

Sustainable forest management concepts



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CHAPTER 2

LITERATURE REVIEW

2. 1 Background of SFM

The sustainable forest management idea has been promoted for the past 20 years in government of Sabah since 1989 but there had not been any serious attempt to put such idea into any effective practice. To solve this challenge, the BN State Government ensured that SFM is implemented in all future forest related activities (SFD, 1998).

Seven main elements of SFM which act as a reference framework for sustainable forest management are the extent of forest resources; forest biological diversity; forest health and vitality; productive functions of forest resources; protective functions of forest resources; socio-economic functions of forests; and the legal, policy and institutional framework (Sarre & Sabogal, 2013). All the main stakeholders involved in forest management such as: forest managers, government, non-government organizations (NGOs) and other stakeholders need to understand what is SFM mean in order to work together to achieve the objectives (Higman, 2005).

FAO had studied almost 80 cases of successful SFM implementation which shown the economic, social and environmental benefits that can be achieved under SFM (Sarre & Sabogal, 2013). One of the efforts in practice of SFM is adopted and implemented principles of sound forest management at Deramakot Forest Reserve in Sandakan. The Deramakot Forest Reserve is FMU No. 19. It had covered 55, 083 hectares of mixed Dipterocarp forest in

the east of Sabah (Mannan, Awang, Radin, Abai & Lagan, 2002). In 1989, Malaysia- German Sustainable Forest Management Project was extended to Sabah and conducted in Deramakot Forest Reserves. The main goal of this project is to apply an ecologically and scientifically substantiated forest management system (Mapa, 2003). This project was undertaken by the Sabah Forestry Department with the help of forest resource management such as stock inventory, reduced impact logging (RIL), the skyline yarding system, forest rehabilitation and silviculture. Due to the successful of SFM at Deramakot, in September 1997, the state Government had an agreement with 10 organizations from private sector which became active partners of the Government to ensure that the SFM practice at Deramakot is extended to other commercial forest areas in Sabah (SFD, 1998).

According to Li (2014), SFM aims to ensure that the goods and services derived from forest meet peoples' needs meanwhile maintain their continued availability and contribution to long-term development. Over the last 10 years, China has made a great amount of achievements in the forest sector based on sustainable forest management concept. For example, China had ranked the sixth in the world in terms of forest stock volume, following by Brazil, Russia, Canada, the United States of America and Democratic Republic of Congo. All these examples show that sustainable forest management concept can help to maintain ecosystem balanced.

2. 2 Forest Management Unit (FMU)

FMU is clearly defined as forest area which managed to a set of explicit objectives based on a long term management plan. SFM is divided all the

commercial forest areas into 27 blocks called Forest Management Units (FMUs). Each FMU is about 100, 000 hectares wide (Toh & Grace, 2006) and every unit will be managed by selected companies (Mapa, 2003). Currently, the level of the FMU in Peninsular Malaysia is an individual state; in Sabah the FMU area will cover by each Sustainable Forest Management License Agreement (SFMLA); while in Sarawak, the FMU is an individual concession area (Ng, Tong & Lim, 2002).

2. 3 Forest Management Plan (FMP)

FMU divided their forest area into severe compartments. Each compartment has to prepare its own FMP. A FMP is a strategic plan that can provide an overview or description of the forest area and the basis activities for monitoring the forest (Armitage, 1998). FMP can also name as medium-term forest management planning which have a minimum duration of 10 years (Kleine & Heuveldop, 1993). FMP translates the forest policy and prepared a well operational program for regulating forest activities. A FMP should include description of forest resource base, the management actions of the resources, review at the mid-point of the plan, review in the final year of the plan and the preparation of a new plan when the present plan expired (Armitage, 1998). FMP is an important strategy which conducted by FMU to well manage the community forest and bring benefits to local communities.

2. 4 Community Forestry

Community forestry is a village-level forestry activity which also can be defined as the participation of local communities in the planning, establishing, managing and harvesting of forest crops in a forest, so they can

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receive a major proportion of the socio-economic and ecological benefits from the forest (Nixon, Herbohn & Harrison, 2001). The participation of local community is very critical to promote sustainable livelihoods and maintain forest resources (Murdiyarso, 2006).

According to Metha (2002), both India and Nepal have a wide variety of forests. At that time, the use of forest is controlled by local community's traditions. However due to massive loss of forest, the governments of India and Nepal began to take over the forest management authority in the late 1980s. This cause the local communities lost their stewardship. As a result, the community forest programs are implemented to give communities financial stake so they have an incentive to preserve the forest. In 1988, the master plan for Nepal's program was adopted which states that the forest administration should allow people to have full control over the forest.

2. 5 Issues during implementation of SFM concept

According to Hickey (2004), during evaluating progress in monitoring and reporting information for SFM, some issues related to forestry such as: trade considerations, socio-economics conditions, forest resource characteristics and forest land ownership need to be considered.

There are some challenges faced by local communities who living in the forests for manage the forests sustainability. For example, lack of available land especially those peoples with no legal claim to their native customary right (NCR) of land within forest reserves. These communities are limited from clearing additional land for their use (Toh & Grace, 2006). Local

communities argued about the forest boundary. They are restricted to enter into the forest to collect forest products (Lintangah, 2013).

According to Lintangah (2013), another issue that faced by local communities during implementation of SFM concepts is the relationship with the FMU holders. Local communities have a low level of cooperation because they lack of consultation from FMU holders and some FMU holders begin their activities without permission of local communities. Besides that, lack of understanding about SFM concept among local communities also becomes an issue during implementation of SFM. SFM implementation also brought some impacts to locals such as lack of infrastructure development and maintenance for example road; lack of provision of job opportunities to the local communities and environmental pollution.

Richards & Yaron (2003) stated that the main problem or issues for sustainable forest management is the failures of market and policy which cause more profitable to cut down trees than to retain or manage them. All these challenges or issues can cause limitation of use right among local communities and occurred conflicts between local communities and forest managers (Duguma, Hager & Gruber, 2009). To solve all these conflicts between stakeholders, SRM approaches should be conducted. It is important to conduct a study about the perceptions of communities towards SRM approaches which can help to solve the issues during SFM implementation. Based on Wang (2008), perception is the insight or intuition gained by perceiving. It can be defined as the sixth sense of human beings. Perception is an important cognitive function that can determine personality.

2. 6 Stakeholder Relations Management (SRM)

The stakeholder relations management approach refers as the framework for analyzing and evaluating a corporation's relationship with external groups to achieve “ win-win” situations that can benefit everyone (Lintangah, 2013).

However, there are usually occurs winners and losers in a complex situations. As a result, stakeholder management approach is conducted for planning and implementing collaborative relationship to obtain win-win outcomes among stakeholders. SRM approach is a response to the growth and progress of corporations to understand how the corporation operates with their stakeholders (Lintangah, 2013). An effective SRM can well-managed the relationship among stakeholders for mutual benefits (Post, Preston & Sachs, 2002). The six steps that focus in stakeholder management approach are first identify key stakeholders, describe their stakes in the organization, determine if those stakes are significant, evaluate the opportunities and challenges, determine the organization's responsibility to the stakeholder, and finally create relationship strategies (Shannon & Thomas, 2015). One of the examples of SRM approaches is Corporate Social Responsibility (CSR) which means “ a voluntary management system used by the companies to incorporate a variety of social, environmental and economic pressures into their business operations and their interaction with their stakeholders” (Lintangah, 2013, p. 36).

Stakeholder management approaches can help to solve problems related with SFM implementation. Most of the stakeholders feel that the dialogue is one of the useful tools in dealing with their claims and interests besides media and technology. It can solve the conflicts among stakeholders through

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communicating, negotiating, contracting, managing relationships and motivating (Freeman, 2004). The SRM approaches that conducted under SFM at FMU level included community forestry, joint forest management, CSR programmes, inter-agencies involvement, and contract forestry that will promote and support the SFM implementation at the FMU level. According to Lintangah (2013), the supporting tools for SRM include the Forest Management Plan, Annual Work Plan, related government policies at the state and federal level, the Forest Enactment of 1968, and the Environmental Impact Assessment (EIA).

2. 7 Sustainable Forest Management License Agreement (SFMLA)

In September 1997, Sustainable Forest Management license Agreement (SFMLA) which is valid for 100 years is formed and replaced the timber license agreement (Toh & Grace, 2006). On 10 September 1997, 10 companies had signed SFMLA with the government to show their cooperation in forest management. They were: Yayasan Sabah; Idris Hydraulic (Malaysia) Bhd; TSH Resources Bhd; Sapulut Forest Development Sdn Bhd; Bugaya Forest Sdn Bhd; The North Borneo Timber Corporation Berhad; Modern Innovation Realty Sdn Bhd; Anika Desiran Sdn Bhd; Bornion Timber Sdn Bhd and Timberwell Bhd (SFD, 1998).

SFMLA holders are responsible for forest planning, forest inventories, preparation of forest management plans, implementation of the SFM, the establishment and maintenance of infrastructure, the security and protection of the FMU area, the protection and conservation of the unique environment

within the SFMLA area, support financial of all the expenses and the accommodation of local communities' interests (Lintangah, 2013).

Under SFMLA, licence holders have to implement community forestry (CF) projects within their respective FMUs. All the companies have to submit annual work plans and harvest plans for each logging plots based on reduced-impact logging systems. All the management and operational plans, especially monitoring the activities of licence holders had to approve by Forestry Department (Toh & Grace, 2006).