Riau. "Konflik PT. Arara Abadi - Masyarakat, Ketika Isu Tanah Ulayat Mengancam Investasi". Internet: www.serikat-tani-nasional.blogspot.com/2008/03/riau-konflik-pt-arara-abadi-masyarakat_19.html. 2008. [29 Juli 2016].