



Governance Policy Sustainable Peatlands Through Community Economic Development in Bengkalis Regency

Zulkarnaini^{1*}, Febri Yuliani¹, Anuar Rasyid², Dadang Mashur¹

¹ Department of Public Administration, University of Riau, Pekanbaru, 28293, Indonesia

² Department of Communication, University of Riau, Pekanbaru 28293, Indonesia

Corresponding Author Email: zulkarnainfisip@lecturer.unri.ac.id

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ABSTRACT

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Peatlands face considerable vulnerability to environmental conditions, posing a significant challenge to the economic well-being of local communities residing in these areas. Striking a balance between promoting the local economy and preserving the hydrological integrity of peatlands is crucial. This paper delves into the enhancement of a business model established through the Participatory Action Research (RAP) method, implemented in a 3 hectare pilot site currently undergoing monitoring and assessment. The findings from this monitoring and assessment phase will inform the second stage (loop) of the RAP process, facilitating refinements to the tested business model. Drawing insights from the Tanjung Leban Village in Bengkalis Regency, Riau Province, as a case study, it is deduced that a peatland-based commodity business model should incorporate pre-production activities. This precautionary measure aims to prevent peat subsidence and preserve the hydrological functionality of the area. Additionally, a temporal segregation of key activities (pre-production, production, and post-production) enhances the granularity of identifying required activities and resources. The study underscores the necessity of designing programs and interventions, such as peatland restoration initiatives, family welfare programs, and business incubator programs, with a focus on collective benefits for groups rather than individuals. To ensure an equitable distribution of benefits and costs among participants, program designers and implementers must carefully consider these dynamics.

1. INTRODUCTION

Indonesia's tropical peatlands are one of the largest carbon emitters, contributing 57.5 gigatons of carbon [1]. Around 43% or 6.4 million ha of Indonesia's peatlands are on the island of Sumatra [2]. However, many of these peatlands have been degraded, making them prone to fires and haze, especially during the long dry season. Some of the causes of peatland degradation on Sumatra Island are the conversion of peatlands into plantations [3]. Based on KLHK data, 1 in 2015 forest and land fires occurred in 2.6 million ha of land in Indonesia. The impact of these forest and land fires reached 16.1 billion US dollars or equivalent to 221 trillion rupiah [4]. In addition, these forest and land fires also caused the death of 24 people and the premature death of 103,000 people [5]. The resulting greenhouse gas emissions are estimated at 1.5 billion mt CO₂ equivalent [4].

Forest and peatland fires are a national case that needs to be addressed by all parties. The fires were deliberately set and carried out by a well-organized organization in order to maximize the profits from crop cultivation [6]. This organized crime is further strengthened through local political contestation through regional head elections [7]. It is highly doubtful that government action alone can actually reduce

fires, given the 'advantages of using fire' that some actors have and their complex relationships with local elites. All parties including central and local governments, private sector, non-governmental organizations (NGOs) and civil society organizations (CSOs) must act together to prevent fires. Community as a key factor to prevent fires at the village level is something that needs to be understood in more depth [8].

Indonesia's Government has made a variety of strategic efforts to reduce greenhouse gas emissions. One of them is preventing the recurrence of forest and land fires by restoring damaged peatlands, for example by stopping drainage and wetting the soil [9] and others. Rehabilitation projects are influenced by the social environment, starting from determining the project scope, objectives to continuing implementation, including revitalizing communities or seeking alternative livelihoods [8]. Participatory sustainable business models are an important tool for promoters and local communities to identify and systematically develop alternative livelihoods. Taking into account the social and ecological environment, the business model must be able to encourage community participation and minimize environmental impact. This goal is important because man-made pressure in the form of activities has changed the shape of the landscape [10].

On peatlands, profitable legal and illegal businesses, such

as mining [11], logging [11, 12], and many more, have destroyed the hydrological function of peat. In these circumstances, it is important to provide attractive and profitable alternative livelihoods for local communities that can also minimize negative external impacts on the environment and achieve sustainability. The preparation of this sustainable business model, if applicable, will contribute to the fire prevention and peat restoration agenda.

While a global sustainable development policy has not yet been developed and decided upon, sustainability emphasis and development began decades ago. Enforcement of the legislation, competition and consumer attention, prompting pressure to address the issue of sustainability [13, 14]. Many companies have responded by improving their business models, meeting sustainability standards (such as ISO 14000), improving supply chains, managing environmental quality, and conducting life cycle analysis [13, 15]. The company's commitment shows the importance of sustainability for maintaining and developing a business [16]. These companies adopt sustainable practices to gain competitive advantage, such as the value of the brand [17]. But on the other hand, companies need capital and investment to achieve sustainable development practices.

In the last decade, many large companies have adopted various sustainable development practices with a focus on energy and material efficiency as well as the use of renewable energy [18]. However, it turns out that this is not enough, a comprehensive and systematic innovation is needed to support a broad transformation. The business model is one of the tools that can be used to identify these innovations [19]. A business model that emphasizes social and environmental factors will increase company value and sales [20]. These aspects are an important foundation for building a sustainable business model based on the triple bottom line concept, such as economic, social and environmental benefits [21].

In the intricate interplay between environmental vulnerability, economic sustainability, and community well-being, peatlands emerge as focal points where these dynamics converge. This abstract introduces a comprehensive exploration of the challenges and opportunities inherent in balancing the economic prosperity of local communities with the preservation of peatland hydrological integrity. The vulnerability of peatlands to environmental conditions is acknowledged as a significant hurdle, prompting a thoughtful examination of business models within the Participatory Action Research (RAP) framework. Embarking on a 3 hectare pilot site, currently in the midst of a meticulous monitoring and assessment phase, this paper seeks to refine and enhance existing business models through iterative insights gained from the RAP process.

The case study unfolds in Tanjung Leban Village, Bengkalis Regency, Riau Province, where the significance of peatland-based commodity business models is underscored. A pivotal revelation from this study advocates for the integration of pre-production activities to preemptively address peat subsidence and uphold the hydrological functionality of the region. Furthermore, temporal segregation of key activities emerges as a strategic approach, providing a nuanced understanding of resource requirements across different phases (pre-production, production, and post-production).

Beyond the scope of business models, the research emphasizes the broader implications for program design and implementation. Peatland restoration initiatives, family welfare programs, and business incubator programs are

scrutinized with a lens that prioritizes collective benefits for community groups over individual gains. The imperative of ensuring an equitable distribution of benefits and costs among participants becomes apparent, requiring careful consideration from program designers and implementers. Inextricably linked to the overarching theme is the incorporation of sustainability as a cornerstone in the devised business model. Beyond fostering a positive brand image, the integration of sustainable principles opens new markets, appealing to an environmentally conscious consumer base. This paper positions sustainability not merely as a virtue but as an essential value proposition for long-term success and a catalyst for positive environmental impact.

2. LITERATURE REVIEW

2.1 Peatland management

Peatlands have a very important role in various aspects of life, both from a social, economic and ecological perspective. Apart from being a global climate controller because of its ability to absorb and store carbon, peatlands also provide forest products in the form of wood and non-timber [3]. Another function of peatlands is as a water storage, water supply and flood control, as well as a habitat for biodiversity [5]. Many species of flora and fauna can only grow on peatlands [22]. Therefore, the damage that occurs to peatlands will have a major impact on the surrounding ecosystem.

Some peatlands in Indonesia have long been used for various life activities. Initially, the community used this land for rubber and coconut plantations. In line with the transmigration settlement expansion program in the 1980s, many peatlands were cleared on a large scale for food crop farming [14]. In addition, the clearing of peatlands is also mostly done for oil palm plantations or for the use of Industrial Plantation Forests (HTI). Some of these peatland uses have yielded good results, but have also caused many failures in their management, especially from an environmental perspective.

The use of peatlands in Indonesia has been carried out since the 1990s [4]. On December 26, 1995, President Soeharto issued Presidential Decree No. 82/1995 on the One Million Hectare Peatland Development Project (PLG) in Central Kalimantan. But this project that cost tens of billions ended in complete failure. The peatlands in the project site proved unsuitable for rice cultivation. Local residents suffer losses due to the destruction of natural resources in the area as well as other hydrological impacts. With the naked eye, this project leaves thousands of kilometers of canals and the destruction of the peat swamp forest ecosystem.

This incident occurred due to errors in peatland management, especially related to the peatland allocation policy itself. Clearing peatlands for agricultural and plantation activities means changing the existing landscape [23]. It is estimated that there are 4-6 million hectares of peatland that can be used for the cultivation of plantation crops. These areas are generally located in shallow peat areas, but due to carelessness in land clearing and the construction of canals they do not take into account the thickness of the peat. As a result, ecological systems that have existed for thousands of years have changed [14]. Organic matter in peatlands becomes dry and flammable during the dry season.

Exploitative use causes peatlands to degrade in quantity and

quality which will reduce their social, ecological and economic functions [3]. Especially with the many interests of various parties who take advantage of the resources in it, so that it often causes conflicts and leads to management with narrow considerations. This condition is exacerbated by the low understanding of the characteristics of the peat ecosystem and the lack of stakeholder participation. There is no visible attention and real activity in peatland management carried out by the community, private sector, or government which makes its use very dangerous [4].

Peatlands, an often overlooked but ecologically valuable ecosystem, play a critical role in global environmental health and sustainable development. Effective peatland management is critical because peatlands often support local economies through activities such as agriculture, forestry and traditional resource use. Sustainable management practices ensure the long-term availability of these resources, thereby supporting livelihoods. Well-preserved peatlands can attract eco-tourism, offering recreational opportunities and economic benefits to local communities. Careful management ensures that tourism activities do not harm the delicate peatland ecosystems.

2.2 Business model

A business model as "the design or architecture of mechanisms for creating, delivering, and obtaining value ... defines the way companies provide value to customers, encourage customers to pay for that value and turn these payments into profits [24]." A business model represents a value proposition, various elements of value creation and delivery, and simplified value acquisition and interactions between various elements in an organization" [25]. A simpler definition, states that "business models describe the reasons why organizations create, deliver, and capture value" [26]. When studying business models, these different definitions have the same agreement, that is, the business model must cover the proposition, creation, delivery and acquisition of value. Utilization and use of peatlands, as well as the preservation of carbon stocks in peatlands are very important for climate change mitigation [27].

There is a difference between regular or traditional business models and sustainable and circular business models. Conventional business models only answer questions about business economics, such as who are the target customers, what value customers want, how to provide added value to customers, internal and external factors and questions that affect business [9, 26, 28]. The sustainable business model is developed from the conventional business model which adds three new features and objectives: 1) Incorporating the concept, principles and goals of sustainability into the business model; 2) Creating for multiple parties Value for active stakeholder management; and 3) Long term application. A sustainable business model can still be upgraded to a circular business model solution [25].

A circular economy "gradually separates the economy from the consumption of limited resources" [29]. It is based on three principles: design to minimize waste and pollution, and to maximize the value and use of products and materials, and to keep value at the highest level and to regenerate "natural systems". The circular business model combines the principles of a sustainable business model with additional efforts, namely increasing, reducing, closing, slowing and reducing the flow of resources and energy to reduce leakage of waste and emissions [25].

These aspects can be captured by developing a business model called the Three-Level Business Model Canvas (TLBMC) [30], the development of the Business Model Canvas (BMC) [29]. If the focus of BMC formation is the economy for assisting in the process of value creation, acquisition and delivery, TLBMC includes canvases for economic business models, environmental life cycles and social stakeholders. It is therefore important to conduct a first-tier business model (BMC) test canvas developed [31]. Its aim is to introduce business development tools to local communities.

A well-crafted and sustainable business model is crucial for effective peatland management, providing a framework that aligns economic interests with environmental conservation. A well-designed business model is not only economically advantageous but also instrumental in achieving the delicate balance between economic development and environmental conservation in peatland management. It serves as a catalyst for positive change, driving innovation, fostering community well-being, and contributing to the global imperative of sustainable development.

3. METHOD

There are many tools available for formulating a business model. The most widely used tool is TLBMC. The TLBMC developed by Joyce and Paquin cited in Ritala et al.'s [32] is a suitable tool for a sustainable business model and emphasizes the three bottom lines of the principle of sustainability. TLBMC is a development 20 model, which includes three layers [33]. The first layer is similar to the BMC economic canvas business model proposed [33]. The second layer is the environmental aspect built from the environmental impact life cycle. The third layer is the social aspect, which explores the social impact of business. TLBMC allows horizontal and vertical coherence. Horizontal coherence is defined as the role of the business model in promoting a "broader system of thinking" and a "more comprehensive/holistic view" of the business model. Vertical continuity keeps different values in action consistent and interrelated. Proposed CBMPT using model, which helps build a model for "maintaining and using the value present in the product for as long as possible" [3, 10]. The tool integrates a circular principle throughout the product life cycle. This life cycle is the basis for the formation of CBMPT. The tool consists of five stages: 1) collection and reintegration of the materials used to make the product (reducing the original material), 2) the first sale to extend the life of the product, 3) the second collection and reintegration (arranging returns), 4) Selling additional products or raw materials, and 5) Recycle materials.

The application of this business model uses participatory action research (RAP). The resettlement action plan consists of four stages, reflection, planning, action or implementation, and monitoring. In the reflection stage, community groups will reflect on the socio-ecological conditions, lessons learned and best practices. The planning stage is carried out by encouraging the development of business models by local community groups. Then at this stage, the community group prepares an action plan that can be implemented. Grounded in ecological economics, the framework emphasizes the interconnectedness of ecological systems and economic activities. It posits that sustainable development in peatland areas necessitates a holistic approach that integrates economic

prosperity with environmental conservation. The RAP process is viewed through the lens of adaptive management, recognizing the need for iterative learning and adjustments. Insights gained from the monitoring and assessment phase guide adaptive changes in the business model during the second stage (loop) of the RAP process.

4. RESULT AND DISCUSSION

4.1 Steps to developing a community based business model in the peatland area

Each community group has its own interest in developing livelihoods. We use Inspiration research and others to select products for community development. Concerning the potential commodity value chain for peatlands. The research also takes into account the importance of economies of scale in the selection of potential products. We also detail the results of existing market surveys, topographic maps and peat depth surveys in Bukit Batu District. It is advisable for each community group to identify and select the goods or services they are interested in. The community then develops the goods or services selected in its field of action. Each group realizes the importance of understanding and considering economic, social, technical and environmental aspects. Discussions and decisions about the choice of goods or services also cover stimulating issues regarding the value proposition, but in-depth exploration is undertaken in the second step.

In general, community groups in Tanjung Leban Village agreed to plant a combination of timber and non-timber goods or services on peatlands. The Community of Fire Care (MPA) (Action Arena 1) chose to develop multi-functional trees and fisheries ecotourism. The women's group (Action Arena 2) and the farmer group (Action Arena 3) chose between multifunctional wood and pineapple. The farmer family group (Action Arena 4, 5 and 6) chose to enrich their monoculture rubber plantation with Liberica coffee. The Tanjung Leban Village Government, representing residents or families, actively participates and recommends planting hybrid coconuts in family gardens because of the high demand for this commodity by families (Action Arena 7).

In developing these selected products, discussion of responsibilities and rights, and the sharing of benefits and costs is also promoted. This is done by considering all aspects of land ownership managed by individuals or community groups. For example, in action arenas 2 and 3 which are located on land belonging to one villager, these residents are managed collectively (jointly managed) by a group, planning and making a collective agreement. The agreement includes sharing of rights, obligations, costs and benefits for the actors involved, for example sharing of benefits for the management team, land owners and MPAs who assist fire patrols.

After reaching agreement on the choice of goods and services, the coordinator begins to explain the concept of the business model. Together with community groups in Tanjung Leban village, we carried out a pilot project for BMC [23]. In Figure 1 you can see community groups who received guidance in the pineapple plantation business sector. Each community group determines and refines each component of the BMC under the guidance of the host. Their ideas are divided into 9 BMC components to make it easier for them to understand the overall model situation and develop an action plan.



Figure 1. Utilization of peatland for pineapple plantation

Applying the development of a community-based business model Each community group in Tanjung Leban Village has developed a different business model for the place of action it manages. In this section, community groups will learn to choose three selected business models. For the record, it should be understood that this business model is far from perfect, especially in terms of consistency between components. For example, in the pineapple agroforestry business model, there are various important value propositions, such as fresh pineapple fruit, blackheads, jam, etc. Although one component and other components in this business model canvas are interrelated and sustainable, in the income stream section, community groups only list fresh pineapple income as the most important income. At least some of the examples below can illustrate and inspire people in rural areas to develop good business models with the help of facilitators.

First, fisheries ecotourism business model. MPA Desa Tanjung Leban developed a fisheries ecotourism business model covering an area of 0,8 hectares for the Action Arena 1. They plan to reach out and provide services to local communities, fish enthusiasts, fish brokers, and end consumers by proposing a fisheries ecotourism business (customer groups). In addition to providing fishing entertainment services and renting fishing gear, fishing ecotourism in Tanjung Leban Village also has natural scenery and provides target consumers with a cooking experience (value proposition) dish made from fish and coffee. Apart from building relationships with sellers and suppliers (channels), MPA will also use an online platform to communicate this value proposition. Relationships with customers can be managed by expanding the fishing community network and holding fishing competitions (customer relations).

Then, MPA Desa Tanjung Leban hopes that through the application of ecotourism zone tickets, annual membership fees for fish enthusiasts, restaurants, equipment rental, and sales of children's toys (income stream), they can get income from the application of this business model. To achieve this revenue estimate, MPA requires capital and human resources, coffee machines, fish eggs, fish ponds, and other means (main resources). These resources will then be used to support and carry out construction and maintenance activities (main activities). Costs incurred in implementing this business model include construction costs, workers' salaries and wages, and fish eggs (cost structure). Regarding network restrictions and capital ownership, MPA plans to establish partnerships and networks with private companies through the Corporate Social

Responsibility (CSR) program, the Bengkalis Regency Tourism Office, Village-Owned Enterprises (BUMDes) and Bukit Batu District (main partner).

Second, the pineapple agroforestry business model. The women's group in Tanjung Leban Village developed a pineapple and forestry business model in Action Arena 2 (an area of 1.3 hectares), which is planting pineapples together with multi-functional trees including trees. In this business model program, women's groups specifically study the pineapple business. The women's group targets the end consumer (customer group) by offering a variety of fresh and processed products (such as fruits, jams, candied pineapple, salads, fruit ice and herbal medicine). These products are delivered to customers at competitive prices and are formulated with market opportunities (value proposition) in mind. By managing the network and relationships with sellers and consumers in the market (customer relations), you can reach the target end customers through the seller network (channel).



Figure 2. Pineapple processing for peatland into products for sale

The existing business model is expected to generate revenue primarily from sales of fresh fruit (revenue stream). Figure 2 shows the processing of pineapples in peatlands into products for sale. To achieve the desired income, they have to invest in chemical fertilizers, pineapple seeds, agricultural equipment, wages for workers, and most importantly land (an important resource). Some of the available resources are managed through a series of activities, such as pineapple farming and forestry management, product maintenance and promotion (main activities). In order to use the main resources to carry out the main activities, the women's group has estimated several costs, including the cost of purchasing seeds and fertilizers and the wages of workers for clearing and harvesting land (cost structure). In addition, MPA and village government have been identified as their main business model partners.

Third, the coffee agroforestry business model. A family farmer group in Tanjung Leban Village manages Arenas 4, 5 and 6. This group develops a Liberia coffee business model for coffee companies, customers and coffee milling experts (customer groups). They offer green coffee beans as well as roasted and ground coffee in attractive packaging (value proposition). To attract target consumers, they hope to sell the product through many cafes and directly to the coffee factory (channel). Maintain communication with customers through good and continuous communication, and through incentives such as offering discount prices (customer relationship). It is

expected that most of the revenue will come from sales of certified coffee seedlings and sales of coffee (revenue streams). The family farming group will use certified coffee seedlings, fertilizers, human and financial capital (the main resource) and other resources to carry out main activities such as training, planting shade trees, fertilizing, maintaining and comparative studies. Costs such as planting, maintenance, packaging and processing are identified as important costs in the business model (cost structure). They want to work with family groups (internal) as well as local communities, private companies and MPA as external partners (main partners).

4.2 Optimizing community business model development in peatland area

There is no such thing as a miracle for a successful business. Communities should use the real business scale guided by the action plan to test the business models developed on site. Taking into account the background, objectives and deadline of the resettlement plan, we encourage follow-up discussions with stakeholders, local government officials, land owners and communities. Discussion topics included the role of each participant and the identification of potential and emerging challenges. Through a participatory approach, the community begins to reflect and communicate their expectations about who is considered an important role and partner as well as their respective roles and responsibilities. They also identify challenges or obstacles that may arise when realizing a joint business, and solutions to these problems. Then, the community determines an action plan and schedule. Most importantly, these discussions resulted in commitments between the village government, land owners, communities and promoters.

The essence of a business model and the planned action or action is how to implement, monitor and evaluate the business model continuously so that the business model can be further reflected and improved. Funding provided by the Temasek Foundation allows the community to go through this process between 2018 and 2019. The total area managed by community-based groups is 3 hectares, namely Action Arena 1-6 (excluding guest houses, namely Action Arena 7), as well as model guidelines business and action plans. Always monitor the challenges and opportunities that arise so that they can be lessons that can be disseminated to other communities. Ongoing monitoring is also important to improve future business models.

Peatland-based commercial models must pay attention to pre-production activities, namely land preparation without burning (PLTB). The use of PLTB in the community needs to be emphasized to prevent peat sedimentation and avoid disturbing its hydrological function. In addition, by separating the main activities according to a specific time / duration (before, during, and after production), the activities and resources required can be defined in more detail. Many plans and interventions define community-based target groups to expand the scope of society while establishing collective action at the community level. Plans and interventions related to peatland restoration, as well as other themes (such as family welfare plans, business incubator plans, etc.) place more emphasis on beneficiary groups than individuals. Plans drafters and implementers need to consider how to share benefits and costs among participants to ensure fair distribution. Figure 3 explains sustainable business strategy for communities for fire prevention and peat restoration.

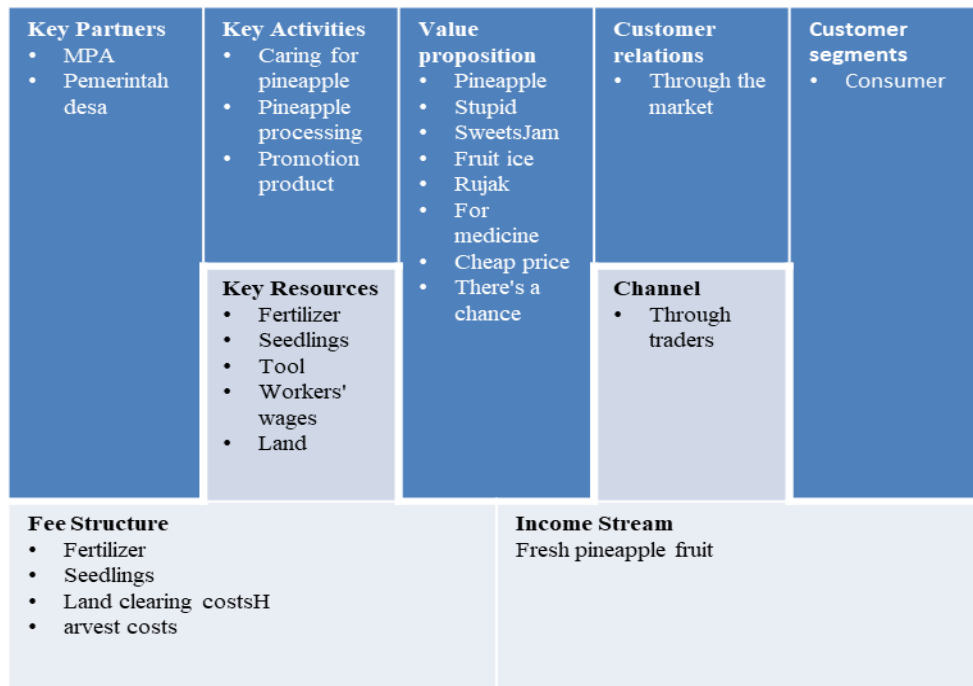


Figure 3. Sustainable business strategy for communities for fire prevention and peat restoration

There are different types of goods and services, both real and intangible, such as ecotourism and carbon sequestration and / or storage through restoration of degraded peatlands. Awareness and recognition of these goods and services is important to educate and raise public awareness about the important values and benefits of protected ecosystems. In the developed business model, sustainability must be considered as an important value proposition. The principles of sustainable development need to be applied to obtain a positive image and open new markets for environmentally conscious consumers.

It is a good habit to introduce and educate people about the formulation of a business model to encourage them to brainstorm. More follow-up questions are needed to explore specific topics in more detail by optimizing discussion time to build participation and collaboration in groups. The community must be grateful for the participation and brainstorming that was built. For the community, it is important to brainstorm some ideas, and then decide and develop a business model to be piloted in the field. At a later stage, in-depth monitoring and evaluation of implementation is required.

4.3 Design business model development in peatland area

The characteristics of conventional or traditional business models are that they can answer key questions about target customers, the value that customers need or want, and how to provide value to customers at a reasonable and economical cost [20, 26, 27]. A good business model can provide additional value to customers [15], and is unique and difficult to imitate [26, 27]. A good business model can also understand and examine internal and external factors such as customers, supply, and the business environment [26].

In addition, a good business model can be found or understood through strategic analysis [27]. However, this standard does not always address sustainability issues. A

sustainable business model is based on the following criteria: maximizing material and energy efficiency, converting waste into useful goods, using renewable and naturally processed materials, prioritizing functions, and developing scale [3]. Solutions and guidance are business-focused and benefit society and the environment.

The business model developed through the RAP process in Tanjung Leban Village, Bengkalis has been piloted on an area of 3 ha and is in the process of monitoring and evaluation. In the second stage (loop) of the RAP process, the results of the monitoring and evaluation will be used to improve the business model that has been tested. The peatland-based commodity business model must consider pre-production activities, namely Land Preparation without Burning (PLTB). It is important to emphasize the adoption of PLTB in the community to prevent peat subsidence and avoid disturbing its hydrological function. In addition, segregating key activities based on specific time/duration will allow for more detailed identification of the activities and resources required.

In connection with these findings, it is necessary to create a model using BMC [23] and consider TLBMC [14] and CBMPT [22]. It is important to combine it with the main element, namely learning in local implementation with community groups. Figure 4 shows the Community Sustainable Business Model (SBMC) plan, which is dedicated to fire prevention and peatland restoration. SBMC relies heavily on participatory methods and focuses on interventions at the community group level. Therefore, SBMC emphasizes the transparency of the cost-benefit sharing mechanism within the group. By recognizing the existence of direct and indirect costs, as well as tangible and intangible goods and services, cost structures and revenue streams were redefined. By categorizing time periods, the main activities can be defined in more detail. In short, the three important pillars based on the MBS concept are: participation, sustainability and transparency of local community groups.

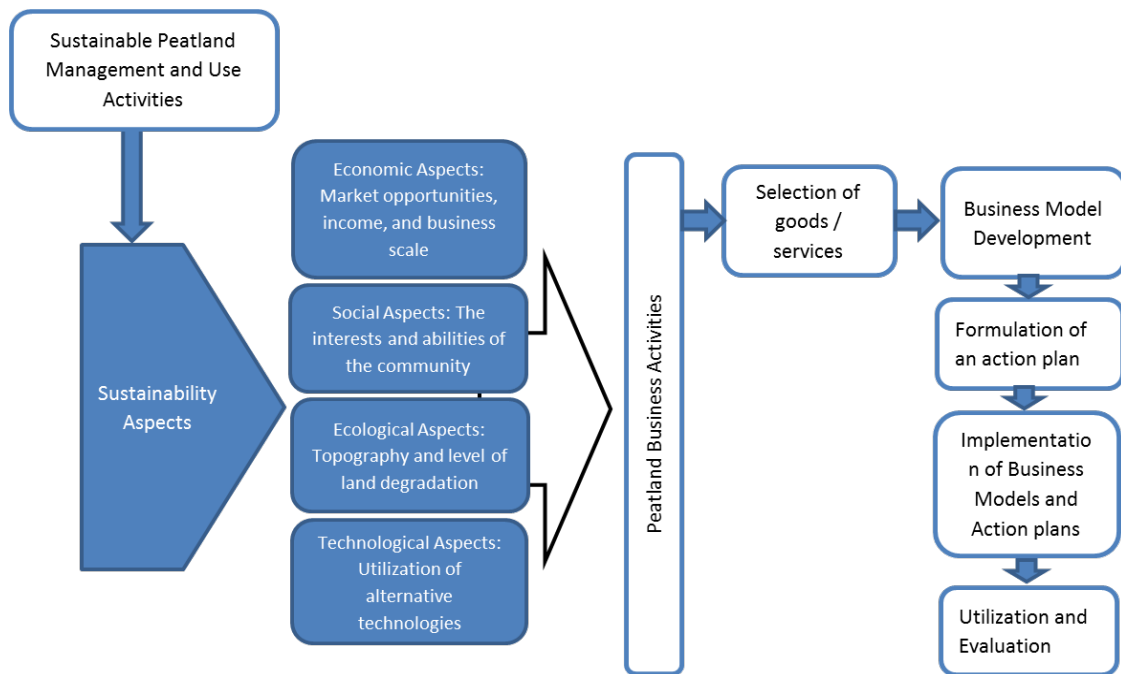


Figure 4. Model business sustainable for communities development in peatlands

There are various types of goods and services, both real and unreal, for example ecotourism and carbon sequestration and/or storage from restoration of degraded peatlands. The recognition and recognition of these types of goods and services is important to educate and raise public awareness about the important value and benefits of protected ecosystems. Introducing and educating people about the formulation of a business model is a good exercise to encourage them to exchange ideas. More follow-up questions are needed to explore specific topics in more detail by optimizing discussion time to build engagement and collaboration in groups. Community participation and brainstorming must be appreciated. It is important for the community to brainstorm a number of ideas and ideas, then decide and formulate a business model to be tested in the field. In the next stage, monitoring and evaluation in implementation needs to be done intensively.

These findings globally support the concept that sustainable development must be effectively linked to social, environmental and economic issues. Integrating paying attention to social and environmental issues in economic actions is linked to development responsibilities for future business activities. In order to achieve sustainable success, entrepreneurs who are successful they must be able to meet the so-called 'triple bottom-line' [10, 12, 17], namely economic prosperity, environmental quality, and social justice. They not only make profits, but also have to be responsible for social and environmental interests simultaneously. Furthermore, these business actors can provide programs and contribute directly to overcoming these social and environmental problems. They integrate a movement oriented towards achieving sustainable business growth.

5. CONCLUSIONS

Adopting existing principles to develop a sustainable community business model (SBMC), combined with an understanding of the socio-ecological environment in a

systematic manner, is excellent for supporting expansion and replication in other locations. It will also enable community groups to practice systems thinking in clearly defined steps. This step will allow them to master the big picture and formulate the necessary strategy. In particular to support fire prevention and peat restoration, business models must be designed in such a way that communities have sustainable livelihood options while restoring degraded peatlands. It is also important to develop business models that society itself can use and test. The successful implementation of this community-based business model is expected to generate triple bottom-line benefits, which can help communities develop independently and progress, and contribute to sustainable development.

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