



## Analysis of Stakeholders Collaboration Model and Its Impact on Improving Human and Natural Resources in the Independent Village Peat Care –Korea-Indonesia Forest Cooperation Center Program

(Case study of the Burned Peatland Restoration Project in Muaro Jambi and Tanjung Jabung Timur Regencies, Jambi Province)

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### **Abstract**

The protection and management of peat ecosystems is a systematic, integrated and effective measure, with the aim of preserving peat ecosystem functions and preventing damage to peat ecosystems. Preventing drought and peatland fires that often occur in Muaro Jambi and Tanjung Jabung Timur Regencies in Jambi Province is an important task of protecting and managing peat ecosystems for the purpose of maintaining hydrological functions, biogeochemical protection, biodiversity protection and productivity of peatlands which have the potential to become a source of life for all living things. Such is the importance of this activity, that the Government of Indonesia through the Ministry of Environment and Forestry has launched the Independent Village Peat Care (IVPC/DMPG<sup>1</sup>) program. KIFC's contribution to support the IVPC program is through an empowerment, gender-sensitive and stakeholder collaboration approach. At the village level, a Working Team for Protection and Management of Peat Ecosystems (WT-PMPE/TK-PPEG<sup>2</sup>) was formed in 10 villages in Muaro Jambi and Tanjung Jabung Timur Regencies. The concrete program for WT-PMPE assisted by the Village Facilitator from KIFC is to provide assistance, training and funding to the WT-PMPE Work Plan for productive business activities such as farming on peatlands, cultivating fish and livestock. Overall, the stakeholder empowerment and collaboration approach model implemented by KIFC has had a significant impact on improving human and natural resources.

**Keywords:** *Collaboration; Stakeholders; Peat; Sustainability; Human Resources and Natural Resources*

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<sup>1</sup> DMPG = Desa Mandiri Peduli Gambut

<sup>2</sup> TK-PPEG = Tim Kerja Perlindungan dan Pengelolaan Ekosistem Gambut

## Introduction

The character of peatlands is the most significant global carbon store formed over thousands of years. Aside from being a carbon store beneath the soil surface, peat also has a function as a very large carbon sink.

Indonesia's peatlands, which are rich in carbon, must be protected from fires so they do not release into the atmosphere, and result in a greenhouse effect; contributing to global climate change and even negatively impacting human health and other ecosystems.

Drought and peatland fires are the biggest threats in maintaining the characteristic of peatlands. Drying causes the groundwater level to drop and a decomposition process occurs and subsequently carbon is released into the atmosphere. Apart from that, it also has an impact on deflating and subsidence of peat, and cause the land lost its productivity and regulatory function.

Characteristics of peatlands with carbon sources stored below the soil surface, are able to maintain hydrological functions, protect biogeochemicals and biodiversity, land productivity, ability to store and maintain large amounts of water needed in fire disaster mitigation. Conversely, peatlands that lose their character become flammable. The critical situation is not only the function of the soil and peat itself but all ecosystems and biodiversity. With the occurrence of fires, the natural peat expanse decreases and even slowly loses its carbon value. The priority solution is to maintain the characteristics of peatlands.

Preventing fires and managing Indonesia's peatlands is the responsibility of all stakeholders, including government, private or corporate, academics, environmental practitioners or activists, and community.

Peat must be preserved in a good and correct way according to scientific principles, avoiding drying, and preventing fires. Damaged peat will no longer be possible to restore. Peat that has already been cleared and located in a cultivation function area, should be used without drainage and burning activities. For peat that has been managed and located in a protected function area, it supposed to be restored into a peat swamp forest for their natural function.

The IVPC/DMPG program in Muaro Jambi and Tanjung Jabung Timur Regencies is one of the KIFC<sup>3</sup> programs whose mission is to preserve sustainable peat ecosystems. The strategy starts with stakeholder collaboration, shared commitment to fire prevention and empowerment-based WT-PMPE/TK-PPEG institutional strengthening.

Collaboration of all stakeholders in the protection and management of sustainable peat ecosystems must be based on knowledge, understanding and mastery of the characteristics of peat ecosystems. Operational meaning and definition are important as part of the corridor as well as the scope of activities.

In the IVPC/DMPG KIFC program, the protection and management of peat ecosystems is a series of activities to maintain the characteristics of peat ecosystem management can take in place and fully understood by stakeholders and the community who are members of the WT-PMPE/TK-PPEG forum. This strategy is based on the concept of work characteristics from Hackman and Oldham (2005), that work characteristics are a work structure that influences the behavior and attitudes of workers towards

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<sup>3</sup> KIFC = Korea-Indonesia Forest Corporation Center. Contributing to the restoration and conservation of peat ecosystems in the Londerang HLG and increasing the welfare of the community in 10 villages around the Londerang HLG.

working conditions. In relation to the protection and management of peat ecosystems, there are 3 important dimensions to be considered, namely: 1) Expertise; 2) Job identity; and 3) Job benefits.

## II. Methodology

The study of stakeholder collaboration models in the protection and management of sustainable peat ecosystems uses a formative study model through gathering public opinion and action. The methodology of this study uses descriptive qualitative by combining processed primary data, secondary data and literature review without intending to make general conclusions or generalizations (Sugiyono, 2014). The combination of this study is able to interpret raw data into a data form that is easier to understand with a more concise form of information (Istijanto, 2009). The procedure for collecting data with a formative study model focuses on observation or observation techniques, interviews, distributing questionnaires, analysis and interpretation of data and documentation.

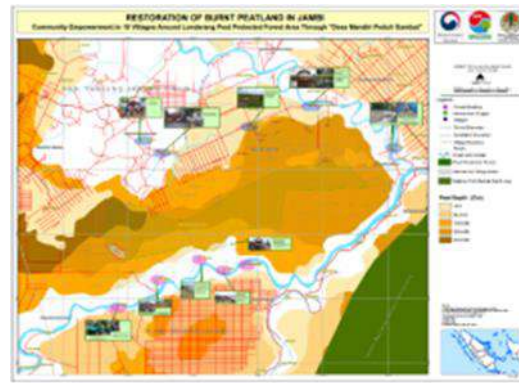


Figure1. Map of distribution of Villages  
WT-PMPE/TK-PPEG in Muaro Jambi and Tanjung Jabung Timur District

Questionnaires in formative studies are divided into 11 main questions, namely: 1) The role and function of peatlands; 2) Utilization and management of peatlands; 3) Status of peatland fires; 4) Assistance and rescue of peatlands; 5) Peatland management model; 6) Institutional WT-PMPE/TK-PPEG and human resource development; 7) KIFC; 8) Partnership; 9) Problems or obstacles; 10) Sustainability and independence; and 11) Recommendations.

The study population is the generalized area consisting of objects and subjects (Hadi, 1986), (Nawawi, 1995), and (Sugiyono, 2008). The population in this study were stakeholders managing the IFVC/DMPG KIFC program at the District level (Environmental Service), Village Official, Jambi University (Unja), Community Facilitators, and the Working Team for Protection and Management of Peat Ecosystems (WT-PMPE/TK-PPEG) in 10 villages scattered in Muaro Jambi and Tanjung Jabung Timur Districts, Jambi Province. The number of WT-PEPM/TK-PPEG administrators is 167 people. 23% of them are women. The total number of respondents was 100 people. 20% of them are women. (Krejcie & Morgan, 1970) and is representative of the population (Creswell, 2010). They are representatives of the population (Harbani Pasolong, 2012). They are sources of data and information that reflect the overall population (Nawawi, 1995) and (Pasolong, 2012).

### III. Literature Review

Indonesia has a peat area of approximately 16 million hectares (Polak, 1952 in Hakim, 1986), or approximately 15.5 – 18.5 million hectares. All of them are spread over in 4 major islands, Sumatra, Kalimantan, Sulawesi and Papua.

Indonesia has 865 Peat Hydrological Units (PHU/KHG<sup>4</sup>) with a total area of approximately 24,667,804 hectares located in 4 islands. (Directorate General of PPKL-KLHK, 2017) and (Decree of the Minister of Environment and Forestry of the Republic of Indonesia Number SK.129/MENLHK/SETJEN/PKL.0/2/2017 concerning Establishment of National Peat Hydrological Unit Map).

In Sumatera, there are 207 PHUs/KHG with an area of approximately 9,604,529 hectares. Spread across 10 provinces namely: Aceh, Bangka-Belitung, Bengkulu, Jambi, Riau Islands, Lampung, Riau, West Sumatra, South Sumatra and North Sumatra. In Kalimantan, there are 190 PHUs/KHG with an area of approximately 8,404,818 hectares. Spread across 5 provinces namely: West Kalimantan, South Kalimantan, Central Kalimantan, East Kalimantan and North Kalimantan. In Sulawesi there are 3 PHUs/KHG with an area of approximately 63,290 hectares. Spread over 2 provinces namely West Sulawesi and Central Sulawesi). Furthermore, on the island of Papua with an area of 6,595,167 hectares, which are spread over 2 provinces namely Papua and West Papua.



Figure2. Program management cycle (FS. QB6, 2022)

The leading strategy carried out by KIFC for the protection and management of sustainable peat ecosystems in Muaro Jambi and Tanjung Jabung Timur Regencies, Jambi Province is an empowerment approach. With an empowerment approach, you will be able to encapsulate social values that reflect a new paradigm in development that is people centered participatory, empowering and sustainable (Chambers, 1995).

The Implementation of the concept of an empowerment-based program in the protection and management of peat ecosystems need to pay attention to gender aspects. All parties have the same opportunity to make peatlands as a source of life. The activity cycle includes 5 integrated stages, namely planning, implementation, utilization, maintenance and program development stages. (FS. QB6, 2022).

Program choices start from simple ones and are based on local wisdom and small costs to give the opportunity to people to be able to contribute both in-cash and in-kind. The program arrangement process begin with increasing the capacity of human resources (knowledge and skills) prior to the physical program.

<sup>4</sup> KHG = Kesatuan Hidrologis Gambut

The results of a study by the International Fund for Agriculture Development (IFAD) confirm that support from production generated by the grassroots community contributes to greater growth compared to the same investment in sectors that are on a larger scale. (Dwi Iriani Margayaningsih, 2016). Brown stressed that a growth can be generated with a smaller cost and also with a small foreign exchange. Furthermore, the concept of community empowerment includes 3 (three) aspects: 1) Empowering; 2) Enabling; and 3) protecting. (Brown, 1995).

Empowering means strengthening the potential and resources owned by the community through concrete steps that involve providing various inputs and opening up various opportunities to make the community more empowered. The most important efforts in this empowerment are increasing the level of knowledge, skills and health as well as access to sources of economic progress including the development of basic facilities and infrastructure; accessible to the neediest sections of society.

Enabling means creating an atmosphere that allows people's potential to develop. Empowerment is a model and strategy for building and developing strengths by encouraging, motivating and raising awareness of the potential that society has.

Protecting means protecting and defending the interests of the weak who need it the most. Participation in the decision-making process is an important moment that must be created at each stage of activity, which provides an initial basis for the strength of weak communities, both socially, economically and politically for the purpose of being able to bargain. (Friedmann, 1994).

The development strategy based on community empowerment, is a process of transformation in social, economic, cultural and political relations of society, hence the shifts and changes in community occur in an integrated condition. The empowerment process begins with an analysis of conditions and situations, who has the most problems and who most needs solutions. Furthermore, participation optimize with a partnership and gender-based group approach model.

Community empowerment is a development strategy. In the development perspective, it is realized how important human capacity as the efforts to increase independence and internal strength to utilize material and non-material resources. As a development strategy, empowerment can be interpreted as an activity to help clients gain the power to make decisions and determine actions to be taken, related to themselves, including reducing personal and social barriers in taking action through increasing the ability and confidence to use their power by transferring power from the environment (Payne, 1997).

This view was confirmed by Owin (2004) that the main consequences and responsibilities in development programs through the empowerment approach are the empowered peoples or peoples have power, strength or ability in term physical and material aspects, economic, institutional, cooperation, intellectual strength and shared commitment in applying the principles of empowerment.

Ife (1995) defines empowerment as an effort to provide people with resources, opportunities, knowledge, and skills so that their abilities increase to be able to determine their future and to participate in and influence community life in their environment.

The concept of empowerment applied to the IVPC/DMPG KIFC program is the result of an interactive process at both the ideological and practical levels. At the ideological level, the concept of empowerment is the result of interaction between the top down and bottom up concepts, and growth strategy and people centered strategy. Furthermore, at the praxis level, interactive will occur through the struggle between autonomy. The concept of empowerment contains a context of partiality for the disadvantaged layers of society because they live in a peatland environment which is full of challenges.

The IVPC/DMPG program in Jambi Province is motivated by many factors, including fire events or burnings that still occurred and result the spread of smoke that has a negative impact on the nearest environment, and even has an impact on neighboring Indonesia. In 2016-2020 the area of peat fires in Jambi Province is known in the following details: 2016 covering 8,281.25 hectares, 2017 covering 109.17 hectares, 2018 covering 1,577.75 hectares, 2019 covering 56,593 hectares, and 2020 an area of 1,002 hectares. (Sipongi.menlhk.go.id)

#### **IV. Result and Discussion**

One of the breakthroughs in the IVPC/DMPG KIFC program is the collaboration model of all stakeholders based on empowerment. The process begins with: 1) Procurement of Community Facilitators; 2) Collaboration with Provincial and District Environmental Services; 3) Cooperation with related Regional Apparatus Organizations (RAO/OPD<sup>5</sup>); 4) Collaboration with Jambi University; 5) Procurement of community facilitators who will work at the village level; 6) Formation of village social institutions called WT-PMPE/TK-PPEG; 7) Problem Identification and Situation Analysis (PISA/IMAS<sup>6</sup>) based on peat ecosystems; 8) Develop a Community Action Plan (CAP/RKM<sup>7</sup>) based on peat ecosystems; 9) Realization of CAP/RKM; and 10) Assistance for the management of demonstration plot development and productive businesses; and 11) Assistance on partnership vertically and horizontally, and also internally and externally. Practically, this process has had an impact on increasing human and natural resources. (FS. QD1, QD3, QE4, QF2, QF5, and QG4, 2022).

The choice of a comprehensive community empowerment approach is a development model that is in favor of the neediest peoples who care about peat. Optimization of community participation must be materialized in every stage of activity. Collaboration of the stakeholders is a basic commitment that is required to be owned by other program management elements outside the community.

The PVIC/DMPG KIFC program has provided space for all of stakeholders to actively participate in the protection and management of sustainable peat ecosystems and collaborate at every stage of activity. (FS. QB6, 2022)

At the planning stage related to the procurement of community facilitators, community representatives have been selected who meet the standard and criteria for a facilitator. The administrative and competence selection process (knowledge, skills and personality) is carried out as a form of openness and fair opportunity for everyone to participate in fair competition. Everyone has the same opportunity to become a community facilitator. Those who pass the selection have been assigned as community facilitators.

The final result of the procurement of facilitators, 20 facilitators were selected to work in 10 villages. Comparison from the aspect of gender, 15 men (75%) and 5 women (25%). The facilitators are placed in villages where each village consists of 2 peoples.

At the planning stage in the village, community facilitators identify problems and analyze situations with the community. The results become input in the preparation of CAP. The flow of implementing problem identification and situation analysis is: 1) Meeting with Village Officials; 2) Community Data Inventory; 3) Formation of the WT-PMPE/TK-PPEG group; 3) Making peat-based maps; 4) Transect walks; 5) Rapid Technical Assessment; 6) Program options; 7) Preparation of DED and

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<sup>5</sup> OPD = Organisasi Perangkat Daerah

<sup>6</sup> IMAS = Identifikasi Masalah dan Analisis Situasi

<sup>7</sup> RKM = Rencana Kerja Masyarakat

Cost Plans; and 8) Compilation of Community Work Plans. This transfer of knowledge has had an impact on improving human resources. The intended planning flow is as shown in Figure 3.



Figure 3. Problem Identification Tool and

Referring to the working principles of empowerment, namely aspects of education and participation, community facilitators always involve the community in every stage of the activity. The main goal is to increase knowledge and skills.

At the stage of establishing WT-PMPE/TK-PPEG with its function as a community representative institution, it begins with conducting program socialization and gathering interest in becoming peat care volunteers. All volunteers identified by the facilitator were invited to consult to form a WT-PMPE/TK-PPEG which was subsequently legalized with a Village Head.

The formation of WT-PMPE/TK-PPEG is an agenda for increasing capacity and empowering Human Resources (HR) in the aspects of knowledge, skills and attitudes. Formation of WT-PMPE/TK-PPEG as a forum for participation in the management of sustainable peat ecosystems (FS. QF2, QF3, QF4 and QF5, 2022).

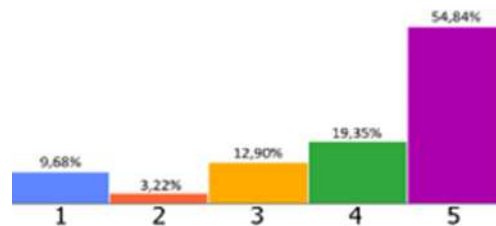


Figure 4

### Formation of WT-PMPE/TK-PPEG and Empowerment of Human Resources (FS. QF2, 2022)

Figure 4 confirms that the process of problem identification and situation analysis which always involves the community has had an impact on improving human resources, especially that experienced by WT-PMPE/TK-PPEG. The results of data analysis, as much as 54.84% stated that the impact was very high on improving human resources, 19.35% was high, 12.50% was moderate, 8.22% was lacking, and 9.68% was very low.

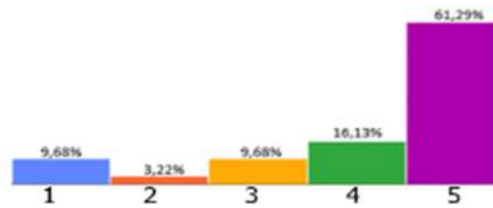


Figure 5. Formation of WT-PEPM/TK-PPEG and Knowledge Improvement

(FS. QF5, 2022)

Figure 5 confirms that the formation of WT-PEPM/TK-PPEG followed by assistance by the facilitator in preparing CAP/RKM documents has increased knowledge. The results of the data analysis stated that 61.29% had a very large increase in knowledge. 16.13% large, 9.68% moderate, 3.22% less, and 9.68% very small.

Out of 5 WT-PEPM/TK-PPEG in Muaro Jambi Regency, CAP/RKM documents were compiled with the following priority program options: 1) Fish farming; 2) Plant cultivation; 3) Goat Farm; and 4) Processed Products. Types of fish that can be cultivated on peatlands are red tilapia, black tilapia, catfish, carp, cork and toman. The type of plant cultivated is Pinang. For the types of goats that are raised, namely local goats and Etawa goats. For processed products such as banana chips. (FS, QB11 - QB12).



Demonstration of fish cultivation in Lake Rasau on the Rantau Panjang Muaro Jambi peatland

Meanwhile, the 5 WT-PMPE/TK-PPEG in Tanjung Jabung Timur Regency have prepared CAP/RKM for the following priority program options: 1) Free-range chicken farming (local = Joper); 2) goat farming (local and etawa); 3) Making Rainbow donut bakery; 4) Processed kepok banana chips; 5) Making ginger drink; 6) Cultivation of areca nut, cavendish banana, ginger, coffee, pineapple and ginger (FS, QB11-QB12).

Analysis of the study as shown in Figure 6 is confirmed by community facilitators from KIFC to WT-PMPE/TK-PPEG has had an impact on increasing human resources in the form of knowledge and skills. The results of data analysis, 58.07% stated very high. 19.35% high, 6.45% medium, 6.45% low, and 9.68% very low.





Demonstration of intercropping plants (banana, pineapple and areca nut) on peat land in Jatimulyo Village, Tanjung Jabung Timur



Demonstration of fish Nila cultivation on peat land in the village of Rawasari, Tanjung Jabung Timur

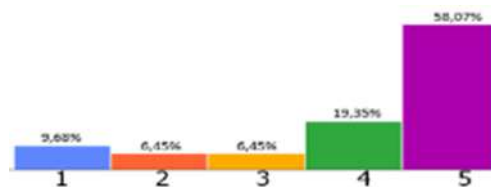


Figure 6. Assistance from Community Facilitators for Increasing Knowledge and Skills

(FS. QG4, 2022)

In its implementation, the Community Facilitator collaborate with the District Environmental Office, District Government, Village Government, social institutions in the village or village community organizations such as the Rapid Reaction Team (RRT/TRC<sup>8</sup>), Fire Care Community (FCC/MPA<sup>9</sup>), Non-Governmental Organizations, and WT-PMPE/TK-PPEG.

The Facilitator Team from KIFC acts as a messenger and is tasked with unifying the principles of preserving peat ecosystems, empowering peatlands with various forms of productive business, managing sustainable peat ecosystems, and preventing fires.

All elements of stakeholders collaborate in one principle, namely managing sustainable peat ecosystems so that peatlands become a source of life (FS. QA2, 2022), as economic assets (FS. QA3, 2022), as environmental assets (FS. QA5, 2022), and as assets towards prosperity (FS. QA5, 2022).

Improving human resources in the form of knowledge and skills that are prioritized during mentoring are: 1) Peat ecosystems; 2) The content of peat and peat soils; 3) Cultivating crops other than

<sup>8</sup> TRC = Tim Reaksi Cepat

<sup>9</sup> MPA = Masyarakat Peduli Api

oil palm and coconut; 4) Recognition of disease in goats (Ping Eye) which is characterized by symptoms of white eyes, discharge of snot or mucus, sores in the mouth, and flatulence; 5) Introduction to prevention and control of diseases in goats; 6) Determination of the type and dosage of animal feed; 7) Marketing techniques and strategies; 8) Fish farming; 9) Making floating cages; 10) Making biofloc; and 11) Making collective goat pens.

The results of the study used institutional monitoring instruments which consisted of 7 aspects, namely: 1) Organization; 2) Administration; 3) Protection and management of peat ecosystems; 4) Productive business activities; 5) Capital; 6) Partnership; and 7) Sources of Human Dava. It is known that the institutional status of the 10 TK-PPEG in Muaro Jambi and East Tanjung Jabung Regencies is as confirmed in graph 1.

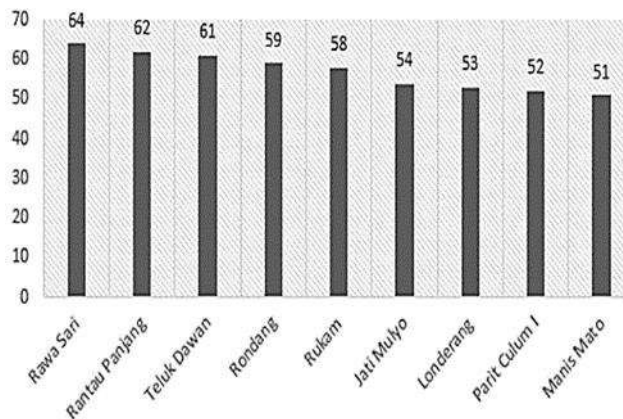


Chart1. Recapitulation of WT-PMPE/TK-PPEG Institutional Status Rank

Prioritized increase in natural resources during mentoring are: 1) Introduction of plants that can grow on peatlands; 2) Introduction of types of fish that can be cultivated on peatlands; and 3) Introduction of peatland productivity.

The strategy for cultivating peat soil for farming on peatlands (cleaning efforts) other than by burning or “**merun**” (local language) is by cleaning it manually (slashing), spraying it with poison, applying SFS (Sanggau Farming System), or using heavy equipment. (FS,2022, QB9).

The strategy for managing agricultural demonstration plots on peatlands is to apply an intercropping system, make canal blocks, choose adaptive plants, apply dolomite fertilizer before planting to reduce the pH of the peat and continue with the application of Za fertilizer after 4-6 months. In its management, of course, planning must be prepared carefully, starting from land clearing, planting, maintenance, harvesting, and post-harvest. (FS,2022, Q B10).

## Conclusion and Recommendation

1. The protection and management of sustainable peat ecosystems can be achieved effectively if it is carried out with a collaborative model of the role of stakeholders by distributing work based on empowerment. Part of the collaborators at the village level are community facilitators and WT-PMPE/TK-PPEG;
2. Stakeholder collaboration can protect the characteristics of peat, so that peat does not burn easily and peat remains a natural resource asset with carbon content;

3. Assistance from KIFC facilitators is prerequisite for an empowerment approach for the aim of effectiveness towards Peat Care Independent Villages;
4. Establishment of WT-PMPE/TK-PPEG at the village level is the right solution for the protection and management of peat ecosystems towards independent villages concerned with peat;
5. Facilitating the preparation of community work plans carried out by KIFC facilitators together with WT-PMPE/TK-PPEG has succeeded in finding innovations in empowering productive peatlands and not depending on oil palm plantations.
6. Through the CAP/RKM facilitation accompanied by collaboration with the role of stakeholders, it has succeeded in increasing human resources (knowledge and skills) and increasing natural resources (peatland productivity);
7. The fishery and agriculture demonstration plot program by selecting native plant species and their derivative products is an effort to increase the utilization of peat ecosystem functions; and
8. The much-needed assistance in the future is the institutional empowerment of WT-PMPE/TK-PPEG for their continuity; also increasing knowledge and skills for crop cultivation (other than oil palm), post-harvest processing, marketing, working capital for peatland management, and partnerships with institutions, whether government, companies and financial institutions.

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*tentang Pembangunan Hutan Tanaman Industri.*

### Formative Study

#### Analysis of Stakeholders Collaboration Model And Its Impact On Improving Human and Natural Resources In The Ivpc/Dmpg – Kifc Program

(Case study of the Burned Peatland Restoration Project in Muaro Jambi and  
Tanjung Jabung Timur Regencies, Jambi Province)

<b>A</b>		<b>Score</b>				
<b><i>The Role and Function of Peatlands</i></b>						
A1	As an environmental asset, peatlands need to be saved	1	2	3	4	5
A2	Peatlands as a source of life	1	2	3	4	5
A3	Peatland as an economic asset	1	2	3	4	5
A4	Peatland as an environmental asset	1	2	3	4	5
A5	Peatland as an asset towards prosperity	1	2	3	4	5
A6	Peatlands are only suitable for oil palm	1	2	3	4	5
<b>B</b>		<b>Score</b>				
<b><i>Utilization and Management of Peatlands</i></b>						
B1	Peatlands have not been managed properly	1	2	3	4	5
B2	Knowledge & skills of peat farmers are still limited	1	2	3	4	5
B3	Management of peatlands is more difficult than mineral soils	1	2	3	4	5
B4	Peatlands are more suitable for community management	1	2	3	4	5
B5	Peatlands are more suitable to be managed by companies	1	2	3	4	5
B6	The role of the community starts planning, implementing, utilizing, maintaining, monitoring, and program development	1	2	3	4	5
B7	There needs to be a specific policy regarding the management of the Company's peatlands	1	2	3	4	5
B8	Clearing peatlands can only be done by burning	1	2	3	4	5
B9	Apart from burning, the strategy for cultivating land (clearing) for agriculture on peatlands is by					
B10	Strategies for managing agricultural demonstration plots on peatlands					
B11	Plants most suitable on peat					
B12	Types of fish that live in peatland canal					

<b>C</b>	<b>Peatland Fire Status</b>	<b>Score</b>				
C1	Peatland fires are caused by deliberate burning	1	2	3	4	5
C2	Peatland fire due to accidental burning	1	2	3	4	5
C3	Who is most responsible if a peatland fire occurs?					
C4	Why do peatland fires keep happening					
C5	If there are members of the community who are proven to have set fire to peatlands for farming, what sanctions should be applied					
C6	Strategy for extinguishing fires on peatland					
<b>D</b>	<b>Peatland Assistance and Rescue</b>	<b>Score</b>				
D1	As a Natural Resource Asset, peatlands need to be managed professionally by experts	1	2	3	4	5
D2	Currently, the government's efforts to save peatlands have not been successful because they are not experts	1	2	3	4	5
D3	Need assistance to peatland farmers	1	2	3	4	5
D4	Assistance for peatland farmers by University	1	2	3	4	5
D5	Assistance for peatland farmers by the Government	1	2	3	4	5
D6	The government needs to set aside funds for the total management of peatlands	1	2	3	4	5
D7	Government employees cannot optimally work on peatland management because they are busy with other programs	1	2	3	4	5
D8	Assistance from Government elements for peatland farmers is not yet 100% due to workload	1	2	3	4	5
D9	Government officials' knowledge of peatland management is still low	1	2	3	4	5
D10	Post-harvest assistance is very important	1	2	3	4	5
<b>E</b>	<b>Peat Land Management Capital</b>	<b>Score</b>				
E1	Communities can contribute to business capital for peatland management	1	2	3	4	5
E2	Management of peatlands does not require a large amount of money if local communities are involved	1	2	3	4	5
E3	The source of funds for business capital is a mutual fund between loans and self-help	1	2	3	4	5
E4	Knowledge and skills are the capital of peatland management	1	2	3	4	5
E5	Business skills as peat management capital	1	2	3	4	5
<b>F</b>	<b>WT-PEPM/TK-PPEG Institution and Human Resources Development</b>	<b>Score</b>				
F1	Formation of WT-PMPE/TK-PPEG for peatland management	1	2	3	4	5
F2	Formation of WT-PMPE/TK-PPEG for Human Resources empowerment	1	2	3	4	5
F3	Need an understanding of the institutional dynamics of WT-PMPE/TK-PPEG	1	2	3	4	5
F4	Skills upgrading to WT-PMPE/TK-PPEG is required	1	2	3	4	5
F5	Increased knowledge of WT-PMPE/TK-PPEG is needed	1	2	3	4	5
<b>G</b>	<b>KIFC</b>	<b>Score</b>				
G1	Assistance from KIFC Facilitators	1	2	3	4	5
G2	Realization of CAP/RKM by KIFC	1	2	3	4	5
G3	The need for assistance by the Facilitator	1	2	3	4	5
G4	Knowledge & skills increase from the Facilitator	1	2	3	4	5

**H**

**Partnership**

- H1 WT-PMPE/TK-PPEG partners in the Village
- H2 WT-PMPE/TK-PPEG partners outside the Village
- H3 Facilitation of work partners by the Facilitator

**I**

**Problems or Constraints**

- I1 Problems or Obstacles in managing WT-PEPM/TK-PPEG
- I2 Problems or constraints in managing fish farming
- I3 Problems or constraints in managing agricultural/plant cultivation
- I4 Problems or constraints in managing the production of banana chips
- I5 Problems or constraints in managing cake production

**J**

**Sustainability and Independence**

- J1 Hope that the business will continue?
- J2 Hope that business capital does not run out?
- J3 Hope that WT-PMPE/TK-PPEG will become an independent institution?

**K**

**Recommendation**

- K1 Suggestions/recommendations for the Department of the Environment
- K2 Suggestions/recommendations for Village Official
- K3 Suggestions/recommendations for Business or Economic Institutions
- K4 Suggestions/recommendations for University
- K5 Suggestions/recommendations for the Facilitator
- K6 Suggestions/recommendations for the community

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