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ICCTF Indonesia Climate Change Trust Fund

PROJECT COMPLETION REPORT (PCR)

Sustainable Forest & Peatland Management to Reduce Emission in Indonesia through Local Actions (TEGAK)

INDONESIA CLIMATE CHANGE TRUST FUND

Report Composition

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Executive summary

The project titled **"Sustainable Forest and Peatland Management to reduce emission through local actions"** is a land-based mitigation project funded by the United Kingdom Climate Change Unit (UKCCU) and implemented by the Indonesia Climate Change Trust Fund (ICCTF), in close collaboration with the Peatland Restoration Agency (BRG), Ministry of Environment and Forestry (MoEF), Local governments (provincial, district, villages), and Civil Sociaty Organization in five provinces (Riau, Jambi, South Sumatera, West Kalimantan and Central Kalimantan) and co-operation with other key stakeholders in targeted provinces.

The original contract signing between UKCCU and ICCTF was held on April 4, 2016, for a 2-year project. UKCCU officially awarded ICCTF with the sum of £3,000,000, while the Government of Indonesia allocates about £600,000 through state budget as project's co-financing. The UKCCU funded program is expected to bring impact for responsive and accountable management of peatland and forest fire in five targeted provinces. In particular, the project further aims to restore the post-fire peatland area 73,600 ha and reduce fire hotspots to 15,610 hotspots.

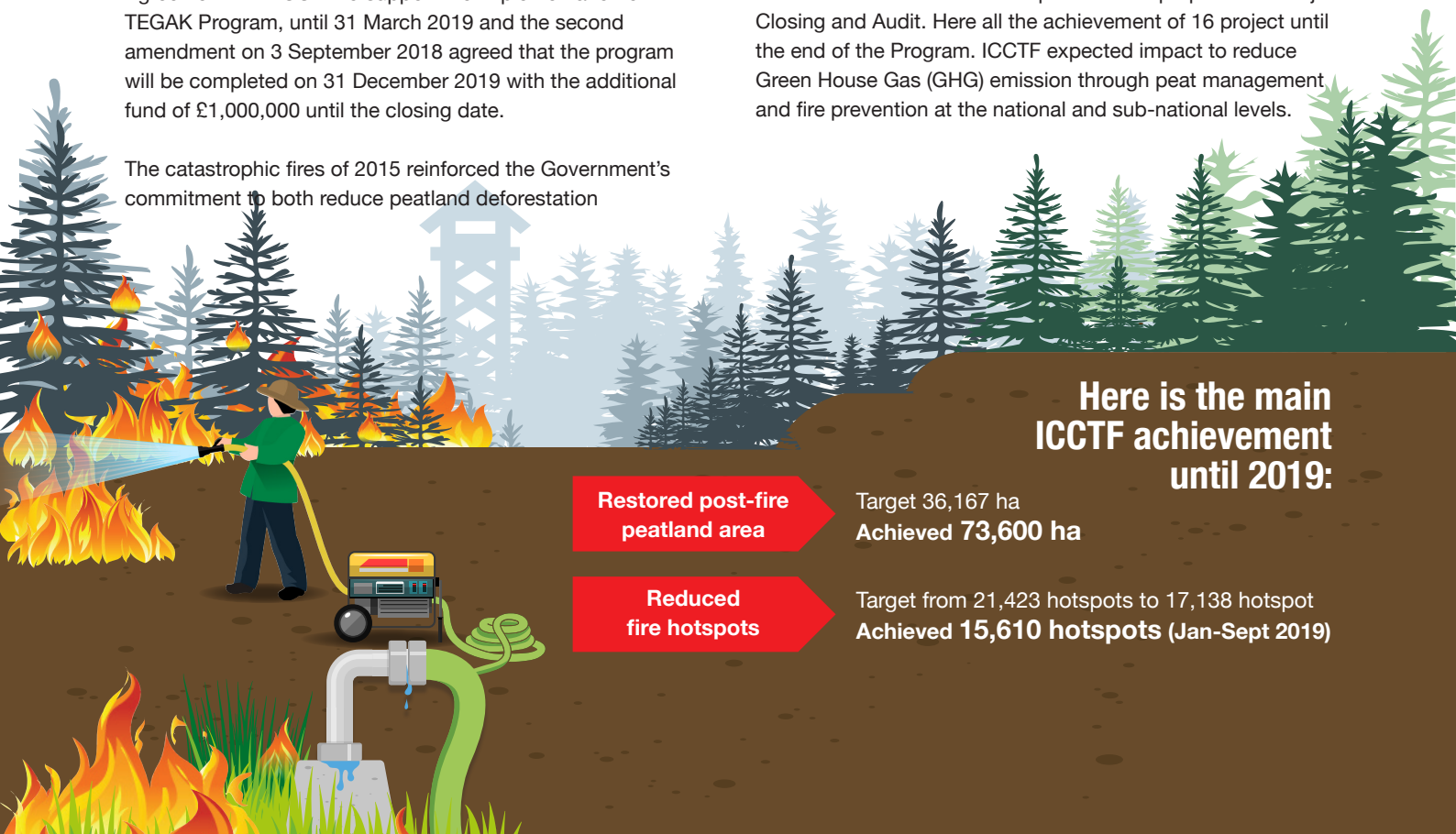
ICCTF's target to mitigate GHG emission under the land-based window is in accordance with the funding from UKCCU under the Forestry, Land Use and Governance Program in Indonesia to support promoting sustainable management of forests and land-use actions in Indonesia to reduce greenhouse gasses (GHG) emissions and deforestation and improve the livelihoods of forest communities or TEGAK Program.

In November 2017, UKCCU signed an amendment of Grant Agreement with ICCTF to support the implementation of TEGAK Program, until 31 March 2019 and the second amendment on 3 September 2018 agreed that the program will be completed on 31 December 2019 with the additional fund of £1,000,000 until the closing date.

The catastrophic fires of 2015 reinforced the Government's commitment to both reduce peatland deforestation and fires, rewet and restore degraded peatlands as well. Following the commitment, The ICCTF-UKCCU Program in 2018 was implemented in the 2 following locations, which areSemenanjung Kampar in Riau Province (KHG Sungai Siak – Sungai Kampar) and also the former establishment of a million hectare of A and E Peat Block, Central Kalimantan Province (KHG Sungai Kapuas – Sungai Barito). Riau Province becomes one of the targeted projects as this province has the largest Peatland in Indonesia reaching 51.06 % of Riau's total land area. (BPS, Statistic Office of Riau province, Bappeda of Riau province, 1995). While Central Kalimantan province as another targeted area, considering the peat area reaches 3,472 million Ha or about 21.98 % of the total area of Central Kalimantan. The focus of this grant is designed to support the effort of the Indonesian government on reducing emissions from forest, plantation and peatland fire. The activities of this program should be in line with the concept of peat restoration program initiated by BRG which is known as 3R, they are (R1) Rewetting (the construction of infrastructure of peat re-wetting through canal blocking technique), canal backfilling, deep wells, and others; (R2) Revegetation (revegetation through planting trees/endemic plants of peatland/natural succession); and (R3) Revitalization of local livelihood (revitalization of local communities livelihood) appropriate with the document of Peat Restoration Contingency Planning in 2017.

In order to support TEGAK Program, a Call For Proposal have held in 2017 – 2019, until the closing date of Call for Proposal, there is 13 downstream partner with 16 project.

The TEGAK program has finished with the 13 downstream partners with 16 project in 2019. All the output has delivered by the end of August 2019 and the rest of the month until December was administration process and prepared for Projet Closing and Audit. Here all the achievement of 16 project until the end of the Program. ICCTF expected impact to reduce Green House Gas (GHG) emission through peat management and fire prevention at the national and sub-national levels.



Here is the main ICCTF achievement until 2019:

Restored post-fire peatland area

Target 36,167 ha
Achieved 73,600 ha

Reduced fire hotspots

Target from 21,423 hotspots to 17,138 hotspot
Achieved 15,610 hotspots (Jan-Sept 2019)

I. Background

During the Conference of the Parties 21 (COP 21) in Paris, France, President Joko Widodo raised up the issue on Indonesia's commitment to combat forest fires and effort on greenhouse gasses reduction. "In order to reach Paris commitments, all parties, all parties must contribute more in mitigation and adaptation,". The President has committed some actions including peat restoration, permits reviews, and moratorium concerning permits issuance on peat development. However, in order to achieve the target of emission reduction up to 29% of business-as-usual (BAU) level by 2030, an attempt to reduce forest fires is needed. El Nino, on the other hand, had worsen the situation in Sumatra and Kalimantan.

The President promised land-management reforms on archipelago's annual wildfires. More than half a million people were diagnosed with various respiratory problems due to the smog after at least 2.1 million hectares of land were burnt. To avoid another destruction, the President plans to enforce a moratorium on peat soil development, claw back plantation licenses on peat to begin blocking hundreds of thousand kilometres of canals used to drain the marshes for planting.

The commitment made through the Intended Nationally Determined Contributions (INDC) is voluntarily and based on the ability of each country. Indonesia made a commitment to reduce emissions by 29 % compared to BAU scenario in 2030, or equivalent to a reduction of 0.848 Giga tons of CO_2 in 2030 and 41 % with international support (equivalent with 1.191 Giga tons of CO_2) (Figure 1).

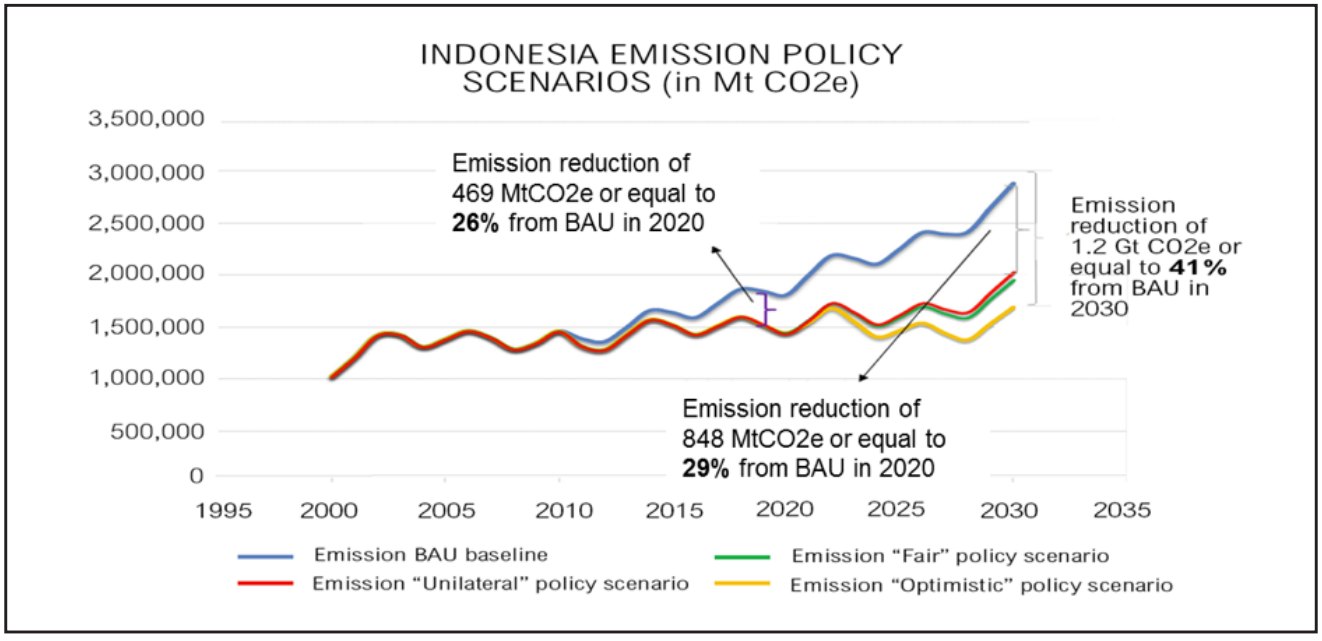


Figure 1. INDC calculation based on a scientific assessment - a strict policy and use the latest available data and information (without creating an additional burden or more).

In October 2015, there are more than 115,000 fire spots across the archipelago from Aceh to Papua, where most are concentrated in South Sumatra, Riau and Jambi, and also in Central and West Kalimantan. The fires burnt almost 1.7 million hectares of both islands which means at least 1.6 GT (CO_2, CH_4, N_2O) emissions were released during the fire in October 2015. It doubles up the comparison to fires in 2014 or about six times in comparison to fires in 2013.

Fires contributed to put Indonesia as the third world largest carbon emitter. The case would weaken the initiative to achieve the National Action Plan which aims to reduce GHG emissions (RAN-GRK) by 26% - 41%. The land use, land use change and forestry sector once again have generated the highest GHG emission. The effort to mitigate emission from LULUCF becomes more important than ever. Hotspot maps indicated that most fire happen in the peat area. Fires in dry peat will not stop without water-logging attempt, which is only possible due to heavy rain.

Government, civil society organization, and academic institutions in Indonesia has put their best effort in dealing and finding the best solution for haze and fire problems. The government already issued several legal basis such as President Instruction No. 11/2015 on Strengthening Control on Land and Forest Fire, Circular Letter from Ministry of Environment and Forestry to forbid land clearing on peat land. The Government also create Peat Restoration Agency with a Presidential Decree No: 1/ 2016. The agency aims to re-wet 2 million hectares of peatlands, vast swaths of which have been drained for oil palm and pulpwood monoculture.

Almost every environmental NGOs and Research Centre stated their position regarding this matter. An integrated action to prevent fire and haze problems is needed. The government already stated their actions such as: early warning system of land and forest fires, moratorium to open new peat land area for commercial activities, increase awareness of sustainable peat management, and regulation for innovative tools and technologies for land clearing. However, these efforts need cross-sector collaborations and support from multi stakeholders to achieve its target. The huge forest and peatland fire at 5 provinces in Sumatera and Kalimantan has occurred in Indonesia. More than 2.6 million forests and peatland area has burned with around 120,000 hotspots appear and moreover the economic loss reached for 20 trillion.

The Government of Indonesia has received funding support from United Kingdom Climate Change Unit (UKCCU) with total budget allocation £ 4,000,000 until 31 December 2019 to support ICCTF in implementing “Sustainable Forest and Peatland Management to Reduce Emissions” or known as TEGAK Program. This program aims to improve forest and peat management through direct collaboration with central and local government. Through the program., ICCTF demonstrated increasing strategic engagement beyond individual project level, with regard to peatland management models through Badan Restorasi Gambut (BRG) and low carbon development through Badan Perencanaan Pembangunan Nasional (Bappenas).

IMPACT

The program’s impact is expected to improve forest and peat management in 5 (five) targeted provinces (Jambi, South Sumatera, Riau, West Kalimantan, and Central Kalimantan) and will be measured by the following indicators:

- Total area (ha) of community-managed of degraded peatlands by at least 5% (26,167 ha). This area has been subject to raised water table following blocking of canals and rewetting.
- Reduced fire hotspots by 20% from 21,423 to 17,138 hotspots.

OUTCOME

- Improved forest and peatland management through direct collaboration with national and sub-national government.
- Enhanced fire prevention strategies and promoting best practices in the grassroot level.

OUTPUT

- Mechanism for identifying, selecting, supporting forest and peatland programs.
- Projects selected and funded bring a positive impact on forest and peat land management.
- Projects selected and funded bring a positive impact on fire prevention strategies.
- Monitoring and evaluation and learning.

Figure 2. Focus area of ICCTF-UKCCU intervention for TEGAK project.

II. TEGAK program in a glance

"Forest and Peatland Management to reduce Emission in Indonesia through Local Actions (TEGAK)" is located in 5 Provinces comprises of Riau, Jambi, South Sumatera, West Kalimantan, and Central Kalimantan which implemented in the grass-root level in collaboration with downstream partner through selection process (Call for Proposal and Call for Institution). This project is in close coordination with Peat Restoration Agency (BRG) and in line with its target known as 3R program which is R1 for Re-Wetting, R2 for Revegetation and R3 for Revitalization of Local Livelihood through MoU between ICCTF and BRG on October 06th, 2016 and Peatland Contingency Plan 2017.

ICCTF, having received a with-cost extension selected 5 new projects in the two provinces of Riau (3 projects) and Central Kalimantan (2 projects). Projects are all located in peatland areas and include activities designed to reduce the incidence of peatland fires as well as rewetting of drained peatlands. Since 2016, the program has finished the project in collaboration with 13 downstream partners. All the output has completed by the end of August 2019 and the rest of the month until December was administration process and prepared for Project Closing and Audit. Here all the achievement of 16 project until the end of the Program. ICCTF expected impact to reduce Green House Gas (GHG) emission through peat management and fire prevention at the national and sub-national levels. The main ICCTF achievement until 2019 are:

RESTORED POST-FIRE PEATLAND AREA

Target: 36,167 ha
Achieved: 73,600 ha

REDUCED FIRE HOTSPOTS

Target: from 21,423 hotspots to 17,138 hotspot
Achieved: 15,610 hotspots (Jan-Sept 2019)

Livelihood activities are a central element of support with a focus supporting women in income generating projects such as horticulture and aquaculture. At the national level, ICCTF has strengthened its engagement towards low carbon development pathways and communicating LCDI models and approaches for the next The Medium-Term National Development Plan (RPJMN). Furthermore, ICCTF have continued to engage with line ministries around the importance of including livelihood elements within peatland rewetting and fire prevention. ICCTF achievements since 2016 are shown in the graph below.

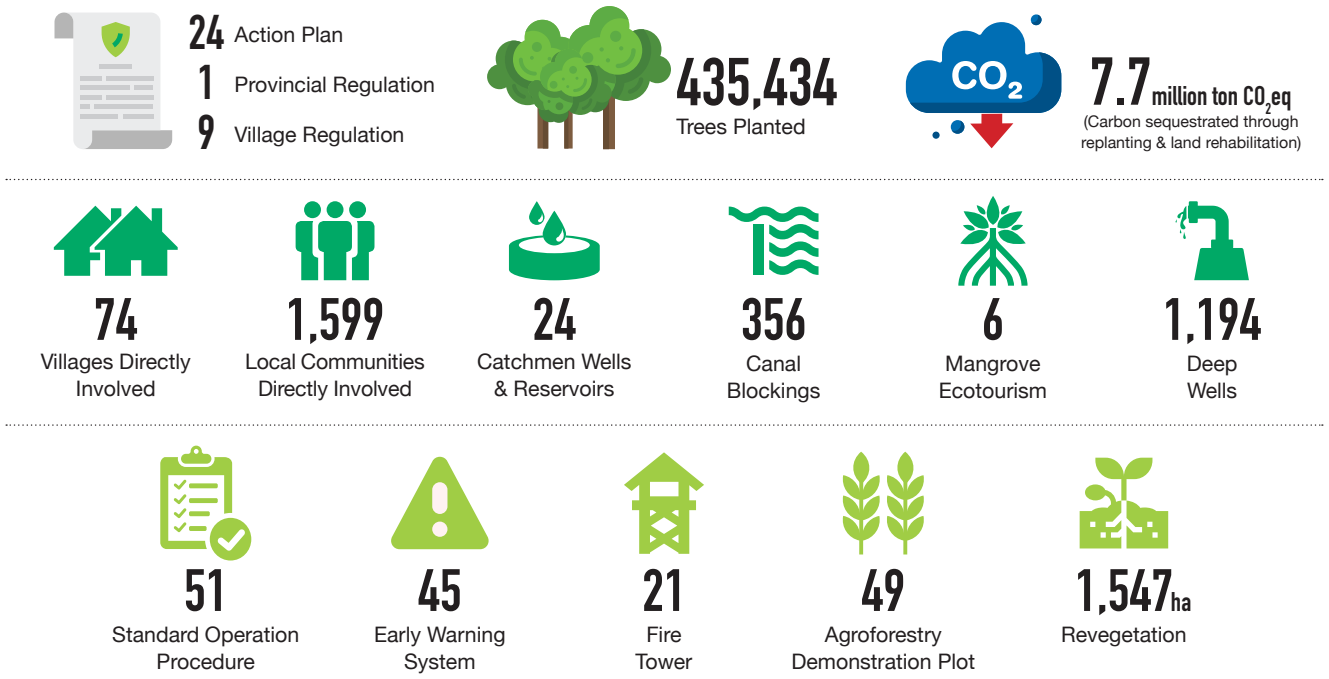


Figure 3. ICCTF-UKCCU Achievement in TEGAK Project.

The restoration program on degraded peatland have covers mainly three main activities, namely rewetting, revegetation, and economic revitalization on peatlands. The Ministry of National Development Planning, through the ICCTF, collaborates with local stakeholders on site to compile and implement various programs that support activities that have the potential to reduce emissions, including the construction of canal blocking and canal backfilling as activities to rewetting peat, prevent further damage from fires, such as deep well and fire monitoring tower, and revegetation activities of native peatland plants, as well as economic revitalization activities for communities on degraded peatlands through the planting of various commodities with high economic value plant.

Based on the analysis conducted, the average total carbon stock value for all ICCTF proponents ranged between 571 and 2,670 Mg C ha-1 where 99% of the total ecosystem carbon stock is in the organic soil compartment. The contribution of carbon stocks from other compartments such as trees, roots, and dead wood to the total carbon stock is relatively small (only about 1%) and varies significantly to the type of land cover. The analysis results indicate that carbon stocks in natural ecosystems will be drastically reduced if deforestation and land cover change occur, especially in the biomass compartment. The reduction in carbon stocks from the vegetation biomass above has implications for increasing carbon emissions or GHGs.

The analysis conducted in this report is still based on reference data on land cover maps from The Ministry of Environment and Forestry and Research and Development Center of Agricultural Land Resource (BBSDLP) peat distribution maps in 2011. Data analysis has not included data or information on the amount of land change rate in each proponent (activity data). Basically, land conversion will have a significant impact on the increase in GHG emissions, especially CO_2. Increased CO_2 emissions (GHG emissions factor) 72 and 49 Mg CO_2/ha/yr respectively when primary peat is converted to agricultural land (including cultivation and oil palm plantations) and deforested. Conversely, mitigation-based management interventions such as the construction of canal blocks contribute to a reduction in CO_2 emissions (GHG removal factor) of around 33 - 47% or 27 - 51 Mg CO_2/ha/yr.

Various types of GHG emission mitigation efforts undertaken by the ICCTF proponent include the construction of canal blocking in degraded peat ecosystems (revegetation and agroforestry), as well as conservation management (avoided emissions from land use change). From rewetting, there is a total potential for GHG emission reduction of 0.41 - 3.1 Mt CO_2 yr-1 or equivalent to 0.08 - 0.63% of the national forestry emission reduction target in the NDC. Interventions in the form of revegetation and agroforestry can contribute to the potential of increasing carbon stocks around 0,0006 - 0.002 Tg C yr-1 (equivalent to 0.002 - 0.007 Mt CO_2 yr-1) and only contributing around 0.001% of the national emissions reduction target in the forestry sector. Furthermore, the amount of annual emissions avoided from management of conservation of peat and mangrove ecosystems in the ICCTF proponent's working area can reach 9.6 - 78.6 Mt CO_2 yr-1 (assuming the rate of change in land use change runs around 10 years or calculated from the NDC implementation target between 2021 and 2030), and is equivalent to 0.02 - 0.15% of the national target. Broadly speaking and if carried out on a sustainable basis, restoration of degraded peat as well as improving conservation management and suppressing the rate of change in land cover in peat and mangrove ecosystems have a major contribution in mitigating national GHG emissions.

III. Output achievements

OUTPUT 1

Activities	Milestones (as of December 2019)	Achievements	Short narrative
Number of Eligible proposals identified and supported	10 proposal	16 proposal	This number of the proposal was held into 2 sections, 1st Batch on 2017-2018 and 2nd Batch on 2018-2019.

The proposal identified and supported by ICCTF-UKCCU was 13 downstream partners with 16 Programs. There are 3 downstream partners was re-funded with a new proposal on 2nd Batch (YMI, RWWG, and P2KLH). This is our mechanism for the funding proposal.

Referring to Standard Operation Procedure (SOP) regarding the ICCTF Trustees (LWA), funding mechanisms of ICCTF bound to the national budget process, based on *On Budget – Off Treasury system*, including the delivery mechanism (Figure 3 and 4) through:

- Funding Selection Process: The project selected by a Steering Committee composed of representatives of the National Development Planning Agency, the Ministry of Finance, the National Council on Climate Change, and development partners

- Criteria: ICCTF consists of two stages: Innovation Fund and the Transformation Fund. Free ' Innovation Fund ' grants come from the budget of the Government of Indonesia, Development Partners and other financial contributors that will be used for activities that provide indirect economic and social benefits in order to increase low-carbon investment

PROCESS OF PROPOSAL SELECTION

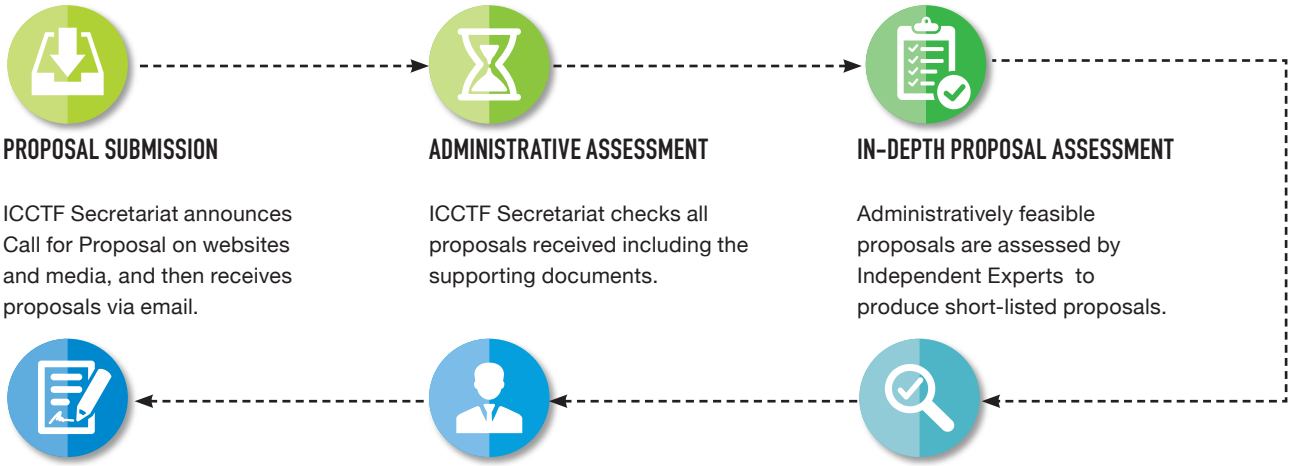


Figure 4. Process of Proposal Selection of ICCTF-UKCCU program.

In regards to TEGAK Programme, this program has developed and obtained approval for the call for proposal guidelines, issued calls for proposals, received 50 proposals with the project goals of peatland restoration and fire management, in-depth proposal assessment and selected 11 of the best proposal through consultative meeting with relevant work units in Bappenas. Grant has been awarded to NGOs, community groups and universities and further referred to 'downstream partners'. Prior to issuing the agreements with downstream partners (implementing partners), a due-diligence process was conducted, including coordination with other projects to avoid the overlapping and double-funding. Those selected proposals are listed in the following table.

Table List of Proposals and Submitter approved and supported by ICCTF Batch I

No	Downstream Partner	Province	Title of Activity	Contract Period
1	A consortium of Yayasan Mitra Insani	Riau	Climate Change Mitigation through the Improvement of Stakeholders Participation in Forest and Peat Land Management Based on Peat Hydrological Unity.	February 2017 - March 2018
2	Faculty of Fisheries and Marine Sciences, University of Riau (Faperika, UR)	Riau	Peat Forest Conservation through Fisheries for Community welfare in Sungaitohor village, Kepulauan Meranti District, Riau Province	February 2017 - April 2018
3	Riau Woman Working Group	Riau	Women's Group Initiation on Reducing Emission from Forest, Field, and Peatland in Pelintung, Guntung, Gungtung, Mundam and Teluk Makmur (Dumai Municipality) (Women's Group Collaborative Approach and Community Taskforce on Fire Prevention on forest and peatland fire management to reduce carbon Emission.	February 2017 - February 2018
4	Jambi Peatland Restoration Consortium	Jambi	Developing Sustainable Agriculture Model and Restoration of Post Fire Peatland Ecosystem Based on Land Use	February 2017 - March 2018
5	Consortium of Walhi South Sumatera	South Sumatera	Protection and Management of Peatland through Ecological Rural Scheme	February 2017 - March 2018
6	The consortium of Hutan Kita Institute	South Sumatera	Developing Demonstration Plot and Pilot of Peat Restoration in Post Fire Peat Swamp Forest Area as a Pilot Site for Program Priority Location of Peat Restoration Agency at MUBA and OKI district, South Sumatera.	February 2017 - May 2018
7	Sampan Kalimantan	West Kalimantan	Strengthening Community Participation by Optimizing Non-Timber Forest Products and Environmental Services in Village Forest to Restore and Protect Peat Ecosystem Sustainability of Bentang Pesisir Padang Tikar	February 2017 - May 2018
8	Consortium Walhi West Kalimantan	West Kalimantan	Facilitation of the Rehabilitation of Degraded Peat Swamp Forest Area as a Result of Fire	February 2017 - May 2018
9	Perkumpulan Pancur Kasih	West Kalimantan	Improvement of Forest and Land Governance through Forest and Land Fire Prevention and Reforestation for Community Welfare	February 2017 - May 2018

10	Center for Forest and Land Rehabilitation, University of Palangkaraya (P2KLH Universitas Palangka Raya)	Central Kalimantan	Construction of Deep Wells and Fire Breaks for Peat Fire Prevention in Central Kalimantan	February 2017 - June 2018
11	The consortium of Borneo Nature Indonesia Foundation	Central Kalimantan	Protection and Restoration of Peat Land in Sabangau Area	February 2017 - March 2018

The second Call for Proposal or Batch II was conducted in the same year. Through the submission process, the five following proposals were selected to be funded by ICCTF.

Table List of Proposals and Submitter approved and supported by ICCTF Batch II

No	Downstream Partner	Province	Title of Activity	Contract Period
1	Yayasan Mitra Insani	Riau	Climate Change Mitigation through parties participation enhancement on forest and peatland management based peat hydrology unity between Siak River and Kampar River	June 2018 – June 2019
2	Center for Forest and Land Rehabilitation, University of Palangkaraya (P2KLH Universitas Palangka Raya)	Central Kalimantan	The Implementation of 3R Peat Restoration Program on Blok A & E ex Peatland Project (PLG) at Kalimantan Tengah	June 2018 – August 2019
3	Riau Woman Working Group	Riau	The Protection and Sustainable Management of Peatland by Women Group as an emission reduction from the forest and land fire at Kampar Peninsula	June 2018 – June 2019
4	PPLH-PI Universitas Kristen Palangka Raya	Central Kalimantan	Re-wetting and fire prevention at Peatland	June 2018 - March 2019
5	Consortium Elang	Riau	Land and forest fire mitigation and restoration effort based on the community through the land object of agrarian reform (TORA) to actualize sustainable peat management practices and to support the Siak Hijau District Program	June 2018 – June 2019

OUTPUT 2

Activities	Milestones (as of December 2019)	Achievements	Short narrative
Integrating peatland hydrological ecosystem into one map policy at provincial spatial plan	**5** district	**9** district	Governor Regulation of Jambi No. 31/2016 about *Petunjuk Teknis Pelaksanaan Pencegahan dan Pengendalian Kebakaran Hutan dan Lahan*
Number of pilot sites using rules and procedures on restoring and re-wetting post-fire peatland	**200** Canal blocking	**356** Canal blocking	**Program R1 (Rewetting)** built 356 canal blocking, 1,194 deep wells, 9 km backfilling, 24 reservoirs, 21 Tower, **Program R2 (Revegetation)** plant 397,884 seedlings on 1,547 hectares
Number of established peat ecosystem agroforest in each targeted province	**10** Villages	**46** Villages	Each target village has done plant cultivation which increasing the economy of community, such as holticultural plant, pineapple, coconut,liberica coffee, petai, rubber, paddy, herbal plant, sago, areca nut, also endemic plant like jeluntung, blangiran, jernang, ect.

On the national level, Consensus on several aspects related to map and definition needs to be achieved and settled by one map policies. In a sub-national government, this one map policies should be translated into their spatial plan and development plan. The local task force will organize various stakeholders such as companies, communities, local governments, and NGOs. This local taskforce would coordinate and works under the supervision of the new Peat Restoration Agency. The task force will have to allow relevant stakeholders to accept the decision that has been made. One of the examples of decisions that will be taken by the task force is to decide which area and activity need to be closed. To close an existing agriculture or forestry company, the task force needs to accommodate certain aspects such as to permit length, harvesting period and small-medium enterprise's capability to recover.

In order to avoid recurring peat fire is to rehabilitate or restoring peatland function. To restore the Peatland ecosystem, the high water level is needed. Closing all canals will be one of the solutions to keep water level high. In the peat rehabilitation process, maintaining effective blocks is important. A primary (perimeter) canal with several subsidiaries will be blocked as an example of effective canal blockings. The community, local government, and other relevant stakeholders need to engage and discuss canal placement. The decision of which canal to be blocked and how it will be blocked, (permanent) or not (might be just gated) will be the result of this consensus.

Several effective methods of canal blocking have implemented in accordance with the water level needed. Pulp plantation, palm oil, and *paludiculture* would need different water levels. To create the best options of canal blocking for forest management unit, as well as gate standard, for effective blocking and channeling water in cultivated peatland. The methods and implementation guidance on peat restoration will need to be created and endorsed by PRA. Peat water management sometimes fails due to heavy rain. The water could flow to the side of the structure. Strengthening the surrounding area of canals blocks with deep root trees will improve the effectiveness of blocks. The cost of restoring peat can be very expensive, therefore the effectiveness and efficiency

of methods and placement of structure would be very important in order to achieve restore the state of peat function.

This program activity is in line with the concept of the peat restoration program implemented by the Peat Restoration Agency (BRG), known as 3R, namely (R1) Rewetting (development of peat wetting infrastructure through canal blocking techniques, canal backfilling, canal backfilling), wells drill (deep wells), and other techniques); (R2) Revegetation (revegetation through tree planting/ peat endemic plants/natural succession); and (R3) Revitalization of Local Livelihood according to the MoU document between the ICCTF and BRG on. 6 October 2016 and 2017 Peatland Restoration Contingency Plans.

Community involvement as direct beneficiaries is very good. ICCTF together with downstream partners The level of public awareness and ownership of the assets built is very visible. This is demonstrated by the support of the village government by budgeting village funds for sustainability and also maintenance of the rewetting assets that have been built. A total of 16 village commitment letters have been made as a form of village government support for the sustainability of the TEGAK Project in 2019.

The village commitment to allocate funds has been implemented since 2018 starting from 6 intervention villages from the Mitra Insani Foundation. The Village Development Work Plan (RKP) allocates at least 10-32 million in 2018 for MPA operational costs and other peatland activities (such as agroforestry).

There is one method we use in managing peatlands to improve the economy as well as to prevent fire in agriculture. The use of land clearing method without burning (PLTB) is an effective method applied on peatlands. This practice is applied in the form of demonstration plots (demonstration plots) which provide training in land management and initial seedlings to later be used as basic capital in its development.

Figure 5. One of Demplot, Pineapple cultivation on Kampung Ara Permai.

One example is the Kampung Ara Permai Women's Farmers Group has harvested the pineapple in mid-August 2019 which was planted in November 2018, the number of pineapples to be harvested is 8,000 sticks, with the current market price of Rp 7,500/2 pcs (trailer), the estimated group income in the pineapple harvest is around 4,000 pineapple trailer x Rp 7,500 = Rp 30,000,000.

In addition, another form of support to improve the community's economy is to develop mangrove ecotourism in several locations at the project site. The revitalization of ecotourism together with the ecotourism management has been carried out and the ecotourism has again been active and resulted in good income. The revitalization include track, facilities, and capacity building for the officers. This revitalization aiming the number of visitors and better ecotourism management in the future.

Figure 6. one of the ecotourism area of Kayu Ara Permai, has succesfuly revitalize.

the increase in the number of visitors to one of the ecotourism mangrove area of Kayu Ara Permai, from the number of visitors from January to May totaling around 3,000 people, and after training in May 2019, data from the last guest book record was increased to 7,000 more visitors, meaning that there were 4,000 increases number of visitors. From the surge in visitors to the Ara Permai Timber Ecotourism area, it can be calculated that the economic increase has occurred: the levy to enter the permeable fig wood mangrove ecotourism area is Rp 5,000 x 4,000 = Rp 20,000,000, - then the average parking fee is 50% of the total number of visitors, namely 2,000 vehicles, times 2,500 vehicles (average cars and motorbikes), Rp 2,500 x 2,000 = Rp 5,000,000, so that if the total income of the mangrove fig mangrove management group is added together, it is: Rp 20,000,000 + Rp 5,000,000 = Rp 25,000,000.

OUTPUT 3

Activities	Milestones (as of December 2019)	Achievements	Short narrative
Number of training conducted for community members and local government officer to combat fire	1,000 person	1,599 person	Training participant consist of all the MPA members, village government officers, and local community
Number of dissemination activities including innovative outreach conducted	150 Health Center 600 Schools	180 Health Center 609 Schools	Desimination has done in school where located on project district location in elementary shcool, junior highschool and senior highschool with various media such as booklet, leaflet, poster, radio broadcast, talk show, comic, calendar.
Number of Standard Operating Procedures (SOPs) and Early Warning System (EWS) concerning fire responses developed	40 SOPs	51 SOPs	SOP & EWS drafting has done to the all intervention villages in form document and early wardning board for fire.

Human resources during fire occurrences in the last few years are not sufficient enough to overcome the vast extension of fire, especially those that have been training into especially for combating fire. An effort from MOEF to include citizens or community to actively engage in combating fire needs to an extent. The increasing number of MPA volunteer in each targeted area and training them with combating fire technique would increase the chance of curbing the fires.

The local government officer or civil servants that serve in the area that prone to peat and forest fires also needs to have knowledge of combating fire. Training them will increase their ability to work in case of fire occurrences. Enhanced network and capabilities of fire readiness community group (MPA-*Masyarakat Peduli Api*) and an improved capabilities village and sub-district organization in order to work alongside BNPBD in needed time such as fire problem happens.

One of the important keys to preventing fire is to change people's behavior toward forest and peatland fire. People tend to forget the impact of a forest fire on them unless they were instantly feeling the problem. This ignorance both in preventing the fire from happening in the first place and from stopping fire to disperse to another area. The full extent of long-term smoke inhalation remains unknown, but researchers fear the effects of the fires may be far worse than they had anticipated. The effects of any smoke on human health are well documented, and even casualty from haze is recorded, but not enough to deter people from burning and not enough to increase awareness from those that probably affected. Dissemination of health issues, biodiversity, and other issues is a must to make people aware of the level of danger of haze and burning peat and forest. The program will target all elementary school and public health facilities in five targeted provinces will have an information sheet about the danger of haze and fire.

The ICCTF has succeeded in forming and training community groups as pilot pilots for peatland management starting from fire disaster mitigation, peatland management with the method of land clearing without burning (PLTB) and training to increase the capacity of community groups. This community group is called the Fire Readiness Community Group (MPA). MPAs were formed in all intervention villages and currently, there are 89 MPA groups with a total of 1,599 people.

Figure 7. Group photo of MPA training for drilled well at Desa Tumbang Mangkutup and Katunjung, Center Kalimantan.

The MPA was given training for the construction of wetting infrastructures such as drilled wells, canal blocking, canal hoarding, and fire monitoring towers. Direct involvement of MPA in terms of infrastructure development so that MPA can gain knowledge for the future and as an economic improvement (seasonal) during the TEGAK project is carried out. Not only that, MPA along with the village government were given training in fire mitigation with good drills that had been built.

Downstream partners also conduct various forms of dissemination to various schools and public health facilities, including public health centers (*puskesmas*). This dissemination was carried out as a form of awareness to increase community awareness of the importance of protecting peatlands around them. Through posters, leaflets, comics, as well as banners and billboards in the form of print media and through radio and local TV broadcasts are also carried out.

OUTPUT 4

Activities	Milestones (as of December 2019)	Achievements	Short narrative
Number of monitoring activities undertaken that result in a change	15 quarterly reports	16 report	12 quarterly, 3 annual report and PCR
Number of FGDs undertaken for allowing the learning process and knowledge sharing	5 FGD	5 FGD	

Provide detail narrative and explanation.

IV. Lessons identified this year linked to this output and recommendations for future programs

Field dynamics often have an impact on changes in the time of implementation which will ultimately affect the time to achieve program targets. Matching the time of activities with the availability of community time will determine the level of community participation and program success.

The development of ecotourism potentials and peatland care economic products is not only a form of community economic and social improvement but also as a model for the governance of peat ecosystems and village production systems that are able to recover. In addition, community economic revitalization activities through field schools and agricultural development are considered appropriate in order to increase income and meet community needs. There are at least 20 Field School cadres who have practiced and disseminated the technical techniques of peatland farming without burning, peat-friendly and organic fertilizer. From these various activities, community confidence and knowledge have increasingly increased to innovate and develop agriculture on peatlands.

V. Overall assessment of whether the expected outcomes and contribution to target impact(s) were achieved

Overall, the 2 main achievements of the ICCTF through UKCCU funding have had an impact and are seen from the data that was submitted earlier. ICCTF-UKCCU has restored burnt-out land to 73,600 ha and has lowered the hotspot point to 15,610 points until 2019. These results are obtained from the achievements of the outputs carried out by downstream partners in the ICCTF-UKCCU intervention areas in 5 provinces in Indonesia in the period 2016-2019. Also, ICCTF submits the new GHG Calculation of TEGAK Project held by the ICCTF Consultant.

VI. Summarise the program's theory of change and major changes to it in the past year

In the past year, TEGAK Project has done a lot of breakthrough which quite innovative as a lesson learned for similar programs in the future.
The changes such as:

1. There is a innovation in agroforestry shallots cultivation and corn in Siak, where ICCTF has done cultivation with implementing the smart farming system and hoping the system will be replicate to another Ministry.
2. Accompaniment to interventional village government therefore emerging the commitment from village for allocating village fund partly for operational and restoration infrastructure maintenance also fire prevention in peatland where located on each villages.
3. ICCTF project real time monitoring in spatial using mapping software that synchronized with Low Carbon Development program in Indonesia.

VII. Explain major changes to the logical framework in the past year

In the last year there is a change on logical framework, because replenishment grant fund amount £ 1,000,000 (one million poundsterling) with increasing the project duration. Therefore, there is a change for the restoration total target area from 10,000 ha to 36,167 ha (before was 26,167 ha) as the early TEGAK Project proposal.

Based on restoration area calculation from all of TEGAK program activity that held on 13 downstream partners with 16 project can do the peatland restoration for 73,600 ha.

VIII. Value for money

Value for money also applies to assistance provided through the ICCTF downstream partners. Obtained more than 1 pound given can provide a large impact. This applies to the ICCTF by paying attention to the quality of the material that will be used in the construction of peat wetting infrastructures such as drills, canal blocking, and fire monitoring towers. Concerning the quality over the price of the material will greatly add value to the benefits provided in addition to the infrastructure built. For example, the cost of ICCTF canal blocking versus under the Peatland Restoration Agency (BRG) projects.

IX. Risk

Overview of program risk during the past year and over the life of the program

During the past year, ICCTF adding an additional non-cost extension (NCE) to 4 downstream partners until June 2019 for YMI, RWWG and Elang also August 2019 for P2KLH UPR. This additional NCE would reduce the overall risk rating of all projects form major to moderate. NCE adding because some of the obstacles such as unpredictable weather impact to the output delivered for building the re-wetting infrastructures. ICCTF also revised all the contract documents with the downstream partner with NCE recommendation.

Update on anti-fraud, anti-corruption

For the anti-fraud and anti-corruption update, ICCTF has own canal website for a report every allegation through this canal. Any report/allegation can be delivered to ICCTF through *https://www.icctf.or.id/whistleblower/* also direct email to UKCCU (attn. Suriany Ida) or direct email to DFID at reportingconcerns@dfid.gov.uk

Every year, ICCTF always invited for meeting concern to anti-fraud and anti-corruption to UK Embassy. Private meeting or anti-fraud day meeting every year to get an update regarding regulation and reporting management system.

Update on safeguarding

ICCTF has own safeguarding through ICCTF Environmental and Social Safeguard document that signs for every downstream partner to understand and own this ICCTF Environmental and Social Safeguard document also. For safeguarding, ICCTF has done meeting concern to safeguarding at UK Embassy. DFID always remembered us to report/allegation can be delivered to ICCTF through *https://www.icctf.or.id/whistleblower/* also direct email to UKCCU (attn. Suriany Ida) or direct email to DFID at *reportingconcerns@dfid.gov.uk*.

The ICCTF Environmental and Social Safeguard document is about child labor, gender, human rights, indigenous people, and many. This document was a standard document that needs to fulfill by the downstream partners (see appendix 1).

X. Delivery, commercial, financial performance

FINANCIAL OVERVIEW

SUMMARY REPORT INDONESIA CLIMATE CHANGE TRUST FUND
FOR YEAR 2016 - 2019

Output	Items	Agreed Budget 2016-2019	Fund Received 2016 - 2019	Expenditure for 2016	Expenditure for 2017	Expenditure for 2018	Expenditure for 2019	TOTAL EXP
1	Mechanism to identify, select, support forest and peatland in place	46,287.26	46,287.26	14,451.42	17,968.62	10,458.21	3,409.00	46,287.26
2	Project selected and funded bring a positive impact on forest and peat land management	2,009,588.12	2,009,588.12	2,495.73	676,047.42	962,855.42	368,189.56	2,009,588.12
3	Projects selected and funded bring a positive impact on fire prevention strategies	747,098.39	747,098.39	189.64	351,818.81	371,708.74	23,381.20	747,098.39
4	Monitoring, Evaluation and Learning	997,026.23	997,026.23	15,676.47	73,847.77	153,196.37	754,305.62	997,026.23
TOTAL		3,800,000.00	3,800,000.00	32,813	1,119,682.62	1,498,218.74	1,149,285.38	3,800,000.00

XI. Monitoring, evidence, learning

MONITORING

ICCTF have a regular monthly report and quarterly report from all the project to provide updates and plan future work. And at the end of the downstream partner project, they will submit the Final Report as a result of the framework indicator. ICCTF continuous engagement with projects, reviewing their reports and providing input and feedback to ICCTF. ICCTF also has conducted the number of field visits to monitor progress by downstream partners proven by the Back To Report Office (BTOR).

EVIDENCE

ICCTF continues to support processes to validate evidence around impact claims being made by the project, such as GHG emission, post-fire restoration area and hotspot reduction through impact assessment and GHG calculation report study from ICCTF consultant. In the end, ICCTF will provide a useful recommendation on the future to support UKCCU on supporting forest, peatlands and land-use governance work.

LEARNING

During the TEGAK project, intense communication and data verification through field visits to review reports that have been received every month will increase opportunities to deliver the results and impacts contained in project agreements and frameworks with downstream partners. Through the approach that has been carried out until the end of the project by focusing on the logical framework of each downstream partner, the desired impact and output can be achieved well.

XII. Progress on recommendations from last year annual reviews for this program

There is no recommendation from the report last year either annual report or EMU Report that need a concern.

XIII. Exit strategy

The overall, after closing project ICCTF development strategy calls for the nationally owned ICCTF to be simultaneous under development as the ICCTF project is being implemented. ICCTF will ensure and encourage the consistency of stakeholders to continue the results of the project (Peat Restoration Agency, Ministry of Environmental and Forestry, Provincial Government and Village Government); ensuring the continuity of the project by expanding to a wider donor; increasing the capacity of the stakeholders involve in the project to replicate and scale-up the project; increasing the networking of the stakeholders and beneficiaries involved in the project aims to access more financing mechanisms.

In addition, ICCTF also to increase the capacity of 'implementing partners' in managing the project including administration, finance, procurement, overall project management and this would strengthen future programming. Through partnership with ICCTF, it can be ensured that there will be a higher capability in performance to attract more opportunities.

In village, the support of the village government by budgeting village funds for sustainability and also maintenance of the rewetting assets that have been built.

APPENDIX 1
ICCTF Environmental and Social Safeguard

ICCTF Environmental and Social Safeguard

Note:
Hanya ada SATU SAJA Jawaban YA dari pertanyaan dibawah ini,
maka PROYEK tersebut akan langsung digugurkan/dibatalkan.

No.	Isu	Yang perlu diperhatikan	Ya	Tidak
1.	Masyarakat Adat dan masyarakat lokal	• Adakah masyarakat adat/lokal yang akan mendapatkan dampak buruk dari proyek tersebut? • Apakah nilai-nilai/hukum adat/kearifan lokal diabaikan dalam proyek tersebut? • Apakah proyek tersebut mendorong terjadinya urbanisasi besar-besaran? • Adakah perlindungan terhadap warisan historis yang ada (mis. bangunan purbakala dll.) diabaikan? (UU No. 11/2010) • Apakah proyek tersebut mengabaikan konsultasi publik sebelum dimulai?		
2.	Keanekaragaman Hayati	• Adakah dampak buruk proyek tersebut terhadap ekosistem, keanekaragaman hayati dan spesies yang terancam punah? • Adakah proyek tersebut makin menambah pemanasan global? • Adakah proyek tersebut mendukung penanaman : tembakau, ganja, candu? • Apakah proyek tersebut mendorong terjadinya pembalakan liar (illegal logging) dan pengurangan luasan hutan lindung?		
3.	Akuisisi lahan dan Pemukiman Kembali	• Apakah proyek tersebut mendorong terjadinya akuisisi lahan untuk penggunaan yang tidak seharusnya? (misal: pencaplokan wilayah hutan, perubahan fungsi hutan menjadi sawah/lahan peternakan/perumahan/ bangunan) • Apakah proyek tersebut mendorong terjadinya pemindahan orang/pemukiman? • Apakah kompesasi yang pantas jika ada akuisisi/ sewa/beli lahan diabaikan?		

4.	Dukungan stakeholders	• Apakah “Pemetaan pemangku kepentingan” dalam proyek ini diabaikan? • Apakah ada banyak pihak yang keberatan dengan proyek ini sehingga mengganggu/berbuatz onar untuk menggagalkan proyek ini?		
5.	Dokumen dan perijinan lingkungan	• Apakah proyek tersebut dilengkapi dengan perijinan yang lengkap? (misal : AMDAL, SPPL, IMB) • Apakah kekurangan dokumen itu bisa menghambat / menggagalkan proyek itu?		
6.	Hak Asasi Manusia	• Apakah proyek tersebut melanggar atau mendorong terjadinya pelanggaran atas hak asasi manusia, seperti : 1. hak untuk hidup, 2. hak untuk memeluk agama/keyakinan, 3. hak untuk bebas berpendapat, 4. hak untuk bebas berpergian dan berpindah tempat, 5. hak untuk bebas berorganisasi, 6. Hak untuk memiliki, membeli dan menjual, serta memanfaatkan sesuatu, 7. Hak untuk bebas mengadakan dan melakukan perjanjian kontrak, 8. Hak untuk bebas memilih pekerjaan yang layak, 9. Hak untuk mendapatkan pelayanan kesehatan, 10. Hak untuk ikut memilih dan dipilih dalam pemilhan umum, 11. Hak untuk mendapatkan perlakukan dan pelayanan yang adil dalam hukum dan pemerintahan, 12. Hak untuk mendapatkan pendidikan yang layak, 13. Hak atas perlindungan terhadap perbudakan (juga buruh anak).		
7.	Standar tenaga kerja	• Apakah hak untuk berunding bersama diabaikan? • Apakah kebebasan berserikat diabaikan? • Adakah buruh anak yang dipekerjakan? • Adakah sistem kerja paksa? • Apakah mekanisme pengaduan (grievance mechanism) diabaikan? • Apakah standar kesehatan dan keselamatan pekerja diabaikan? • Apakah perlakuan terhadap pekerja (khususnya wanita) diskriminatif?		

8.	Gender	• Dalam pengelolaan proyek, apakah wanita tidak diperbolehkan mengambil keputusan? • Status wanita sebagai kepala rumah tangga tidak diakui? • Perbedaan dalam mengakses pelayanan dasar terjadi? • Ada hambatan dalam partisipasi kegiatan di masyarakat karena gender? • Kesempatan kerja tidak sama bagi wanita dan pria? • Ada stigma dan stereotip negatif terhadap wanita? • Wanita dan pria tidak sama di depan hukum? • Wanita dan pria tidak sama dalam hal berpolitik? • Apakah di daerah itu, banyak wanita masih dieksploitasi, misal : banyak terjadi perdagangan perempuan? • Apakah masih ditemukan banyak pelecehan seksual, tapi yang dihukum lebih berat justru wanita? • Apakah wanita dibiarkan miskin keahlian dan pengetahuan untuk bisa meningkatkan pendapatan? • Apakah Akses wanita terhadap kredit sangat terbatas/tidak ada? • Apakah wanita tidak punya aset produktif sama sekali? • Apakah wanita dibedakan dalam menerima gaji/ upah? • Wanita dilarang bepergian (ada penangkapan saat pulang malam)? • Apakah wanita masih diharuskan kawin terlalu muda? Atau dipaksa kawin/dijodohkan? • Apakah masih banyak ditemukan perlakuan kasar/ kekerasan terhadap wanita/anak-anak dan masyarakat tidak melaporkannya?		

SUPPORTING THE INDONESIAN GOVERNMENT FOR A BETTER CLIMATE

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