





Annual Report 2014 Indonesia Climate Change Trust Fund







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ACRONYMS

BAPPENAS	Badan Perencanaan Pembangunan Nasional		
	(The National Development Planning Agency of Indonesia)		
BMKG	Badan Metereologi, Klimatologi dan Geofisika		
	(Indonesian Agency for Meteorology, Climatology and Geophysics)		
CSO	Civil Society Organization		
DIPA	Daftar Isian Pelaksanaan Anggaran (Government budgeting document)		
EA	Executing Agency		
ED	Executive Director		
GHG	Green House Gas		
GIS	Geographic Information System		
Gol	Government of Indonesia		
Kepmen	Keputusan Menteri / Ministerial Decree		
LOA	Letter of Agreement		
LWA	Lembaga Wali Amanat (National Trust Fund Institution)		
МоА	Ministry of Agriculture		
MoFoR	Ministry of Forestry		
МоН	Ministry of Health		
MWA	Majelis Wali Amanat (MWA) / Board of Trustees		
NAMAs	Nationally Appropriate Mitigation Action Programs		
RAN-GRK	Rencana Aksi Nasional – Penurunan Emisi Gas Rumah Kaca		
	National Action Plan on Mitigation		
RAN-API	Rencana Aksi Nasional Adaptasi Perubahan Iklim		
	National Action Plan on Adaptation		
REDD+	Reducing emissions from deforestation and forest degradation		
	in developing countries, and the role of conservation,		
	sustainable management of forests and enhancement		
	of forest carbon stocks in developing countries		
SATKER	Satuan Kerja (Working Unit)		
SGP	Small Grant Program		
SOP	Standard Operating Procedure		
PDA	Pengelola Dana Amanat (National Fund Manager)		

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EXECUTIVE SUMMARY

This report covers activities carried out in 2014 by the Indonesia Climate Change Trust Fund (ICCTF) under the 'Preparatory Arrangements for the Indonesia Climate Change Trust Fund' (PREP-ICCTF) project, a partnership between the National Planning and Development Agency (BAPPENAS) and UNDP.

The ICCTF coordinates and channels funds for climate mitigation and adaptation in order to ensure effective development assistance for climate initiatives and to guide Indonesia towards a low-carbon economy. To support the establishment of a nationally-managed and fully operational Indonesia Climate Change Trust Fund (ICCTF), the PREP-ICCTF project focuses on: (i) providing support to Gol's priority climate change initiatives; (ii) coordinating policy dialogue and increasing awareness of ICCTF; (iii) supporting the capacity development needs of the Gol for efficient and effective implementation of ICCTF. PREP-ICCTF's main achievements for 2014 are outlined below:

Climate Change Project Selected, Monitored and Evaluated

ICCTF has successfully funded six small grant projects (SGPs) and completed three funded projects involving line ministries, resulting in significant improvements in addressing climate change mitigation & adaptation in Indonesia. ICCTF has continued to maintain its fiduciary standard by employing an internal independent audit (Morrison International) to conduct audit on the financial and administrative aspects of both funded and SGPs.

Policy Coordination Forum and Policy Development Support

In 2014, ICCTF and Bappenas convened the ICCTF NAMAs Summit: Climate and Development Investment Forum aimed at matching national sustainable projects,

policies and programs (NAMAs) with international climate and clean energy finance from international donors and other investors. The forum also served as an opportunity to present the current ICCTF NAMA project/program pipeline and to showcase best practices in climate finance. ICCTF demonstrated its strong role in coordinating climate finance and acting as a financing portal to receive and distribute funds from development partners, climate funds (Green Climate Fund, NAMAs Facility, Adaptation Fund, EU Global Efficiency and Renewable Energy Fund, etc.) and other financing mechanisms.

Preparation of the National Trust Fund

In 2014, the last year of preparing to become a National Trust Fund, some significant achievements have been made for the transition of ICCTF to a nationally managed trust fund (Lembaga Wali Amanat), including the issuance of two Ministerial Decrees. Firstly, the Ministerial Decree (Keputusan Menteri/Kepmen) No.33/M.PPN/HK/03/2014 on ICCTF Board of Trustee has been issued in March 2014. In October 2014, this Decree was revised in order to accommodate the new government structure and to enact the new regulation Ministerial Decree of Bappenas/PPN No. 97/M.PPN/HK/10/2014.

Secondly, Ministerial Regulation (Peraturan Menteri/Permen) No. 10/2014 revised several clauses (e.g. clauses on the structure of ICCTF, clauses on duties and responsibilities of the Board of Trustees, clauses on duties and responsibilities of Chairman and Secretary of the Board of Trustee/Majelis Wali Amanat) under Ministerial Regulation/Permen No. 3/2013 on the establishment of Indonesia Climate Change Trust Fund/Lembaga Wali Amanat Dana Perubahan Iklim.







I. Situational Background

Climate change is recognized as a major challenge of our time. Climate change is having devastating effects on countries around the globe, with Indonesia being one of the most severely impacted because of its large number of islands (approximately 17,000), and its population's great dependency on natural resources. As a result of increased awareness about the impacts of climate change signified by Indonesia's high vulnerability and its increasing GHG emissions, Gol has committed to reduce GHG emissions by 26 percent financed by its own resources and up to 41 percent with international support compared to a business-as-usual scenario. Besides mitigation efforts, national climate action plans on Climate Change Adaptation (RAN-API) provides guidance on adaptation measures to reduce the adverse effects of climate change and to support vulnerable populations in adjusting to its impacts. This commitment is in line with the long-term vision of Indonesia's development plan to achieve sustainable development and a low-carbon economy.

To harmonize and coordinate the international support for climate change activities, the Government of Indonesia (GoI) established the Indonesia Climate Change Trust Fund (ICCTF) in 2009. The ICCTF is planned to be nationally managed through the establishment of a National Trustee. Before the National Trustee is in place, ICCTF is operating under "Preparatory Arrangements for the Indonesia Climate Change Trust Fund (PREP-ICCTF)", a project of the GoI facilitated by the United Nations Development Programme as the interim fund manager.

During the interim period, the PREP-ICCTF continues to provide support in the following areas: (1) Gol's priority climate change initiatives; (2) The establishment of the ICCTF; and (3) Capacity development needs of the Gol for the efficient and effective implementation of the ICCTF.

II. ICCTF Progress in 2014



I. Project Implementation

Summary

In 2014, ICCTF's main activities included continued funding and monitoring of funded projects implemented by the Ministry of Agriculture (MoA), the Ministry of Health (MoH) and the Ministry of Forestry (MoFoR). In addition, the ICCTF focused on the following activities: (i) issuing a Call for Proposals for small grant projects (SGPs) that targeted Civil Society Organizations (CSOs) and universities; (ii) selecting six small grant proposals and funding the projects; (iii) closely monitoring programmatically and financially the six projects. In the fourth quarter of 2014, ICCTF also oversaw the completion of three funded projects implemented by line ministries and SGPs.

Progress

1.1 Funded Projects

In 2014, the ICCTF continued to oversee three funded projects implemented by the following ministries: (i) the Ministry of Agriculture; (ii) the Ministry of Health; (iii) the Ministry of Forestry.



The project **'Sustainable Management of Degraded Peatland to Mitigate Green House Gas Emissions and Optimize Crop Productivity'** aimed to improve the model for sustainable management of degraded peatland to mitigate greenhouse gas (GHG) emissions and optimize crop productivity. This project which focused on areas in Papua, West Kalimantan, Riau, Jambi, and Central Kalimantan, is a continuation of a previous project supported by ICCTF during 2010-2012.

The outputs of this project include: (i) Scientific and comprehensive maps

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of degraded peatland in Sumatra, Kalimantan and Papua with at the scale of 1: 250.000 and in selected districts at 1: 50.000 scale; (ii) A strategy model and models for sustainable management of degraded peatland to mitigate GHG emission crop productivity; (iii) Improved institutional support, human resources, and capacity for research, management and Monitoring Reporting and Verification (MRV) of peatland; (iv) Policy inputs and guidelines for sustainable management of degraded peatland based on socio-economic and environmental considerations; (v) Publication and networking between national and international research institutes, policy-makers, universities, farmer groups and NGOs.

The capacity building consists of classroom theory and field practice as well as calculation exercises, analysis and interpretation of data and presentation of training exercises by the trainees. The training materials included: (i) sustainable management of peatland; (ii) principles of climate change; (iii) measurement of carbon stocks in peat soil and vegetation; (iv) measurement of GHG in peatland with Gas Chromatography ;(iv) Measurement of GHG in peatland with infrared gas analyser (IRGA); (vi) Use of automatic weather system (AWS) and piezometer measurements; (vii) estimation of GHG emissions from agriculture and land use change. Training has been conducted in five provinces namely West Kalimantan, Papua, Jambi, Riau and Central Kalimantan with the number of participants in each province of around 22 to 32 people.

This project has successfully broadened Indonesian Agency for Agricultural Research and Development (IAARD) networks with national and international communities and stakeholders at the national and sub-national levels. Research results have been and will be communicated and disseminated at national and international fora and published in proceedings, book, policy briefs, guidelines and leaflets. Several manuscripts will be re-written in national and international peer-reviewed journals to increase visibility and contribute to scientific literature.

The ICCTF progress reports are available at www.icctf.litbang.deptan.go.id .

Ministry of Health

The project, **Health Vulnerability: Assessment, Mapping, and Community Based Adaptation on Dengue Haemorrhagic Fever and Malaria Diseases'** addressed the problem of changing patterns in Dengue Haemorrhagic Fever (DHF) and Malaria Diseases induced by climate change. During this second phase, which occurred over 2012-2014, the project aimed to increase preparedness.



The project achieved the following interconnected outputs: (i) a Model of DHF and Malaria incidence linked with climate change projections complemented with disease distribution maps developed for each of 21 cities/districts in 5 provinces: West Sumatera, DKI Jakarta, East Java, Bali and Central Kalimantan; (ii) Increased awareness of health officers and relevant

policy makers at provincial and district levels on climate-induced DHF and Malaria and vulnerable communities in West Sumatera, East Java, and Bali; (iii) Increased capacity of health officials and communities to develop adaptation strategies in response to climate change-induced DHF and Malaria in West Sumatera and East Java.

This project has contributed to increased preparedness of communities and governments facing climate change impacts on the health sector especially with the distribution of DHF and Malaria pattern. Models and maps of health vulnerability projections for DHF and Malaria due to climate change in 5 provinces could be replicated for other provinces with adjustment each local condition. The local government will continue to implement the Community Work Plan through funding by local financial sources (APBD) and also with support from the private sector and communities themselves.

Ministry of Forestry

The MoFoR project supported the sustainable management of communitybased wood pellets production as biomass energy. The goal of this project was to support a low carbon economy and mitigation of the impact of climate change in Bangkalan District in Madura.

The outputs of this project included:

• First, the project established



demonstration plots as the Biomass Energy Estate (BEE) for supplying wood pellet

incubators. The demonstration plots have a total of 214 hectares of red kaliandra ready to supply the raw material of wood pellets and the carbon stored in the form of wood biomass.

• Second, CO2 net emissions sequestered in the BEE and the CO2 net emission substituted by wood pellet products were measured. The harvesting of kaliandra commenced in May 2014 (14-month-old of kaliandra). Based on calculation of carbon sequestration at the existing BEE, the estimated emission reductions at the BEE of kaliandra is 69.69 tonnes CO2eq/ha/year (emission of BEE) - 22.02 tonnes CO2eq/ha/year (emission of community forest located in FMU) = 47.67 tonnes CO2eq/ha/year

• Third, the development of a business model, entities and an incubator for a wood pellet industry. The factory, which is a building with an area of 200 m2 and a 197 kilowatt electricity connection, has been producing a good quality wood pellets. A community-based forest organization called "Kelompok tani FMU Gerbang Lestari" consists of 10 farmer groups in the community and has cleared all legal requirements, including: factory license, legal permit, and other necessary documentations to operate the business. As of the end of the project has produced wood pellets by CV Gerbang Lestari and has been stored in the warehouse of production as much as 12 tonnes.

• Fourth, capacity of community institutions was improved through generating alternative sources of income for farmers. The project also undertook institutional capacity building of farmers through training programs, Focus Group Discussion (FGD), and technical assistance. The farmers and factory workers were given access to education, management training, and processing plant machinery and they have been able to develop knowledge on the production of wood pellets.

1.2 Small Grant Projects (SGPs)



On January 20, 2014, ICCTF announced the Small Grant Project Call for Proposals. ICCTF invited civil society organizations, non-governmental research institutions and universities/academies to submit project proposals. The proposed budget for accepted proposals is up to IDR 500,000,000 (five million Rupiah).

The assessment was conducted through reviewing documents and direct interviews with representatives of project proponents. Before the deadline on February 20, 2014, ICCTF received 196 proposals. In general the selection processes for Small Grant Projects (SGPs) followed three stages as presented below:

Stage 1:

Administrative and general criteria by the ICCTF Secretariat. This stage generated 15 Land-based Mitigation proposals; 34 proposals related to Energy Window; 31 proposals related to Resilience and Adaptation.

Stage 2:

Review conducted by three independent consultants who experts in three Windows generated six Land-based Mitigation proposals; six proposals on Energy and six proposals related to Resilience and Adaptation.

Stage 3:

In-depth assessment conducted by the Panelist Experts in each Window. This stage produced three (3) proposals in each Window. A total of 9 proposals submitted to the Steering Committee Meeting on 24 March 2014 and six proposals were funded. Details on the implementation of six small grant programs are as outlined below:

Enhancing carbon sequestration in a **Community Forest** (Partner: ARUPA)

The project has four strategies: increase the planting of timber and fruit trees a community forest; establish a in financial institution for tunda tebang (delayed logging); encourage environmental and social aspects in community forest management through the development of community-based forest management plan; and promote the integration of community forest into the regional spatial plan through mapping and public consultation. The geographic coverage for this project: Bantul, Gunung Kidul, Yogyakarta

Output 1: Carbon Balance / Statement of Carbon Stocks in the Village

Under output 1, the project completed a report/balance sheet containing information on community forest carbon stocks in 2014 in the village. In 2014, the results of calculations performed by the community revealed that forest carbon stocks are 78.97 tonnes / ha in the yard and 49.87 tonnes / ha in upland.

In addition to balance sheet of carbon stocks, ARUPA also produced a module to measure community forest carbon stocks that are expected to become carbon calculations for a facilitator or extension agency/instructor. The module is expected to broaden the knowledge and ability the villagers to perform carbon calculations independently.

Output 2: Carbon Sequestration in a Community Forest

Planting a total of 4500 teakwood trees and over 1600 durian trees to increase carbon stock as per request from the village residents and later on this village would be promoted as a tourism village. The activity started with the preparation of seedlings, then proceeded to seed distribution, then to the maintenance by all members of the Community forest of Komunitas Tani Hutan Jasema. From the planting of 4,725 teakwood trees, with an assumption of 80 % as the teakwood grow, it is predicted that in 2034 as much as 493, 960 tonnes of carbon will be absorbed. The seedlings are distributed to all members of the KTH Jasema (554 families), whose land spans at a total of 312.32 hectares.

Output 3: Micro-Financing Institution for Success of a Logging Moratorium

The ICCTF completed the establishment of micro finance institution called 'Koperasi

Tunda Tebang (KTT)' at Terong Village in the form of a cooperative. The administrative procedure to establish a cooperative has been completed and the legal documents of the cooperative has been issued. On November 11, 2014, the cooperative was launched by the vice district head of Bantul and Deputy Minister for



Natural Resources and Environment of Bappenas.

With the establishment of KTT, this cooperative has collected in the first year an initial capital of 78 million rupiah from its members. The KTT is expected to provide loans to the community by using teakwood plants as collateral in the form of wood. Teak wood is the only tree type that meets the requirements (e.g. volume of tree is bigger, the age of tree is old enough) for harvest within one year. By doing so, the community continues maintaining forest carbon sequestration and the forest would be able to store carbon as long as possible in the community forest. With the initial capital, it is predicted that in 2021 KTT will retain forest carbon stocks of as many as 29.40 tons.

Output 4: Management Plan for a Community-Based Community Forest

The community forest management plan document contains the following three types of activities: silvikultur, ecological and social. Silvikultur activities include inventory stands, land preparation, seedling, planting, maintenance, protection and safeguarding of forests, and logging/harvesting. Ecological activities consist of a plan for the location of high conservation value. This management plan is expected to be a guidance for managing community forest in which Komunitas Tani Hutan (KTH) Jasema has received certification to legalize timber, so that the management of community forests can be preserved.

Output 5: A draft of policy paper to accommodate community forest as part of village planning

Establishment of a Draft Paper for Environmental Planning and Rural Resettlement in Terong Village. The draft paper of the environmental management plan and the settlement will be used by the village government in the village's planning. The arrangement includes a management plan of protected areas (protected forests, protection of springs and protection of the river); management plan of agricultural area; forest conservation management plan and the people; settlement development plan; trade zone development - services and development office zone. In relation to climate change mitigation, the Terong's village incorporates a total of 668,842 hectares of community forest area in 9 sub-village. The areas of the community forests will be maintained ecologically and economically.

Public-Private Partnership Model in Tackling Deforestation & Forest Degradation

(Partner: Forestry Faculty of Bogor Agricultural Institute, Bogor)

The project is aimed for developing relationship model between emission reduction, deforestation and public-private partnership model in climate change mitigation and climate-smart agriculture module for local people's capacity building. The Public Private Partnership model tackling Forest Degradation and Deforestation in the Giam Siak Biosphere was implemented by Bogor Agricultural Institute's forestry faculty.

Output 1: One series data of GHG flux in each forest cover/vegetation density and spatial data of GHG emission.

In order to develop a model of the relationship between deforestation and GHG emissions, sampling and analysis of GHG and spatial analysis of various land cover have been conducted. After analysing the data, a model of the relationship between deforestation and GHG emissions was developed. Deforested areas release CO2 at a higher rate than areas with land cover, followed by palm oil with an annual crop. The calculation showed that one hectare of deforestation in this biosphere reserve will increase CO2 emissions of as much as 1,545 tons. And one hectare of reforested area would reduce CO2 emission by 456 tons. Current data shows that, even with reforestation of all deforested areas in the biosphere reserve, it will still be unable to sequester the amount of carbon emissions already emitted. This calls for halting deforestation and preventing future fires.

Output 2: Development of a model for public private partnership in climate change mitigation

Recent focus group discussions (FGDs) involving stakeholders including Sinar Mas Company and BKSDA aimed to develop a model for a public private partnership in climate change mitigation projects. A public private partnership model consists of private sectors, university, NGOs & CSOs, local government, BPPT, research institutions and the community. The participants of FGDs agreed to manage the Biosphere Natural Reserve for the following purposes: (i) community welfare; (ii)

continuity business community; (iii) sustainability of forest / peat ecosystems; (iv) increased human resources.



Biosphere reserve management already exists, but collaboration and involvement of more stakeholders in the management is needed, especially from those stakeholders that play a part in deforestation and forest degradation. The research showed that forest fires are ignited to clear land for farming. Education on sustainable farming and conservation for the local people is needed in order to stop

deforestation, forest degradation and forest fires. This research also provides criteria and indicators for the better management of partnerships and biosphere reserves.

Output 3: Module Climate Smart Agriculture (CSA)

A CSA module was developed with the aim to increase the capacity of local communities. CSA is part of the effort to reduce deforestation, forest degradation, and GHG emissions by developing an alternative to community efforts to improve the welfare of the people in the biosphere reserve. The module entails the following topics: overview of the problems of agricultural development at the site of Giam Siak Kecil – Bukit Batu Biosphere reserves, information about the potential of the commodity in the transition area of the biosphere reserve and information on guidance commodity development according to CSA. The target audience for this module are field extension workers. The project will continue the development of the CSA module demonstration plots in the selected pilot villages by using different commodities to create more operational and practical modules for farmers.

CSA aims to choose the right crop or plant to farm and the right methods of farming it. Some crops are more profitable than palm oil but emit less CO2. Even if the farmer choose palm oil as their crop, there is a right method of farming in the peat land area such as GSK-BB Biosphere reserve that can lead to less emissions than the conventional practice of farming.



Planning and Information System for Street Lighting Energy Efficiency

(Partner: Politeknik ATMI Surakarta)

The project is aimed at developing a geographic information system (GIS) for energy-efficient street lighting. The geographic coverage for this project: Kota Surakarta, Jawa Tengah

Output 1:Development of Geographic Information System (GIS) of Penerangan Jalan Umum (PJU)/ Street Lighting in Surakarta City

The system is built by using a web-based base map Surakarta from Open Street Map (http://www.openstreetmap.org). The GIS of Street Lighting of Surakarta City can be accessed

using either a computer or handset device. This system requires an internet connection in order to derive a map. This system has the following benefits: (i) to help the operators of public street in recording and monitoring of data ranging from identity , location (longitude - latitude) point PJU, address, type, condition, duration of flame , procurement and maintenance costs , and more ; (ii) allow the operator of PJU related planning activities. The operators can easily create various scenarios. Fields that can be included in the scenario are the determination of PJU area, the selection of the type of lighting technology, the determination of the subscription or meter rates, investment, metering and lights as well as other components; (iii) GIS PJU also features a report that is able to present the results of the scenario calculations. Contents of the report are presented, among others, energy consumption, costs, and the calculation of carbon emissions.

Output 2: Proposed master plan for street lighting program

ATMI Surakarta has completed the development of a manual "Public Street Lighting Efficiency Plan: Case Study of Penerangan Jalan Umum (PJU)" that is located at Kanayatan Sreet Joyotakan. Surakarta. The manual serves as a substitute document of Proposed Master Plan for street lighting efficiency of Surakarta. This book is a documentation of a case study scenario Street Light Metering at JI. Kanayatan 1, Joyotakan, Surakarta. This book explains briefly the standards used in determining the choice of lights and calculation. The



following paragraphs focus on the translation of the four pieces case study scenarios. The scenarios are a combination of taking efforts and efficiency in the form of replacement bulbs or meter system. The last part of the book displays comparison chart of Total Ownership Cost and Total CO2.

Output 3: Pilot of application of Geographic Information System (GIS) of Penerangan Jalan Umum (PJU) located at Kampus Politeknik ATMI Surakarta.

This pilot for GIS is located in Duwet Raya Street, Karangasem village, Laweyan District, Surakarta. Previously, this area used discharged gas tornado lamp 80 watts. The two types of lamps used in the pilot project are solar powered LED lights and lights LVD (induction). Both lights represent PJU lamp energy saving technology and highefficiency lighting. PJU held three sets for each type of lamp, for a total

of three solar power LEDs and three LVD.

Output 4: Operators and planners of Penerangan Jalan Umum (PJU) Surakarta City PJU will be able to operate and develop an efficient street lighting.

ATMI Surakarta has completed a training for staff DKP on how to streamline PJU Surakarta City and operate the Geographic Information System street lighting of Surakarta.

The participants of training were five staffs DKP Surakarta City PJU field, two staffs PLN Area Surakarta and two staffs of BLH Surakarta, one staff of BAPPEDA and two staffs of ATMI Polytechnic Surakarta. Through this training, participants will have a better understanding on the basis for the calculation of electric energy consumption, the calculation of GHG emissions, efficiency opportunities PJU of metering and energy-saving technologies PJU.

Adaptation on Seaweed Aquaculture (Partner: Humaniora, Kendari, Sulewesi Tenggara).

The project Adaptation on Seaweed Aquaculture aimed to increase local people's knowledge on seaweed aquaculture and introduce a new variety of seaweed that can adapt to the adverse impacts of climate change. It is implemented by Humaniora in Tobea and Renda Island, Southeast Sulawesi. The geographic coverage for this project: Pulau Tobea dan Pulau Renda, Kab Mena

Output 1: Dissemination of knowledge about the relationship between seaweed production and weather conditions as well as a better method and technology for seaweed cultivation to seaweed farmers in the Tobea island and Renda island

Information was disseminated on the effect of climate variations to the cultivation of seaweed as well as adaptation methods and technology at island of Renda,

Wangkolabu, Tobea Island of Muna District, Southeast Sulawesi. This activity involved seaweed cultivation technology experts from the Institute of Marine Technology Perekayaan - Wakatobi (BPTK) and the Institute of Seaweed Research and Development of Gorontalo. In addition, Humaniora has developed pilot seaweed cultivation in order to identify factors affecting the cultivation of seaweed. The first harvesting was conducted in early October 2014. The pilot 'garden' aimed to introduce seaweed seed from other areas to identify the causal factors that affect the success of seaweed cultivation. In addition, Humaniora also completed a series of discussion with





the villagers and seaweed expert, sea climate experts and local extension agency from department of marine and fisheries regarding the influence of seasonal variations in aquaculture as well as the application of adaptation methods and technology on seaweed.

Output 2: Pilot seaweed farming with new methods and technology as well as varieties of seaweed that are more tolerant of variations in climate.

The project developed a guideline for demonstration plots for farmers and developing guidance for monitoring of demonstration plot for local facilitator/pendamping. Furthermore, a training for local facilitator and farmers was also completed and was followed by the development of demonstration plots in two selected locations using new methods and technologies, new seaweed varieties that are more tolerant to climate variations.

Output 3: Analysis of the results of seaweed farming with new methods and technologies as well as varieties of seaweed that are more tolerant to climate variations

Model of seaweed farming using new method and technology and new variety which more tolerant with climate variations. Other activities performed including regular discussions with the participants of 'pilot' demonstration plots and local facilitator on results of cultivation/seaweed farming as well as discussions with seaweed expert on the implementation of seaweed farming. One of the main output of this activity is the production of a video documentary containing stages of the seaweed farming, socialization activities and demonstration plots.

5 Strengthening the Climate Information System for Farmers and Fishermen

(Partner: Yayasan PIKUL, Kupang)

This project built the information dissemination system through an operator, who compiles weather and climate information from the Meteorology, Climatology, and Geophysics Agency (BMKG, www.maritim.bmkg.go.id), the Integrated Planting Calendar (KATAM, www. katam.litbang.deptan.go.id), the Ocean Research and Observation Agency (BPOL, www.bpol.kkp.go.id), SI-Mail (pdpt-kkp.org) and other sources. The

information is later translated to text messages to be distributed to around 1,000 farmers and fishermen in Kupang municipality and regency.

Output 1: Farmers and fishermen understand and are interested in pertaining information on climate and utilize to make decisions in the agricultural business and the decision to go fishing.

Several activities that have been conducted to achieve this output, including: (i) dissemination of information to a total of 500 fishermen and farmers on weather and climate through short messages (SMS),16 times within duration six months for farmers: 120 times in 4 months for fishermen (ii) completed needs assessment on climate information and weather for farmers and fishermen that was conducted in both Kupang City and Kupang District; (iii) conducted a workshop to develop climate and weather information system inviting a wider government stakeholder in Kupang. In addition, Pikul also conducted two trainings on information related to climate





and weather for Petani Penyuluh Lapangan (extension agency) and leader of farmers and fishermen groups (2 times for farmers, 2 times for Fishermen, including seaweed farmers), developed an operating manual document containing the Climate Information Dissemination System and a manual to monitor responses from farmers and fishermen. Printing and distribution of a total of 500 posters on information monitoring for farmers and fishermen were also conducted.

Output 2: Relevant local government offices (Extension Agency, Department of Agriculture, Fisheries and Maritime Affairs) develop a plan to disseminate the information periodically to farmers and fishermen.

In order to encourage and enhance capacity of the relevant local stakeholders in providing a period information on climate to the fishermen and farmers, Yayasan Pikul produced a lessons learned report about information systems and also developed a module to allow the farmers translate and interpret easily about weather and climate information.

Output 3: The mass media develop a participation plan on weather and climate information for farmers and fishermen.

The involvement of media in providing information on weather and climate is extremely important. And aiming for embracing the local media, Yayasan Pikul organized a training for journalist and mass media. In addition Yayasan Pikul also produced a followup assessment report on the needs of the information for farmers in Kupang district, developed a workshop report detailing lessons learned from developing climate and weather information systems. Lastly, Yayasan Pikul produced reports on monitoring of the use of information by farmers and fishermen (5 farmers, 5 fishermen using sampling method).

6 Strengthening resilience of coastal community through technology and participatory media

(Partner: Perkumpulan Bingkai Indonesia, Yogyakarta)

The project called Strengthening Coastal Community Resilience through Participatory Multimedia Technology in four provinces was implemented by Bingkai. The project aimed to improve climate information dissemination for fishermen community in four provinces: Yogyakarta, West Java, Banten and North Sulawesi.

Output 1: Information related to weather forecasts is received by fishermen across eight communities in four provinces during three months through SMS.

Under output 1, Perkumpulan Bingkai has accomplished the following outputs: (i) completed socialization meetings at eight selected areas and finalized the selection of community facilitators in September 2014; (ii) dissemination of SMS to the fishermen across eight communities in four provinces. The number of recipients SMS were: 148 in the first three month (32 people from Sangihe - North Sulawesi, 15 people from Ujung Kulon and 20 from Pelabuhan Ratu, and 81 from Yogyakarta). Those people who received an SMS then continue to spread the information verbally to their family and community surroundings. Prior to the dissemination of SMS on forecast weather, Perkumpulan Bingkai organized a workshop in mid of July 2014 in Yogyakarta targeting local facilitators to teach them how to gather and disseminate information related to weather forecasting. A total of 31 fishermen participated in this activity

Output 2: Development of a manual of practical guidance for gathering and disseminating information on weather forecast for the local facilitator/pendamping. This practical guidance is prepared by Yayasan Bingkai based on the previous activities. The proponents of these activities were involved as a writer and a trainer in facilitator training so that both knowledge and experience could be absorbed through the process of writing and training. Pocket books were printed and distributed to a total of 500 fishermen and other relevant stakeholders in eight regions. The pocket book has now become a guide for local fishermen to access and manage information from BMKG and information on potential fish catchment areas. The pocket guide also serves as reference to other parties

such as the Dinas Kelautan dan Perikanan (DKP) and nongovernmental organizations and young fishermen.

Output 3: Institutionalization of a long-term working mechanism of information retrieval and forwarding daily weather forecasts on a group of fishermen in 8 communities from 4 provinces.

Strengthening youth groups and potential fishermen has been



implemented in 8 regions. Institutionalization is still not one hundred percent completed as the duration of the project is very short. Fishermen groups have yet to develop action plan as part of follow-up process following the completion of the project. In addition, activities aims to link up between fishermen and the local stakeholder - especially local government still has not achieved yet. These two interrelated activities will be part of Yayasan Bingkai's 'homework' to continue this commitment to the fishermen communities. The meeting with related local government offices or public hearings to the legislative office will be conducted after the completion of community action plans and production of documentary is completed. These activities will be carried out in January 2015.

Output 4: Produce visual documentation of activities and learning processes of the project.

Audio-visual documentation has been produced, either in the form of photos and video footage of the film to be part of the process of project implementation. Some materials like photos, documents of process activities, fishing activities and landscape project site have been collected. For the purpose of documentation, the project has started to compile a short film to record the journey and portrait of the project, which is currently in the final stages. This film expects to be beneficial for the community in developing sustainability strategies. As the film describes the objectives, outcomes, outputs and activities addressing the needs of fishermen on the information and potential fish catchment areas, it will easily capture the stakeholders' attentions, in particular, governments and legislative aim to support the existing efforts in the community as well as to strengthen fishermen's groups and ensure that information forecasts and potential fish catchment areas can continue to be acknowledged by fishermen.

Contribution to long-term results

To fulfil the fiduciary standards mechanisms and quality assurance as well as to complement the monitoring and evaluation activities, ICCTF appointed Morisson International as the ICCTF internal auditor. During 2014 Small Grant Projects with a focus on CSOs and universities as the Implementing Agency have been prioritized. In the future, ICCTF coverage of institutions it will cooperate with on climate change mitigation and adaptation financing projects will be expanded.



2. Communication and Outreach

Summary

In 2014, ICCTF conducted several communication and outreach activities both at the national and international level. The activities are, among others, 'Coral Adoption with School Children' in August 2014, which included a roadshow to schools aimed at increasing awareness of the school children on climate change in collaboration with a local organization, two donor and media visits to both funded project and small grant project, the ICCTF Media Fellowship which was held in collaboration with AJI (Independent Journalist Alliance) Jakarta. Furthermore, ICCTF in collaboration with GIZ, CDKN and line ministries organized one day investment forum meeting aimed at matching national sustainable projects, policies, programs (NAMAs) with international climate and clean energy finance from international donors and other investors. In 2014, ICCTF participated in the UNFCCC Conference of Parties 20 in Lima. Last but not least, ICCTF also participated in the USAID Adapt Asia-Pacific Third Annual Forum 2014 in partnership with UNDP on "Strengthening Country Systems to Access and Manage Climate Change Adaptation Finance in Asia and the Pacific".

Progress

2.1 Participation in International Events

Awareness of ICCTF on the national and international scene has increased through the Secretariat's active participation and attendance in international events. Linked to these outreach materials, including newsletters, booklets, project profiles, fact sheets and posters. These were distributed and shared during major events in Jakarta, Cambodia, Malaysia and at the COP 20 in Lima, Peru. The activities included:

2.1.1 Participation in UNFCCC Conference of the Parties (COP) 20 in Lima, Peru in December 2014.



Bappenas in collaboration with ICCTF and GIZ organized two parallel events during UNFCCC COP 20 in Lima, Peru. The first event, titled 'Media and Climate Change: Lessons Learned and Best Practices', presented the activities that ICCTF has done with the mediat to promote public awareness on Climate Change. Two of four winners of ICCTF Media Fellowship from Berita Satu TV and Tempo shared their works and experiences on reporting about climate change impacts and the development implications. The other parallel event, titled 'Indonesia's Mitigation Framework: From Commitment to Implementation Progress', presented the results and lessons learned from the implementation of mitigation actions in the forestry and land use sectors (REDD+) as well as energy and waste sectors. The second event also discussed the way forward for climate change policy in Indonesia as well as the future of NAMAs, REDD+ and INDC.

2.1.2 ICCTF NAMA Summit: Climate and Development Investment Forum 12 September 2014

On 12 September 2014, ICCTF in collaboration with GIZ, CDKN and line ministries

organized one day investment forum meeting aimed at matching national sustainable projects, policies and programs (NAMAs) with international climate and clean energy finance from international donors and other investors. The investment forum aimed to present the current ICCTF NAMA project/program pipeline and best practices on climate finance. Over 170 decision makers and project developers from multilateral and bilateral donor and development agencies, climate-related stakeholders, national NGOs as well as representatives from private sector attended the meeting. Mr. Rachmat Witoelar, President's Special Envoy for Climate Change, delivered a speech during the summit, followed by an opening speech from the Vice Minister of National Development Planning and presentation from panellists on NAMA projects. Following this event, several meetings with potential donors/development partners seeking to invest in NAMA were held during 2014. In addition, one of the NAMAs proposal (CEMENT NAMA) has been accepted by ADMIRE (Adaptation Mitigation Readiness) Project. The ADMIRE Project is a 3 year project (2014 - 2016) funded by the Danish Ministry of Foreign Affairs with the aim to the development of ambitious adaptation and mitigation projects. The project is implemented in collaboration with United Nations Office for Project Services (UNOPS) and the UNEP DTU Partnership.



2.1.3 Asia Pacific Fora

During 2014 participated in several in several fora across the Asia Pacific Region. On 15-16 September, ICCTF participated in the USAID Adapt Asia-Pacific Third Annual Forum 2014 "Strengthening Country Systems to Access and Manage Climate Change Adaptation Finance in Asia and the Pacific". A senior staff of ICCTF (Finance Manager) attended the two-day workshop in Cambodia. In addition, the Head of ICCTF Secretariat (Bappenas) presented Indonesia's experience in financing climate change related projects.

In addition, ICCTF sent two senior staff to participate in the 4th Asia-Pacific Climate Change Adaptation Forum 2014 organized by Asia Pacific Adaptation Network (APAN) on 1-3 October in Kualalumpur, Malaysia. In the forum, ICCTF presented three projects related to adaptation, among others, the 'Strengthening the Climate Information System for Farmers and Fishermen' project and Health Vulnerability: Assessment, Mapping, and the project on 'Community Based Adaptation on Dengue Haemorrhagic Fever and Malaria Diseases'



2.2 Community Outreach to Kabupaten Kepulauan Seribu

In August 2014, ICCTF implemented a program called 'Corals Adopttion Corals with School Children'. In the context of the program, a series of activities were conducted in collaboration with Yayasan Terumbu Karang Indonesia (TERANGI) – a local organization that promotes conservation of coral reef and campaigns on saving coral-reef and coral adoption especially at Kabupaten Kepulauan Seribu.

The activities included the following activities: (i) socialization meetings on climate change and methods of adopted coral targeted to five junior high schools in Jakarta that specialized in marine and fisheries subjects; (ii) developing design adoption of coral; (iii) coral platform submersion activity by inviting a wider audience such as school students, teachers, and media. To support the coral platform submersion activity, the local fishermen community JARMON provided 10 reef balls of coral transplants, with each reef ball consisting of 15 pieces of coral transplants; 25 rubbles, with each rubble containing one unit of coral transplant and 10 platforms, with each platform holding 16 pieces of coral transplants.

2.3 Donor and Media Visits

As part of its efforts to promote the activities of ICCTF to a wider audience and media, the ICCTF held two Donor and Journalist Visits at project sites. The first donor and media visits were held in June 2014 in Bangkalan, Madura. The visits aimed to present Biomass Energy

¹ The coverage of donor and journalist visits can be accessed in the following link: ANTARA http://www.antaranews.com/berita/440896/berkah-kaliandra-berkat-pelet-kayu

Kontan http://nasional.kontan.co.id/news/di-2015-bappenas-tambah-dana-iklim

Kontan http://industri.kontan.co.id/news/wood-pellet-si-pengganti-batu-bara/2014/06/24,

Kontan http://nasional.kontan.co.id/news/icctf-kenalkan-proyek-wood-pellet-terintegrasi Tempo http://koran.tempo.co/konten/2014/06/30/345699/Memanen-Energi-dari-Kaliandra

Jakarta Globe http://www.thejakartaglobe.com/news/madura-pioneering-eco-friendly-firewood

and Wood Pellet industry projects to a wider audience and highlight lesson learned. More than 30 representations from the media, including LKBN ANTARA, Tempo, Kontan, Jakarta Post, Jakarta Globe, and Jawa Timur Television (JTV), a member of Jawa Pos Group and donor representatives (UNDP, USAID, Millennium Challenge Account Indonesia (MCAI), Climate and Development Knowledge Network (CDKN), Embassy of Denmark, and GIZ)) participated in the event¹.

The second donor and media visits took place in Kupang, East Nusa Tenggara on 13-14 November 2014 to a Project called "Strengthening Climate Information System for Farmers and Fishermen in Kupang", in cooperation with Pikul, an NGO that focuses on capacity building activities in Eastern Indonesia. During the visit several journalists participated in a FGD to discuss with farmers and fishermen on the progress and experiences in implementing the project. They were later taken to the project sites in Tablolong beach and Semau Island, to see how the seaweed fishermen benefit from the project. The journalists who joined the visit were from Kompas Daily, The Jakarta Post, Media Indonesia, Kompas TV, Berita Satu TV, Tempo, Pos Kupang and Victory News².

2.4 Journalist and Media Award

In 2014, ICCTF continued to conduct ICCTF Media Fellowship 2014 in collaboration with AJI (Independent Journalist Alliance) to support the mass media in educating the public on climate change. A series of activities have been completed in regards of Journalist and Media Award as presented below:

(i) A Public Discussion and Launching of ICCTF Media Fellowship on May 7th, 2014 was held at Rosewood 3 Meeting Room, Royal Kuningan Hotel, Jakarta The purpose of the meeting was to discuss with the shorlisted 'candidates' to recieveMedia Fellowship on the overall objective of ICCTF Journalist and Media Award

(ii) Media and Journalist Award on 30 May 2014.

The winner of the ICCTF Media Fellowship Award took was on May 30th, 2014 at ICCTF Secretariat Office in Jakarta, Indonesia. A selection committee consisting of Senior Editors and Journalists from national media selected 10 out of 61 proposals. Five proposals from Printed Media; three proposals received from Online Media; and two from Television were nominated for the ICCTF Media fellowship 2014. Among them, representatives of three best media coverage were offered the opportunity to cover the UNFCCC-COP 20 in Lima, Peru³.

²The following links are the media coverages on the event, as of Nov. 18, 2014: The Jakarta Post (http://m.thejakartapost.com/news/2014/11/17/farmers-learn-modern-weather-forecasting.html) Kompas Daily (http://www.batukarinfo.com/news/%E2%80%9Dsms-penting%E2%80%9D-bagi-nelayan-dan-petani)

³See the following link broadcast by AJI on the activity. http://perubahaniklim.co/siaran-pers-sepuluh-tim-terpilih-sebagai-penerima-beasiswa-liputan-perubahan-iklim/ (iii) First Workshop on Media Fellowship on June, 2014

ICCTF and AJI Jakarta held the first workshop for 10 media teams coming from across Indonesia that have been chosen as the winners of ICCTF Media Fellowship 2014. The workshop discussed several of topics related to the impacts of climate change on health, how energy and efficiency can successfully contribute to mitigating climate change and how journalism can act as channel to spread knowledge and understanding about climate change to the general public.

(iv) ICCTF Media Fellowship 2014 Closing Ceremony and Book Launching on 13 October 2014

In October 2014, ICCTF and AJI (Aliansi Jurnalis Independen – The Independent Journalist Alliance) Jakarta concluded the ICCTF Media Fellowship 2014 with the announcement of the top three teams and the launching of a book that presented the work of the Media Fellowship. The event was opened by Mr. Lukita Dinarsyah Tuwo, Vice Minister of the National Development Planning Agency (Bappenas) and was attended by Senior Advisor to Minister of Forestry on Environment and Climate Change, Director of Environment, Bappenas, representatives of Danida. GIZ and the media. A total of 100 participants participated in the event

The top three teams are Tempo Yogyakarta, Media Indonesia West Kalimantan as well as Berita Satu TV. After the awarding session, ICCTF and AJI launched a book consisting of the journalistic works written by the fellows. The book will be distributed to national media to encourage more climate change-related reporting in the future.



Contribution to longer-term results

The active participation of ICCTF in national and international events strengthened role and visibility of ICCTF as a key financing institution in Indonesian climate policy framework. The presence in regional and global (i.e. COP 20) contributed towards disseminating lessons learned and best practices on climate finance to other policy makers in the world. Beyond increased recognition and publicity, the presentation and sharing of experiences also aligns with ICCTF's goal of increased resource mobilisation. By reaching out to communities across Indonesia ICCTF ensures that it communicates the importance of climate change to those impacted worst by climate change.



3. Organizational Development

Summary

During 2014 the legal basis including Ministrial Decree (Kepmen) ICCTF Board of Trustee has been issued. Implementing Bylaws as a basis governance of ICCTF has been signed by the chairman of LWA ICCTF. Signing MoU with Bank Mandiri as a national trustee. The escrow account for LWA ICCTF has been created and fully operational. ICCTF secretariat continued to increase the capacity of the staff through provision of Results-Based Monitoring (RBM) training with the support of UNDP Indonesia mission.

Progress

ICCTF made a significant achievements on the legal establishment of the Trust Fund (LWA), the Board of Trustees and its Bylaws. A Ministerial Decree (Kepmen) on the ICCTF Board of Trustee (MWA) was issued in March 2014. To accommodate the change in government structure, in October this Decree has been revised and a new regulation, Ministerial Decree of Bappenas/PPN No. 97/M.PPN/HK/10/2014, has been enacted.



The Implementing Bylaws of the LWA ICCTF as a guidance for the organ of LWA ICCTF in conducting their duties of managing and implementing the ICCTF programs has been endorsed by MWA members and signed by the Chairman of MWA in early November 2014. Previously, the draft of Implementing Bylaws have been circulated twice to the members to allow feedback and input. In addition, the draft of Bylaws have also presented in the MWA meeting that took place on October 3, 2014.

For allowing a' smooth transition from PREP-ICCTF to National Trust Fund, in 2014, staff recruitment continued including the position of an Executive Director. The recruitment process of the Executive Director (ED) position via national procurement system was initiated in March 2014. During the first MWA meeting that took place on 27 June 2014, the MWA members nominated Mr. Noorsalam R. Nganro as the Executive Director. The ED joined in ICCTF in August 2014.

In 2014, ICCTF secretariat continued to conduct the revision of Business Plan 2014-2020 to set the long-term vision. The business plan revision has been conducted along with the development a fundraising strategy and presented to MWA members for comments and inputs. On October 3, 2014 the Business Plan has been endorsed by MWA members.

During 2014, the ICCTF organized two MWA meetings. The first meeting took place on 27 June 2014 at the Bappenas Ball Meeting Room with the objective to discuss the following matters: introducing MWA members about their role and responsibilities; updating on the progress of ICCTF activities and milestones for the transition phase as well as to make key decisions/endorsements on PDA, Executive Director, Business Plan and Bylaws. As a result of the meeting, the meeting following decisions were taken: (i) Appointment of Bank Mandiri as PDA (Pengelola Dana Amanat/Fund Manager); (ii) nomination of Noorsalam R. Nganro as the Executive Director with a six-month probation contract. The second MWA meeting was conducted on October 3, 2014 with the objective to introduce the newly elected Executive Director to MWA members; to endorse the Implementing Bylaws and the Business Plan ICCTF 2014 - 2020) as well as to sign a MoU with Pengelola Dana Amanah (PDA - Bank Mandiri).

ICCTF strengthened its financial accounting system by further developing custom webbased **Enterprise Resource Planning (ERP)** that is set to replace the financial oversight service provided at the moment by UNDP's Atlas system under PRE-ICCTF. To support the implementation of ERP, a series of activities were conducted during 2014 including discussion on the implementation of ERP financial system in April 2014 with the aim to socialize the new system, followed by a-half-day meeting on Enterprise Resource Planning (ERP) system to ensure that the ICCTF staff is familiar with the system and able to operate it on a day-to-day basis. The ERP Human Resource Integrated System (HRIS) was launched in July 2014. Some adjustments remain to be made by the service provider (BataviaNet) to improve and enhance the ERP system following the launching of the ERP system.

ICCTF continued its transition from PREP-ICCTF to a National Trust Fund. The need to increase the capacity of ICCTF secretariat staff is very crucial. In June 2014, UNDP organized a Results-Based Monitoring (RBM) training. This three-day training has been conducted as a follow-up to UNDP capacity assessment for ICCTF from 2012. The training ensures that ICCTF staff adopt highest quality standards in the management and operation of the trust fund. The objectives of the workshop were: to provide key staff of ICCTF and executing agencies with an in-depth understanding of Results-Based Management through presentation and exercises and to apply RBM to the existing business plan, the annual work plan of ICCTF and to present and future funded projects, in line with the Planning, Monitoring and Evaluation (PME) of SOPs.

As part of its efforts to foster **exchange of information and lessons-learned** among relevant stakeholders, the ICCTF conducted capacity building activities on thematic climate change issues including Focus Group Discussion (FGD) on the topic: 'Maximize Potential Fishing Location Information for Fisherman.' The FGD was targeted at stakeholders from national and international governmental and non-governmental organizations dealing with fishery issues. The resource persons attended the discussion included representatives from Balai Pengembangan Observasi Laut (BPOL) of Bali; BPPT, Faculty of Fishery and Marine of Institut Pertanian Bogor (IPB), Marine Faculty of UNDIP Semarang. In addition, ICCTF Secretariat also organized a series of discussions and meetings together with relevant units in Bappenas and line ministries (Ministry of Finance, Treasurer, etc.) aimed to finalize the standard operating procedures (SOPs), implementing Bylaws as well as Fund Channelling Mechanism.

Establishment of **SATKER (Working Unit**) took place in the end of December 2014. It is expected that the SATKER is fully functioning by early 2015.

Contribution to longer-term results

The issuance of Ministerial Decree (Kepmen) on ICCTF Board of Trustee allows ICCTF to operate independently and use the service of its Trustee to implement new projects in a future call for proposal. It also puts ICCTF in the right position to be the default implementation platform for RAN-GRK, RAN-API and NAMAs. To enable ICCTF to become a transparent, credible, and independent organization as well as to get national and international recognition, ICCTF has committed to continue to improve its performance of its strategic plan in the upcoming years.

III. Challenges and Responses 2014

The PREP-ICCTF project faced several challenges to accomplish the planned targets in 2014 as presented in the table below:

	Challenges	Management Responses
Strategic	Leadership and strategic positioning of ICCTF affected by the absence of Executive Director and additional staff yet to be recruited	After clearance by Bappenas, the Secretariat advertised the position of the ICCTF Executive Director. The advertisements has been conducted twice as the first announcement resulted in a lack of shortlisted candidates that meet the requirements. In addition, the approval of candidate of ED only occurred during the first MWA meeting on June 27, 2014.
	Strong alignment with other similar initiatives and the strategic objective of the RAN-GRK, RAN-API and strategic objectives set by Board of Trustee is required	Policy coordination and continuous policy dialogue, ICCTF plays an important role in improving coordination and alignment. Linkages of ICCTF Secretariat with related initiatives and objectives may be strengthened after consultation with Bappenas.
Institutional	The need to improve ICCTF management system i.e. reporting, finance, communication, and human resources.	The secretariat will strengthen its reporting and communication capacity. In the Q2 2014, ICCTF Secretariat recruited a number of staff to fill vacant positions including Planning M&E Manager and Associate, Grant Assistant, Graphics Designer, Windows Assistant and others.
Financial	ICCTF and BAPPENAS need to prioritize the arrangement of fundraising activities and strategy to deal with the expected financial shortage in the beginning of 2015.	The fundraising activities will be conducted by the Executive Director with the support of Director of Fund and Finance fr The fundraising strategy has been elaborated in the ICCTF Business Plan 2014-2020 in order to forecast incoming funds from various sources, both nationally and internationally.

IV. Cross Cutting Issues

Gender Mainstreaming

The gender mainstreaming process is incorporated into all organizational activities to ensure that awareness of gender issues and respect for the equality of both sexes are reflected throughout all activities. ICCTF takes into account sensitivity to gender issues in all policy, programme, administrative and financial aspects of the organization. The gender mainstreaming is part of ICCTF objectives because fighting against climate change differentiated roles of men and women expose them to different risk.

ICCTF supports gender mainstreaming and pays attention to marginalized communities, such as small farmers, smallholders of forest community in Madura, small-scale farmers in five location of MoA projects who are actively involved in the projects. For example, in the case health project conducted by Minister of Health (MoH) the participation of predominantly female local health volunteer 'local cadre' has led to a more 'dynamic' implementation of the project. These local cadre can help their neighbours and community by disseminating information related to the importance of living in a clean environment and away from mosquito 'breeding' areas.

The involvement of a women groups in Pulau Rendra and Tobea of Kendari, Southeast Sulawesi in a small grant project (SGP) on seaweed farming allowed a faster decision-



making process and enabled them to increase their livelihoods and thereby 'escape' from poverty and elevate their status in society.

Partnership

The secretariat intensified its joint effort with the German International Cooperation (GIZ) through a new initiative funded by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMU) of Germany. The objective of this partnership is to optimize the capacity development offered by GIZ to the ICCTF Secretariat. In parallel and funded by the German Government, an integrated expert from German Centre for International Migration and Development (CIM) is assigned as an Assistant Director for Fund and Finance since October 2013. This integrated expert is expected to craft and launch a resource mobilization and funding strategy for the ICCTF Secretariat for 2015 and beyond.

In year 2014, the USAID-funded regional programme of ADAPT Asia Pacific through AECOM provided technical assistance on the development of Monitoring and Evaluation framework for adaptation activities. This support was initiated in 2013 and the cooperation was concluded in February 2014. The framework is used for selecting proposals from both small grants and funded projects . During 2014, the Climate and Development Knowledge Network (CDKN) supported ICCTF in the organization and implementation of the ICCTF NAMAs summit. This cooperation will be continued and strenghtened in 2015. Through a selected service provider funded by CDKN, ICCTF will receive technical assistance to improve the understanding of the ICCTF about the capacity needs and technical requirements in accessing global climate funds (especially GCF) and how to conform with international standards in climate finance management. This activity aligns with the effort of ICCTF to become a National Implementing Entity (NIE) to the ICCTF.

Bank MANDIRI has been appointed as a National Fund Manager (NFM) of ICCTF. It will serve as the party that receives and holds domestic and international grant managed by ICCTF in accounts opened on behalf of ICCTF. Bank Mandiri as the National Fund Manager has the following duties: (i) open and manage the Rupiah Currency Account; (ii) perform the functions of a trustee and paying agent in relation to the distribution and payment of Deposit Funds to Destination Account; (iii) perform the function of investment agent in relation to the management of Deposit Funds.

In addition, the trust fund has established a partnership with the Independent Journalist Alliance (Aliansi Jurnalis Independen-AJI) Jakarta to organize the ICCTF Media Award. The three winners were invited to cover ICCTF's contribution to the UNFCCC Conference of Parties (COP) in Lima, Peru on 1-10 December 2014 with the objective to increase ICCTF's visibility among domestic or foreign decision makers.



The trust fund has also established partnerships with local and national NGOs as well as Universities to implement the small grant projects (SGPs). They are: (i) Perkumpulan PIKUL, Kupang; (ii) Aliansi Relawan untuk Penyelamatan Alam (ARUPA); (iii) Humaniora; (iv) Politeknik ATMI Surakarta; (v) Perkumpulan Bingkai Indonesia; (vi) Institute Pertanian Bogor (IPB). These six organizations were supporting ICCTF in implementing the climate change related activities targeted for grassroots people and communities in several provinces in Indonesia.

The Royal Danish Embassy contributed to the Indonesia Climate Change Trust Fund (ICCTF) through the Environment Support Programme Phase III (ESP3) programme with the objective to provide effective planning, implementation, monitoring and evaluation of GHG reduction and climate change adaptation, including environmental considerations and methods. The contribution will be used for further strengthening the selection and monitoring process of ICCTF future projects in order to ensure notable project development. It will be a possibility to finance projects from private companies, local government and CSO. The ICCTF through Board of trustees meeting make all key decision.

V. Risk Management

	Rating (low,	Mitigation
	medium, high)	Strategy
Political		
Cabinet reshuffling and readjustments in several layers of government agencies including Bappenas following the Presidential election of 2014.	Medium	The election of the new president and implications are beyond control of the PREP-ICCTF project and the secretariat. However, during the presidential election period, ICCTF did take some measures including establishing a partnership with a journalists'associaton to promote publicly the importance of climate change and the role of ICCTF in the achieving national mitigation and adaptation targets.
Regulatory		
Issuance of regulatory framework on the establishment and operational MWA-LWA occurred in the Q4 2014	Low	Through intensive coordination and communication with relevant Units in Bappenas and as a result of a new regulation - Ministerial Decree of Bappenas/PPN No. 97/M.PPN/ HK/10/2014 on Board of Trustee of ICCTF was issued in October 2014.
Strategic		
Profiling from ICCTF to access vertical funds such as the Adaptation Fund, Green Climate Fund is not sufficient yet.	Medium	Utmost priority has been put on the legal establishment of a fully national set up. Once finalized with the issuance of the Kepmen MWA, ICCTF can focus on meeting the requirement of vertical funds. The accreditation by the Adaptation Fund board was unsuccessful in 2012 and learning from this experience the Secretariat may want to seek for accreditation once again with increased capacity and a national status. As for the Green Climate Fund, 2014 is still premature to consider accreditation of the trust fund to access this vertical fund; however, the Secretariat will keep itself abreast of developments surrounding
		the fund.

Operational

The SATKER is not fully operating by the Q4 2014 however the endorsement of SATKER ICCTF occured in 2014. ICCTF has it owned SATKER with code number 966010.

Medium

Several meetings took place to discuss the establishment of SATKER including learning from the lessons learned of the establishing SATKER of Millennium Challenge Account Indonesia (MCAI).

VI. Lessons Learned

The implementation of PREP-ICCTF Project in year of 2014 has produced excellent results and best practices. However, lessons learned highlight key issues including:

- 1. Coordination with local/community leaders and relevant stakeholders at the early stage is very crucial
- 2. Having a legal basis of cooperation with the local stakeholders.
- 3. Comprehensive assesments and intervention on community awareness raising
- 4. The importance of using local tools for public awareness raising
- 5. Incorporating media in a series of activities and dissemination of program
- 6. Well-structured project management
- 7. Putting an emphasis on sustainability and a proper exit strategy for small grant programs during planning process
- 8. Not only stand alone 'dissemination of weather forcast information'
- 9. Advocacy at the local government
- 10. The project needs to be demanded by the local community and provide direct benefits to them.

Details on the lessons learned captured during the implementation of both funded projects and small grant projects are presented below:

1. Coordination with the local/community leaders and relevant stakeholders at the early stage is very crucial

The process of involving the community from the beginning is important to the success of project implementation. Society should not be perceived or positioned as simply an 'object or recipient of project', but it should be the main actor. The community needs to bear the ownership of project in order to ease the process of engagement at the local level. In addition, it is very important to involve local stakeholders like village government, local government and other relevant parties through coordination meetings and hearings prior to the project start or during the inception stage. These activities are useful for capturing

the necessary information to which conditions the implementation of the project can be accepted and supported, to ensure the availability of data or information that is needed for the Project. Miss-communication and lack of coordination with the decision-makers can be minimized if there is a clear information and knowledge possession on the overall project design through advanced briefing and notification.

2. Having a legal basis of cooperation with local stakeholders.

A legal basis of cooperation between the relevant stakeholders involved in the project is very crucial. This legal basis document can clearly elaborate the role and the functions of the stakeholders involved. The experience from small grant projects as an example, the mapping was conducted through a joint MoU between managers of Penerangan Jalan Umum (PJU) and the State Electricity Company (PLN) to generate data that can acceptable for both parties. There was several meetings organized between the executive, manager PJU and PLN to discuss technical matters (e.g. calculations, standards, etc.) for preparing GIS's specifications system that met the standards of the interested parties.

3. Comprehensive assessments and intervention on community awareness raising

The key lessons learned from this practice, stem from the valuable reporting from the heads of the villages and local authorities when a different approach towards building capacity was communicated to them. One point of caution is that practitioners should not rush to implement an educational intervention without prior consulting the population on the overall concept. For social mobilization to be effective, it has to be anchored in a set of learning materials to support the learning process. Concrete and tangible examples should be provided, along with the use of local dialects to improve the understanding of difficult concepts such as types of hazards and how they should be managed. It is important to minimize problems with communities by respecting local customs and traditional ways of doing things.

4. The importance of using local tools for public awareness raising

Sometimes it is difficult to use methodologies of public education and awareness in both rural villages and suburban villages, e.g., megaphones instead of using microphones. Rural and urban villages require different media means for awareness campaigns. Those include, among others, the importance of drawing a map and using 'visual materials' like interactive drawings and posters. In addition, the application of local materials and resources can be a good way to facilitate the learning of rural populations. Mapping on community needs for example can be done in parallel to the drawing of the paper map and obtain better results and prolong the attention span of participants, including saving time during learning acquisition.

5. Incorporating media in a series of activities and dissemination of program

Involving the media in a multiple process is important. The media can provide input on

the overall program, and can help to disseminate information on programs. Additionally, it provides an opportunity for the program and media practitioners to experience the learning elaboration process as important. This process was included by Pikul, Bingkai Indonesia and Humaniora. The media played an important role in assessing the program and in disseminating the information effectively to the rural population. From this process ICCTF was able to enhance their learning activities. The news broadcasted through the media staff or practitioners received a positive response from other parties, especially the private sector and government. They expressed their interest in 'expanding' the ICCTF programs and this becomes an investment in the institutional development of ICCTF by attracting partners for future business proposals development.

6. Well-structured project management

Project management is eased by the regularity of operations such as call for proposals and development of project proposals. Ensuring regular and well-communicated call for proposals contributes to the quality of projects funded later on and can help in the management of projects in terms of anticipating work load and other challenges. Wellfunded operations are a precondition to the stability and regularity of operations. The upcoming Small Grant Project (SGP) 2015 will use the state budget (APBN) to fund the project implementation. Therefore, it is strongly required to prepare the modality, disbursement and reporting mechanism. At the same time the capacity of the project implementer in complying with APBN system has to be ensured.

7. Putting an emphasis on sustainability and a proper exit strategy for small grant programs during the planning process

In the upcoming SGP project selection sustainability and development of an exit strategy has to be ensured. This can be done by mobilizing resources from the government/ community/private sector to support the continuation of the project. Previous experiences demonstrated that projects struggle in achieving the project outputs and complying with ICCTF-UNDP reporting mechanism due to the short lifetime (6 Months) of the project. Therefore, has supported project implementers in developing a workplan to ensure sustainable results. As an example, Perkumpulan Bingkai has committed to continue to work with fishermen, youth, adolescents and local facilitators to strengthen the capacity of farmers and fishermen after the phase-out of the project.

8. Not only stand alone 'dissemination of weather forcast information'

The project aimed to disseminate weather forecast information and potential fish need along with other activities required by the fishermens and farmers as capacities and needs the community are quite diverse. For example in the four projects it was encounteered that additional skills are needed by the fishermen to manage and market the fish when it is abundant.

9. The importance of conducting proper assesments before selecting the project target group and site

The selection of target groups and location of the program are the basis for identifying the right methods and needs for the intervention program. In the coastal areas for example, the fishermen have a variety of needs and capacities. The types and models of production of natural services determine specific the needs for the design of the program intervention. In the case of Bingkai Indonesia's project in Pelabuhan Ratu, small boat fishermen who fish in a range of less than 2 miles at sea require more information on the scale of waves, tides and winds instead of information on fish potential in a certain location. These type of fishermen require daily weather information instead of weekly. However, fishermen with large ships demand more information on fish abundancy in a certain location and they require weekly information instead of daily. In the case of Pikul, seaweed farmers in Tablalong Kupang, weekly rather than daily weather information on tides and waves are more useful. Also, for farmers weekly information are better to plan their activities ahead

10. Advocacy to the local government

There should be an intervention from the local government and parliament to raise the importance of marine and coastal economies important sector to the region. The coastal and marine sector are still treated as marginal issues. To convince the government and parliament, adequate preparation is needed, including the ability of fishermen to describe the various problems they face, the effort that they have done in coastal resources as well as what is required in the context of a changing climate. They need to set up an advocacy strategy for stakeholders, in particular to engage the local government and to ensure that their needs are considered and addressed.

11. The project needs to be demanded by the local community and provide direct benefits to them

This Lessons Learned from dessimenating information on weather and climate among fishermen and seaweed farmers. At the start of the project fishermen and seaweed farmers were not aware of the importance weather forcast information. However, through periodic delivery of the information on weather forecast by BMKG, fishermen and seaweed farmers increasingly understood that weather information is required to avoid risk and to apply the rightt fish management. Information needs even increased apart from text information, visual information such as current maps, maps of potential fish, sea floor maps, were soon requested. Overall weather information was useful for fishermen, coastal fishing and also seaweed farmers.

VII. Conclusions and Ways Forwards

- The transition process and new institutional arrangements from PREP-ICCTF to ICCTF or National Trust Fund is completed in line with Presidential Regulation No. 80/2011 on national trust funds.
- A National Fund Manager (Bank Mandiri) is selected and fully functioning to support the trust fund.
- Governance of ICCTF including Standard Operating Procedures (SOPs), Implementing Bylaws have been completed and adopted by the MWA for allowing the trust fund to be fully functioning in 2015.
- Establishment of Satuan Kerja (SATKER) or Working Unit is completed. The Ministry of Finance has approved the proposal to establish special SATKER LWA ICCTF.
- The Government of Indonesia (GoI) through APBN 2015 provides support amounting to 15.3 billion rupiah (USD 1.27 million) for operational expenses of ICCTF and small grant projects (SGPs). Moreover, in December 2014, the Royal Danish Embassy's made a direct contribution to the ICCTF amounting to USD 65,000 aimed to further strengthening the selection and monitoring process of ICCTF's future projects and to cover general operational expenses of the secretariat ICCTF in year of 2015.

• ICCTF continued to strengthen its operation through its existing thematic windows and expanded its mode of delivery to civil society through a Small Grant Programme. Thereby it gives means to stakeholders at the local and national level to mitigate and adapt to climate change.

- ICCTF continued to strengthen its fundraising activities to raise additional funding. During 2014, it successfully organised with support from Bappenas, GIZ and CDKN an ICCTF NAMAs Summit with the objective to match national sustainable policies, projects and programs (NAMAs) with international climate and energy finance from international donors and other investors. In a followup, several bilateral discussions with potential donors were held that demonstrated interest to invest in one of the presented NAMA.
- ICCTF continued to work on building up a pipeline of NAMA projects through the development of several concept notes and proposals. Among them, ICCTF plans to scale-up the Biomass Energy's project in Bangkalan, Madura to sustain the project and ensure its future replication. A proposal titled "Sustainable Wood of Effective Energy Technology (SWEET) NAMA," has been presented at the NAMAs Summit and will be further enhanced over the next month in cooperation with line
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ministries and development partners. For another proposal titled CEMENT NAMA, ICCTF successfully facilitated the submission and acceptance by ADMIRE (Adaptation Mitigation Readiness) - a 3 year project (2014 - 2016) funded by the Danish Ministry of Foreign Affairs with collaboration between United Nations Office for Project Services (UNOPS) and the UNEP DTU Partnership.

- ICCTF starts preparing documentations to proceed with the Fund's accreditation application as a National Implementing Entity to the Green Climate Fund. In this endeavour, ICCTF will receive support through CDKN and GIZ.
- ICCTF has successfully managed the transition phase. It has set the legal and operational requirements in place to work fully as a nationally managed trust fund. During 2015, ICCTF will continue to demonstrate its growing capacity to manage and raise funds. Thereby, it will gradually increase its visibility as an important vehicle to channel and manage climate finance contributions.

ICCTF Activities in the Media

The following are some of ICCTF activities that had been published in the media that part of Human Interest Story

"Farmers Learn Modern Weather Forecasting"

Published in The Jakarta Post on November 17, 2014 http://www.thejakartapost.com/news/2014/11/17/farmers-learn-modern-weather-forecasting.html

ourty-year-old Halidun Usman Kiah, a fisherman from Kupang, East Nusa Tenggara, said he now relied on text messages that he frequently received on his cell phone.

The text messages, which give reliable and accurate weather information, were sent by people working for a project called Important Messages for Fishermen and Farmers (SMESTA).

Halidun said that the text messages had been a major help for his work in fish farming.

"Because of the program, we have very accurate information on weather conditions and the exact location of fish," Halidun said during a meeting organized by the Indonesia Climate Change Trust Fund (ICCTF) and the Meteorology, Climatology and Geophysics Agency (BMKG) in Kupang on Friday.

Halidun said with the information, especially about where to find more schools of fish, he could start earning more.

"Each time I go out to sea, it costs me around Rp 3 million [US\$245] for four or five days of sailing and sometimes I go home empty-handed. However, since getting the fish-location information, I always have fish in my nets," Halidun said.

SMESTA was launched in July 2014 by the ICCTF and BMKG in cooperation with the Pikul Foundation, a local NGO in Kupang.

The program was designed as part of efforts to improve the livelihoods of local fishermen.

The ICCTF and BMKG agreed to support Pikul's SMESTA program in sending text messages to fishermen in the area.

The program has also been helpful for other local people, especially at the height of a long dry season.

Since September this year, 39,879 people in Kupang and other areas of East Nusa Tenggara province have been facing water shortages.

Pikul project coordinator Danny Wetangterah said that in the current dry spell, accurate information on weather would be very helpful for local people, especially farmers.

He said that until recently, farmers in Kupang relied on traditional methods like reading constellations or wind direction to decide on the best time to plant their crops.

"So do the fishermen; they still rely on traditional methods to predict the waves before they go to sea. They need other information sources, a more reliable source," Danny told The Jakarta Post.

Danny said there was an abundance of scientific data available to make an accurate weather forecasts, provided by the BMKG or a governmentmade farmers' calendar, but at times the information was too complicated for local people.

"We think that it would be better if someone could translate and deliver the information in very simple language. They don't use knots as a unit of measurement for wind or use the terms of latitude or longitude," Danny said.

As of July this year, 1,084 farmers and fishermen had registered for the service.

The information is also a matter of life or death.

Local farmer Amsal Tapikep said that he and his family could have perished at sea if not for a SMESTA text message.

"I was about to start a journey to visit a relative on a nearby island. Turns out there was a storm that had been raging for days. Thank God we got the text and cancelled our visit," he told the Post.

"In Madura, Pioneering an Eco-Friendly Firewood"

Published in The Jakarta Globe on June 27, 2014 http://thejakartaglobe.beritasatu.com/news/madura-pioneering-eco-friendly-firewood/

angkalan, East Java. Irham Rofii stands out from your run-of-the-mill Muslim preacher, even here on the island of Madura, off the coast of Surabaya, which is home to a bevy of high-profile clerics and their Islamic boarding schools.

Irham also runs a school, but with a difference: He is known as a "green pioneer" in his community and, most recently, a biomass energy champion.

"It used to be overheated here in Madura. Now you're arriving here drenched in sweat, but in the past we were scorched [by the sun]," the 48-yearold says, recalling how dry and barren the subdistrict of Geger in Bangkalan — one of four districts in Madura — was just a few years ago.

Irham took to planting trees in the area, which was a challenge given how nutrient-poor the soil was. Soon after he took charge of Darul Ittihad, the Islamic boarding school his father had founded, Irham began using his influence as a local religious and community leader to encourage residents to follow suit in planting trees.

The Islamic clergy holds strong sway over local communities in Madura, more so than in most other parts of predominantly Muslim-populated Indonesia, and the Madurese are said to trust their clerics more than government officials.

"So when I set the example, people came to believe that planting trees was good. So they began to do it too," Irham says, adding that reforestation is now considered by local residents as an activity that has religious merit.

Geger has since been transformed from a once barren area. Houses sit along a road that cuts through the subdistrict, into Kombangan village where Irham lives, looking almost like intruders in an old-growth forest — when in fact it is the various trees and shrubs now growing densely in the area that were introduced more recently and now provide shelter from the searing heat of the day.

"It used to be impossible to grow rambutan trees here," says Irham, whose tree-planting campaign has earned him the nickname Kyai Hutan (Forest Cleric).

"If you'd been here two months ago, you could have easily picked the rambutan off the trees around here," he adds, pointing to a tree not far from where we sit, as he addresses guests — local and foreign — who have come to see his latest project.

Having essentially created a forest where before there was none, Irham is now involved in another green project, one that has been going on for the past two years, this time on renewable biomass energy — more specifically, wood pellets.

The project was proposed by Yetti Rusli, an adviser with the Forestry Ministry, and approved for funding in 2012 by the Indonesia Climate Change Trust Fund (ICCTF). The ICCTF is a body under the National Development Planning Agency (Bappenas) tasked with managing funds from international donors to support climate change mitigation activities in Indonesia.

Near-zero emissions

Upon a request from South Korea, which is set to boost its biomass energy use in order to cut carbon emissions, the Bogor Institute of Agriculture (IPB) conducted a study in 2011 to examine potential of four plants for development as energy wood pellets, an environmentally friendly alternative to carbon-heavy coal.

Yanto Santosa, a professor of ecology at IPB and an adviser to the ICCTF, says the four plants were red calliandra, Gliricidia, white leadtree and ear tree. The study found that pellets produced from each plant released near-zero carbon emissions and heat of around 4,600 to 4,700 calories per kilogram --nearly as much as coal at 4,800 to 5,500 calories per kilogram. Calliandra (Calliandra callothyrsus) came out the winner due to its high productivity.

"In its first year, calliandra may be harvested after nine months, and then after that every six months," Yanto says. "Every time a calliandra tree is cut down, seven to nine buds will appear. [Farmers] probably only need to replant the trees after 15 years."

The other plants tested, meanwhile, took longer to grow, which meant lower productivity.

"Higher productivity means faster absorption of carbon dioxide," Yanto adds.

He says calliandra also has the highest density, which explains its less than 1 percent ash content,

meaning the wood is highly combustible with near-zero emissions — a good indication of a clean fuel.

Noer Yanto, former official with the local forestry agency who is also heavily involved in the wood pellet project in Geger, says calliandra has another advantage in that it can grow in nutrient-poor soil and degraded land. It does not require fertile soil to grow in, and in fact its nitrogen-fixing ability allows for other plants to grow more easily — making it perfectly suited for Madura, a large part of which remains dry and barren.

Those are the reasons why calliandra, native to Panama and Mexico and introduced in Indonesia in 1936, was chosen as the raw material for wood pellets in the ICCTF pilot site, he says.

A total of 214 hectares in three villages in Geger have been dedicated to growing the plant some interspersed with other plants — after Irham, Noer and Ghozali Anshori, another local public figure, encouraged members of the local farmer's cooperative, Gerbang Lestari, to participate in the project. Gerbang Lestari was founded by Irham.

The cleric has even allowed a plot of his land to be used to house the factory that will process the wood. He got his students and residents to help build the factory together, with funds from the ICCTF.

"We want our students to be good not just in religion, but also in science and technology," Irham says.

A total of Rp 2.5 billion (\$207,000) has been allotted for the project, including Rp 1.2 billion for the wood pellet mill, most of whose parts were shipped from China.

The machine, half-assembled in Indonesia, was ready for use a month ago and has been on a test run since then, processing narrow calliandra trunks and branches into wood pellets. Business interests and beyond

Daru Asycarya, a Forestry Ministry official supervising the project, says it has drawn the interest of several prospective buyers, including one from South Korea who wants to buy 300 tons of calliandra wood pellets per month.

No deal has been inked, though, Daru says, as the mill is still in the testing stage and only has a production capacity of a ton per hour or around 220 tons per month. "We want to first make sure that we can produce prime-quality products that will be more widely accepted," he says.

As for local customers, Daru says, some tea growers in West and Central Java as well as cement maker Holcim have expressed interest in the wood pellets for use in their operations.

"Many industries have now begun using biomass energy," he says. "Semen Indonesia [a cement maker], for example, wants biomass to comprise between 30 and 40 percent of their energy source. They've begun looking at us."

Syamsidar Thamrin, the ICCTF secretary, has other uses in mind. She says calliandra wood pellets can be an ideal solution for the electricity needs of many of the remote villages across Indonesia, especially on the smaller islands that remain beyond the reach of the national power grid run by state-owned electricity firm PLN.

"Wind power is not always economical. Solar cells remain expensive. Kerosene is cheap only because it's subsidized. And don't forget the cost of fuel shipment," Syamsidar says.

"Calliandra, though, is cheap. I hope this project will be replicated, and later on scaled up for the whole of Madura. And in 10 or 20 years from now, I hope [calliandra wood pellets] will be used to support 'power the villages' programs," she adds.

With as many as 24 million hectares of land across Indonesia categorized as degraded or barren, Yanto says there is a large potential for industrialscale calliandra cultivation and a massive wood pellet industry that will benefit not only local farmers and communities with additional incomes, but also Indonesia with a new potential power source, and eventually the world, with reduced carbon emissions.

Indonesia is currently facing an energy crisis, with domestic oil reserves expected to be depleted by 2025 if no new reserves are found. Gas reserves are expected to last only for another 30 years, while only highly-polluting coal is expected to stay around for longer — for the next 60 years, according to the Agency for the Assessment and Application of Technology (BPPT).

But despite the situation, and the amounts of carbon the fossil fuels emit into the air, the development of sustainable and renewable alternative energy sources in Indonesia has been going at a snail's pace.

Fossil fuels still dominate Indonesia's energy mix, with less than 5 percent coming from renewable sources, namely hydro-electricity and geothermal power, according to 2010 data from the Energy and Mineral Resources Ministry.

Syamsidar dismisses concerns that a wood pellet industry will turn out like the palm oil industry, which has led to the wholesale destruction of huge swaths of pristine forest to clear land for oil palm plantations. If that were to happen with the calliandra industry, experts say, it would go against the whole point of producing clean energy for lower emissions.

"Oil palm requires productive land. But with calliandra, we're focusing on barren and degraded lands," Syamsidar says. "Rather than letting those lands stay abandoned, why not put them to use?"

Village saves world from climate change"

Published in The Jakarta Post on January 17, 2015 http://www.thejakartapost.com/news/2015/01/17/village-saves-world-climate-change.html

aving declared their region climatecaring in November 2014, farmers in Terong village, Bantul regency, Yogyakarta, have backed up their words with actions by not cutting down trees in the area before time.

The postponement of the logging has been enacted in the hope that the trees will absorb carbon dioxide (CO2), thus mitigating the effects of global warming.

"This is a sign of our awareness, a form of observance to participate in the saving of the world from the impacts of global warming," village head Welasiman told The Jakarta Post on Wednesday.

The United Nations Framework Convention on Climate Change (UNFCCC) states that CO2 is the dominant cause of climate change.

Terong village, which covers an area of 755 hectares on Bukit Patuk hill, which borders Gunungkidul regency, Yogyakarta, is a very green place. Large trees, such as teakwood, mahogany and sengon cover villagers' yards.

Thanks to the presence of big trees, water resources that had disappeared from the subdistrict have returned.

People became more eager to plant trees since 2010, when NGO Arupa (the Alliance of Volunteers to Save Nature) came to the subdistrict, bringing news to residents of the success in a neighboring subdistrict, Semoyo, of a program to save the environment through carbon absorption.

Arupa director Dwi Nugroho said his organization had helped Terong forest farmers establish a farmers' group, Jasema, in 2012, with 554 members and a combined space of 321 hectares.

Arupa trained the farmers to manage the forest sustainably, understand global warming and climate change and calculate carbon absorption. The farmers' group was later granted a timberlegality verification system (SVLK).

According to research conducted jointly by Arupa and the farmers between 2011 and 2014, every hectare of trees in domestic yards in the subdistrict could absorb 14 tons of carbon annually. The trees in the fields, meanwhile, could absorb 10.87 tons of carbon per hectare per year.

Dwi said the main cause of deforestation in the area was the early logging of trees because of high demand, with subsequently low prices for the timber produced.

To deal with this, Arupa, with support from the Indonesia Climate Change Trust Fund (ICCTF), established Koperasi Tunda Tebang (Cooperative to Delay Logging) Jasema.

The cooperative offers farmers loans with trees as collateral, with the proviso that the trees must not be logged until they reach the ideal time.

"With the cooperative, the farmers have access to funds but their trees continue to grow and absorb carbon," Dwi said.

In 2014, Arupa and the ICCTF planted 4,725 teakwood trees, 3,780 of which are expected to survive for the next 20 years and could absorb a total of 493,960 tons of carbon or some 24,698 tons annually.

Jasema farmers' group chairman Sugiyono said early logging caused financial losses to farmers. Providing an example, he said that a sonokeling tree of less than a meter diameter was sold for Rp 100,000 (US\$8) to Rp 300,000, whereas given time to grow, it could fetch millions of rupiah.

Sugiyono explained that farmers could take out loans of up to Rp 5 million from the cooperative. He himself had borrowed Rp 4 million for his wife's business with his 24 teakwood and mahogany trees as collateral.

"I have to pay Rp 440,000 a month in installments for 10 months," said Sugiyono, adding that since its establishment in November 2014, the cooperative had disbursed a total of Rp 66 million to its 30 members









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