Kementerian PPN/ Bappenas

ICCTF
Indonesia Climate Change Trust Fund

ANNUAL REPORT 2017

INDONESIA CLIMATE CHANGE TRUST FUND

MESSAGE FROM THE

Chairman of the Board of Trustees

Indonesia Climate Change Trust Fund

Salam sejahtera,

The Indonesia Climate Change Trust Fund (ICCTF) was founded eight years ago as the sole Trust Fund for Climate Change in Indonesia. In dynamic and highly challenging circumstances, ICCTF has proven its ability to continuously develop and to contribute towards the achievement of national goals in the field of climate change. During the year 2017, ICCTF continued the implementation of mitigation and adaptation actions as well as organisational strengthening to realise the vision of ICCTF as a strong and independent trust fund. ICCTF has also played a role in promoting Indonesian initiatives to reduce climate change impacts at both national and international levels.

By the end of 2017, ICCTF had implemented 63 projects focussed on land-use and energy based mitigation as well as adaptation and resilience. Positive impacts from these projects have included improvements in environmental quality, community/stakeholder empowerment, and improved livelihood options especially for farmers and fishers. Mitigation and adaptation actions are expected to continue and yield more extensive benefits for the people of Indonesia.

During 2017, the Indonesian Government announced its Low Carbon Development Plan (*Perencanaan Pembangunan Rendah Karbon* - PPRK). In this context, it is expected that in future ICCTF will not only play a role in achieving Green House Gas (GHG) emission reduction targets, but also in ensuring that these targets are met in ways which also improve human welfare.

In addition, ICCTF is expected to support the achievement of the Sustainable Development Goals (SDGs), in particular Goal 13 on Climate Change, as per Presidential Decree No. 59 of the year 2017.

It is anticipated that ICCTF will continually increase its capacity in the management of climate change funds, as well as in seeking to access the various sources of funding which are or become available. It is to be hoped that all the lessons learned and good practices developed under ICCTF programs can be incorporated into the process of drafting the 2020-2024 National Medium Term Development Plan (*Rencana Pembangunan Jangka Menengah National* - RPJMN).

We take this opportunity to express our gratitude to all parties who have provided support for ICCTF. We sincerely hope for continued support from various parties in the future.

Best regards,

Chairman of ICCTF Board of Trustees
Dr. Ir. Arifin Rudiyanto, M.Sc
Deputy for Maritime and Natural Resource Affairs
Ministry for National Development Planning/National Development Planning Agency

FOREWORD

ICCTF Executive Director

Since joining ICCTF in July 2017, I have had the opportunity to learn about the dynamics and organisational structure of ICCTF. One thing which I have realised is that ICCTF is the sole trust fund for climate change in Indonesia. ICCTF supports many partner organisations in undertaking initiatives to address climate change in Indonesia, with a focus on three areas: Land Area based mitigation, Energy, and Resilience. During 2017, ICCTF implemented actions to address climate change in two of these areas: land area based mitigation and resilience. In addition, ICCTF continued to develop the energy focus as well as initiating new programs such as the marine based area approach.

In 2017, ICCTF managed 42 projects spread in 19 Indonesian provinces, comprising 31 land-based mitigation projects and 11 adaptation and resilience projects. Activities undertaken included forest and peatland management; the rehabilitation of critically degraded land; forest fire and other land burning prevention measures; water management; livelihoods-related activities; climate modelling; and vulnerability assessments for the agriculture and fisheries sectors. I believe that these projects have already provided significant positive impacts or benefits for local communities and can be used as examples or blue-prints for extending similar initiatives to other areas. One important point which I would like to mention here is that in 2018 ICCTF will begin to handle marine projects including plans to manage the coral reef rehabilitation and management program (COREMAP).

We believe that ICCTF can continue raise its capacity to manage funds for addressing climate change in Indonesia. As the sole trust fund for climate change in Indonesia, the role of ICCTF will continue to expand at national, regional, and global levels. Strategic steps taken by ICCTF include participation in the UNFCCC COP 23 held in Bonn, Germany; the development of the Indonesia Blue Carbon Strategy Framework (IBCSF), the development of integrated proposals, and so on. ICCTF will continue to endeavour to improve organisational governance and performance in order to increase and improve future outputs and outcomes.

On behalf of ICCTF Secretariat, I take this opportunity to thank all who have supported ICCTF activities and contributed to our achievements during 2017, in particular ICCTF Board of Directors, government agencies, donor agencies, our partners, and all ICCTF management and staff.

Through this Annual Report for 2017, we wish to share our experiences with and disseminate information to all stakeholders. We hope this will help to promote continued support for ICCTF and its activities to address climate change issues in Indonesia. We welcome constructive criticism and suggestions to help us to improve the future performance of ICCTF. Thank you.

Executive Summary

ICCTF is a key instrument for the Indonesian Government in the context of climate change mitigation and adaptation goals set under the RAN/RAD-GRK (GHG national and local government emissions action plans) and RAN API (National Action Plan for Climate Change Action). ICCTF was established in 2009 under the Indonesian Government project "Preparatory Arrangements for the Indonesia Climate Change Trust Fund (PREP-ICCTF)", facilitated by the UNDP as the interim management agency for the fund. During 2013, ICCTF was established as a working unit (Satuan Kerja-Satker) of the Ministry for National Development Planning/National Development Planning Agency under Ministerial Decree of the National Development Planning/National Development Planning Agency Number 3 of 2013.

Since its establishment in 2009, ICCTF has successfully funded 63 national mitigation and adaptation projects in 19 provinces across Indonesia. To implement these projects, ICCTF has collaborated .with government institutions, universities, and civil society organisations. Over the period 2016-2018, ICCTF managed 42 projects in the focus area of land area based mitigation as well as adaptation and resilience. During this period ICCTF received funding support from Indonesian Government, the British Government through the UKCCU, the United States Government through USAID, and the Kingdom of Denmark through DANIDA, as well as technical assistance from the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU) through GIZ INFIS.

During 2017, ICCTF managed funds amounting to IDR 58.3 billion, from funding sources including the Indonesian Government, DANIDA, USAID, and UKCCU. By 2017, ICCTF had significant achievements with regards to mitigation and adaptation action. Overall, ICCTF projects have the potential to reduce GHG emissions by 9.5 million tons equivalent carbon dioxide (CO_2eq). In 2017, infrastructure to support community activities built under ICCTF projects included canals, deep and catchment wells, reservoirs and water storage tanks, watch towers, guard posts, and biodigesters. In addition, a number of policy documents to support mitigation and adaptation actions were drafted, including village regulations. Furthermore, all these efforts resulted in increased community capacity and local economic improvements.

A major landmark in 2017 included the Indonesian Government commitment demonstrated through the launch of the Low Carbon Development Plan (PPRK) by the Minister for National Development Planning/National Development Planning Agency, Bambang P. S. Brodjonegoro, in Jakarta, firstly in October 2017, and then in November 2017 at the UNFCCC COP 23 held in Bonn. This policy document promotes low carbon development in line with accelerated economic growth and poverty reduction. ICCTF and its partners will support the Indonesian Government in its efforts to implement this low carbon development policy.

During 2018, ICCTF will continue climate change mitigation and adaptation activities including through scaling-up projects which have had significant impacts, as well as extending forest and peatland management programs to new areas (Siak-Kampar River peat hydrological unit in Riau and Kapuas-Barito River peat hydrological unit in Central Kalimantan). ICCTF will also continue to work with many parties in developing new initiatives and programs to access sources of funding such as the Green Climate Fund (GCF), Global Environment Facility (GEF), NAMA Facility, and others. Programs under development include IBC-Metro Bimindo, the Indonesia Green Cooling Program, and the Coral Reef Rehabilitation and Management Program (COREMAP-CTI). Institutional development of ICCTF also needs to be continued to enable ICCTF to function as a fully-fledged nationally managed trust fund.

ICCTF 2017 Annual Report includes the progress and achievements of ICCTF activities during 2017. This report describes activities related to project management cycles, the development of new initiatives, as well as communication and outreach. We hope that this report will enable all interested parties to know and understand the role and contribution of ICCTF in supporting the Government in addressing climate change issues. ICCTF welcomes all constructive input in order to help improve future performance.

Silver Lining

Climate change has become a global issue facing all people on earth, including Indonesia. Together with 169 other nations under the United Nations (UN) Framework Convention on Climate Change (UNFCCC), Indonesia adopted the Paris Agreement, with the goal of limiting global warming during this century. This agreement also contained crucial points regarding actions and investment for achieving a low carbon, climate resilience and sustainable future. Indonesia ratified the Paris Agreement under Undang-Undang No. 16 of 2016 and presented a Nationally Determined Contribution (NDC) document. In this document, Indonesia has set targets for greenhouse gas (GHG) emission reductions by 2030 ranging from 29%, using national capacity alone, up to 41% with international support.

In order to coordinate actions to address climate change, the Government requires a national climate change funding agency with the professionalism and capacity to implement internationally recognised fiduciary standards. Therefore, in 2009 the Government established the Indonesia Climate Change Trust Fund (ICCTF) a climate change finance agency under direct Government control and management, with the goal of coordinating and disbursing funds to support climate change mitigation and adaptation activities in Indonesia.

To date ICCTF has been through two institutional phases: firstly the Preparation Phase (PREP-ICCTF) period from 2010- 2014 during which the United Nations Development Programme (UNDP) acted as interim trustee; secondly, since 2015 ICCTF has become a Nationally Managed Trust Fund with an institutional structure as a Working Unit under the Ministry for National Development Planning/National Development Planning Agency. The fundamental difference between these two phases is that during phase one, UNDP financial systems were implemented, while during phase two national budget (APBN) mechanisms apply.

ICCTF has endeavoured to implement Indonesian climate change policy through the management of domestic and international funds and their disbursement to programs in line with national/local government action plans for GHG emission reduction (RAN/RAD GRK) and the national action plan on climate change adaptation (RAN-API), as well as to support emission reduction target achievement under the Indonesian NDC. ICCTF has supported NDC emission reduction targets through 3 thematic windows: land area based mitigation, energy, and resilience and adaptation. So far, ICCTF has implemented 63 programs to address climate change, spread across 19 Indonesian provinces.

Many valuable lessons have been learned during the implementation of the 63 climate change projects funded to date, both in terms of policy and finance. Cross-sectoral cooperation and partnerships are extremely important for maximising outputs and outcomes. Replication and scaling up can greatly increase the impact of successful interventions. Different funding sources can be matched to appropriate intervention levels, scales, and scope. Potential sources include Village and other government funds which can be accessed through interventions in sub-national medium term development plans (RPJMD) drafting process, as well as Corporate Social Responsibility (CSR) funds from the private sector. .

During 2017, ICCTF undertook an estimation of potential GHG emission reductions from 50 programs implemented between 2010 and 2017. The results showed a potential reduction of GHG emissions from ICCTF projects of 9.5 million tons CO_2eq. This figure is equivalent to 0.91% of the 2020 NDC target of 1,050 million tons CO_2eq. In order to increase contributions to GHG emissions reduction, ICCTF is constantly striving to optimise the funding sources available as well their disbursement for implementing climate change mitigation and adaptation actions in Indonesia.

The current status of ICCTF as a ministry working unit (Satker) places limitations on its ability to perform its functions as a trust fund. The main reason for this is the obligation for ICCTF to apply the rigid national government financial system to all grant funds, substantially curtailing flexibility in receiving and disbursing funds from and to a wide variety of entities. ICCTF is also limited in its ability to receive and manage investment funds (e.g. endowments, sinking and revolving funds). Therefore, looking to the future, ICCTF needs to be released from its ministry working unit (Satker) status through a transformation in organisational structure to a new, more flexible and independent format. ICCTF hopes to become an accredited National Implementing Entity (NIE) able and entitled to access climate change funds from many sources both in country and from abroad.

ICCTF needs to anticipate changes in the dynamics of development finance in di Indonesia, including in the context of climate change. With plans affot for a new funding body, the *Badan Layanan Umum Perubahan Iklim* (BLU-PI) – Public Service Agency for Climate Change – at the Minsitry for the Environment and Forests (KLHK), ICCTF must seek ground-breaking and innovative programs to distinguish it from other climate change funding organisations. For example, ICCTF could develop programs and a focus to access renewable energy-related funds.

Raising public awarness and understanding regarding climate change is extremely important to gain support for national development targets. ICCTF will continue to work to improve its communication and outreach strategy both to support climate change related campaigns and to enhance the public image and presence of ICCTF as trust fund for climate change in Indonesia. This strategy will also disseminate ICCTF program achievements and lessons learned, with follow-up activities or enabling replication by others.

Since its foundation until the present day, ICCTF has worked with and received funds from many entities including central and local government agencies, donor organisations, civil society organisations, the private sector, universities, and other development partners. Moving towards fully-fledged “Nationally Managed Trust Fund” status, as well as continuing its role in supporting national development targets, ICCTF will continue to rely on the support of all such entities. Therefore, ICCTF extends an open invitation to all parties wishing to work with and support the on-going development of ICCTF.

Key Outputs

9.5
million ton CO_2 eq

CO_2
Carbon sequestrated through replanting and land rehabilitation

221 Articles/ broadcasts
online media, printed press, TV and radio

350,560
trees planted

9,150
schoolchildren involved

4 **climate change vulnerability maps**
(along the coasts of the Java Sea, Subang, Gorontalo and Rote Ndao)

81
villages directly involved

1,317
people directly involved

203
canal blocking

647
deep wells

3,365
villages involved

200
catchment wells

100
water tanks

24
water reservoirs

9
fire prevention watch towers

10
guard posts

10
biodisgester

9 sites
forest fire prevention & control procedures

38
village regulations

& **11**
Kings in Maluku agree to adopt and incorporate climate change issues in village planning

in Numbers

9.5
million ton CO_2eq

EQUIVALENT TO THE EMISSIONS OF

5 million Indonesian people per year

Average per capita CO_2 emissions of Indonesians = 1.9 ton CO_2 (World Bank 2013)

190,000 return flights between Jakarta and Jayapura

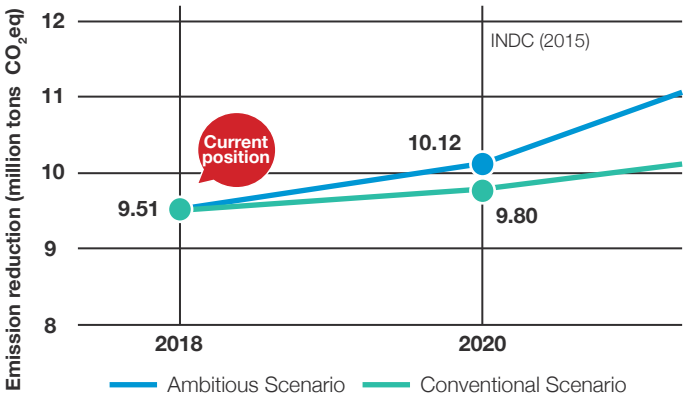
Jakarta - Jayapura - Jakarta emissions = 0.5 ton CO_2
(source: icao.int; assuming 100 passengers on each flight)

CO_2 20% of the total GHG emissions of Switzerland

In 2012, total emissions from Switzerland = 47 million tons CO_2
(source: National Inventory Report of Switzerland)

POTENTIAL REDUCTION IN GHG EMISSIONS FROM ICCTF PROJECTS

By 2018, the reduction through ICCTF interventions in CO_2 equivalent emissions reached 9.5 million tons CO_2eq This is equivalent to 0.91% of the INDC 2020 target of 1,050 million tons CO_2eq. Projections to 2020, under a conventional scenario, predict a total reduction in emissions of 9.8 million tons CO_2eq, or 0.93% INDC 2020 target. Under the ambitious scenario, emission reductions could reach 10.12 million tons CO_2eq, 0.96% of the INDC target.

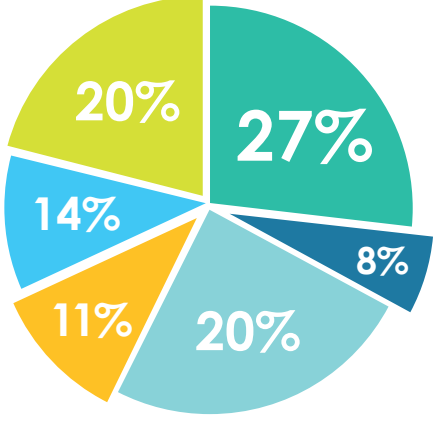


FUND MANAGEMENT

Audits, Human Resources & Capacity Building
11,564,732,877

Communications, Monitoring & Evaluation
8,171,508,001

Fire Prevention
6,164,039,561



Land-based Mitigation
15,977,760,132

Adaptation & Resilience
4,474,060,427

Forest & Peatlands
11,963,282,341

List of Content

About the
INDONESIA CLIMATE CHANGE TRUST FUND

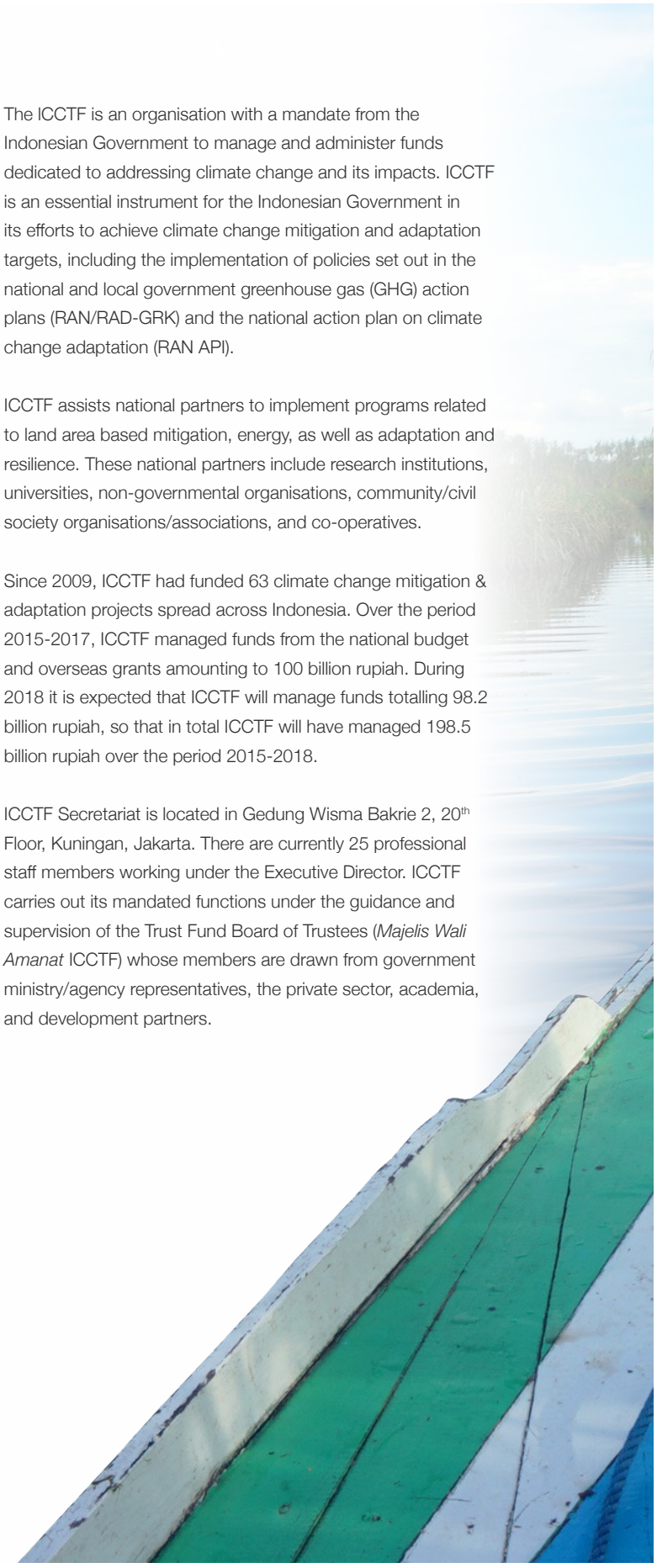
ICCTF, Indonesia Climate Change Trust Fund, is a vital instrument for the Indonesian Government in its efforts to achieve the climate change mitigation and adaptation targets set under national and regional action plans (RAN/RAD-GRK and RAN API). ICCTF is the only trust fund managed by the Indonesian Government. Since its establishment in 2009, ICCTF has successfully funded mitigation and adaptation projects across the nation.

The ICCTF is an organisation with a mandate from the Indonesian Government to manage and administer funds dedicated to addressing climate change and its impacts. ICCTF is an essential instrument for the Indonesian Government in its efforts to achieve climate change mitigation and adaptation targets, including the implementation of policies set out in the national and local government greenhouse gas (GHG) action plans (RAN/RAD-GRK) and the national action plan on climate change adaptation (RAN API).

ICCTF assists national partners to implement programs related to land area based mitigation, energy, as well as adaptation and resilience. These national partners include research institutions, universities, non-governmental organisations, community/civil society organisations/associations, and co-operatives.

Since 2009, ICCTF had funded 63 climate change mitigation & adaptation projects spread across Indonesia. Over the period 2015-2017, ICCTF managed funds from the national budget and overseas grants amounting to 100 billion rupiah. During 2018 it is expected that ICCTF will manage funds totalling 98.2 billion rupiah, so that in total ICCTF will have managed 198.5 billion rupiah over the period 2015-2018.

ICCTF Secretariat is located in Gedung Wisma Bakrie 2, 20th Floor, Kuningan, Jakarta. There are currently 25 professional staff members working under the Executive Director. ICCTF carries out its mandated functions under the guidance and supervision of the Trust Fund Board of Trustees (*Majelis Wali Amanat* ICCTF) whose members are drawn from government ministry/agency representatives, the private sector, academia, and development partners.



Objective

Supporting the Indonesian Government in reducing GHG emissions through moves towards a low carbon economy and adaptation to climate change impacts.

Target

Integrating climate change issues into national, provincial and district development plans.

Implementing mitigation and adaptation initiatives in the context of GHG emission reduction.

FOCUS areas

LAND-BASED MITIGATION

The land-based mitigation focus provides financial support for programs such as:

- Reforestation/rehabilitation of degraded lands, restoration of critically degraded land as community forests, and biomass energy estate.
- Management of degraded peatlands to lower emissions, and sustainable management of conservation areas.

ENERGY

The focus area on energy contributes to GHG emission reduction through:

- Funding for low carbon energy technology.
- Energy conservation and energy efficiency, including renewable energy sources.

ADAPTATION & RESILIENCE

The focus area on adaptation and resilience aims to strengthen national and local institutions and communities vulnerable to climate change impacts through:

- Disseminating climate information, developing and improving the design of adaptation strategies, the use of appropriate science and technology.
- Promoting appropriate policies which support the implementation of (adaptation and resilience) activities.

SITES OF THE 42 PROJECTS

During 2017, ICCTF provided supporting funds to 42 projects in two focus areas: land-based mitigation, and adaptation and resilience, at sites across Indonesia. Under the energy focus area, ICCTF held a workshop on renewable energy and prepared new funding proposals.

Figure 1. Distribution of 42 land area based mitigation and adaptation and resilience projects supported by ICCTF across Indonesia.

Legend

Land-based mitigation
with number of projects by province

Adaptation & Resilience
with number of projects by province

Funding Sources

The total ICCTF Budget for 2017 was IDR 58.3 billion. Funding composition is shown in Figure 2. Indonesian Government funds were spent on operational expenses and organisational development, the development of thematic focus areas, the Secretariat and communications. Funds from the Kingdom of Denmark were allocated to the development of thematic focus areas, communication and outreach, capacity building, monitoring and evaluation, as well as Secretariat operational expenses. Funds from the United Kingdom through the UKCCU were allocated to initiatives connected with peatland forest management and fire prevention. The largest funding component came from the United States Government through USAID and was used to fund 20 mitigation projects and 11 adaptation projects. Funds from the US Government were also used for ICCTF staff capacity building. ICCTF also received technical assistance from GIZ/ INFIS over 4 years. The value of this assistance was equivalent to Euro 875,000 per annum.

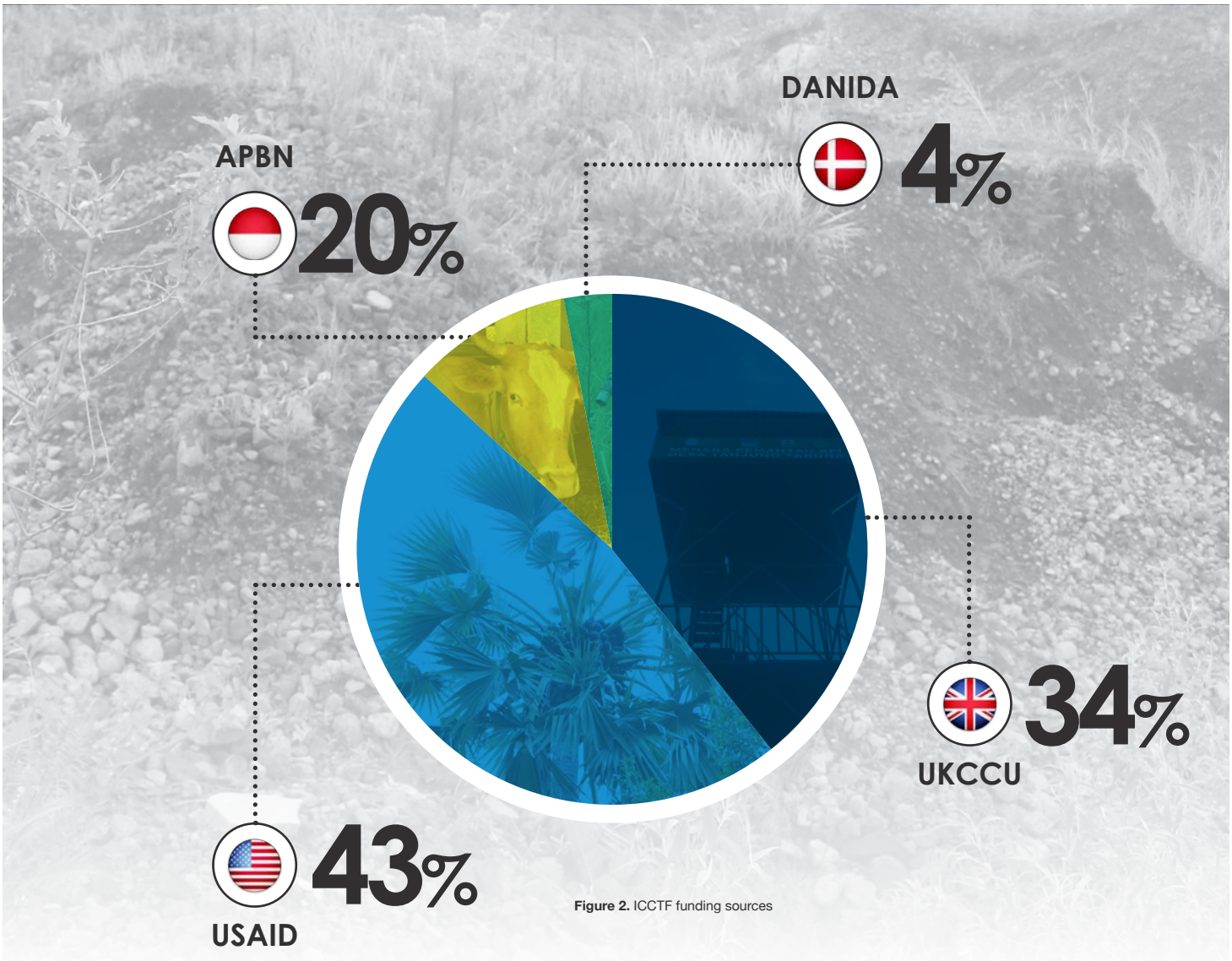


Figure 2. ICCTF funding sources

Funds from the US Government (USAID) and UK Government (UKCCU) were mostly used to provide grants to partner organisations. Funds from USAID were used to fund initiatives aiming to support national goals on GHG emission reduction targets (RAN-GRK) and climate change adaptation (RAN-API).

Funds from UKCCU however were used to fund activities related to forest and peatland management, especially fire prevention and fire fighting. Achievements under this program included the promulgation of local regulation *Peraturan Gubernur Jambi No 31/2016 tentang Panduan Teknis Implementasi Pelaksanaan Peraturan Pemerintah No 2/2016 tentang Pencegahan dan Kontrol atas Kebakaran Hutan dan Lahan di Jambi.* This regulation established technical guidelines for implementing the provincial regulation on forest and peatland fire prevention and control in Jambi. Other achievements included peatland management under a forest ecology scheme in Bangsal village, Ogan Komering Ilir, South Sumatra. UKCCU funds also enabled Dumai-Riau to make fish feed from weeds cleared during land prepared for planting without the use of fire. Communities of three villages in Siak District, Riau developed mangrove ecotourism, while 600 wells and 3 watch towers were built in South Kalimantan.

FINANCIAL INFORMATION

As the sole National Climate Change Trust Fund in Indonesia, ICCTF has always held fast to the principles of financial accountability and transparency in all its activities in line with the governance goals of the organisation.

ICCTF financial department routinely administers, prepares, and reports on all activities implemented in a professional manner and in accordance with the principles of good governance. During 2017 ICCTF managed National Budget funds (APBN) amounting to 12 billion rupiah and Overseas Grants amounting to 46.8 billion rupiah. The total funds administered during 2017 amounted to 59 billion rupiah. Disbursements during 2017 amounted to 58.3 billion rupiah or 99% of all funds administered.

The detailed allocation of these funds can be seen in the table below.

No.	Funding Source	Program	Funds Administered	Funds Disbursed	
1.	APBN	Development acceleration policy related to climate change mitigation and adaptation in Indonesia	Rp 12,206,294,000.00	Rp 11,431,461,680.00	**94%**
2.	DANIDA	Additional funds for the Environmental Support Programme (ESP3) for the Indonesia Climate Change Trust Fund (ICCTF)	Rp 2,347,494,879.89	Rp 2,347,494,879.89	**100%**
3.	USAID	USAID Support for Indonesia Climate Change Trust Fund (ICCTF)	Rp 24,811,728,000.00	Rp 24,811,720,605.99	**100%**
4.	UKCCU	Forest and peatland management to reduce Indonesian emissions through local activities	Rp 19,724,706,173.47	Rp 19,724,384,173.47	**100%**
		TOTAL	**Rp 59,090,223,053.36**	**Rp 58,315,061,339.35**	**99%**

ICCTF FINANCIAL MANAGEMENT
2015-2018

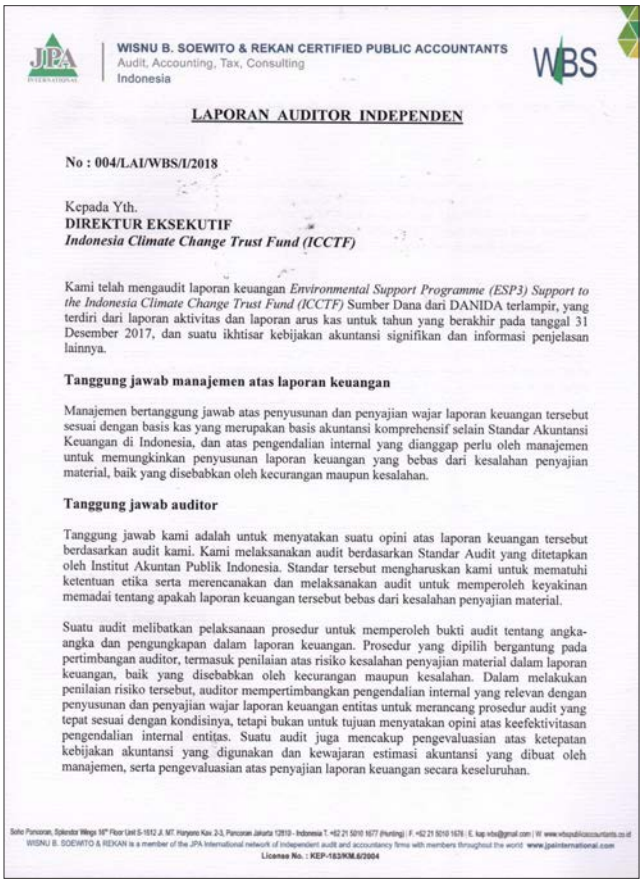
Since 2015, ICCTF has been a Working Unit under the Ministry for National Development Planning/National Development Planning Agency. As a Trust Fund, from 2015 to 2017 ICCTF managed funds from the national budget (APBN) and Overseas Grants totalling 100 billion rupiah. It is anticipated that in 2018 ICCTF will administer funds amounting to 98.2 billion rupiah so that the total funds managed over the period 2015 – 2018 will be 198.5 billion rupiah.

		Grants			National Budget	Technical Assistance
	TOTAL FUNDS	USAID	UKCCU	DANIDA	APBN	BMUB GIZ/INFIS
2015	Rp 14.6 billion	20,513 USD equivalent to Rp 288 million	–	350,000 DKK equivalent to Rp 700 million	Rp 13.6 billion	3.5 million Euros
2016	Rp 27.4 billion	981,260 USD equivalent to Rp 13.7 billion	32,813 GBP equivalent to Rp 538 million	1.15 million DKK equivalent to Rp 2.3 billion	Rp 11.2 billion	
2017	Rp 58.3 billion	1.7 million USD equivalent to Rp 24.8 billion	1.1 million GBP equivalent to Rp 19.7 billion	1 million DKK equivalent to Rp 1.9 billion	Rp 11.4 billion	
2018 (forecast)	Rp 98.2 billion	2.2 million USD equivalent to Rp 31.7 billion	2.8 million GBP equivalent to Rp 45.7 billion	1 million DKK equivalent to Rp 2 billion	Rp 19.1 billion	
TOTAL	**Rp 198.5 billion**	**5 million USD** equivalent to **Rp 70.27 billion**	**4 million GBP** equivalent to **Rp 66 billion**	**3.5 million DKK** equivalent to **Rp 6.9 billion**	**Rp 55.4 billion**	**3.5 million Euros**

AUDIT

As a discharge of responsibility under the principles of transparency and accountability, ICCTF Financial Reports are audited annually by the International Public Accountant's Office (KAP) and the Audit Board of the Republic of Indonesia (BPK-RI). In 2017, ICCTF Financial Report was audited by Public Accountants Wisnu B. Soewito & Co. with a verdict of **Reasonable Without Exception**. The audited Financial Report can be seen in the Appendices.

DANIDA Audit Report



WISNU B. SOEWITO & REKAN CERTIFIED PUBLIC ACCOUNTANTS
Audit, Accounting, Tax, Consulting
Indonesia

LAPORAN AUDITOR INDEPENDEN

No : 004/LAI/WBS/I/2018

Kepada Yth.
DIREKTUR EKSEKUTIF
Indonesia Climate Change Trust Fund (ICCTF)

Kami telah mengaudit laporan keuangan *Environmental Support Programme (ESP3) Support to the Indonesia Climate Change Trust Fund (ICCTF)* Sumber Dana dari DANIDA terlampir, yang terdiri dari laporan aktivitas dan laporan arus kas untuk tahun yang berakhir pada tanggal 31 Desember 2017, dan suatu ikhtisar kebijakan akuntansi signifikan dan informasi penjelasan lainnya.

Tanggung jawab manajemen atas laporan keuangan

Manajemen bertanggung jawab atas penyusunan dan penyajian wajar laporan keuangan tersebut sesuai dengan basis kas yang merupakan basis akuntansi komprehensif selain Standar Akuntansi Keuangan di Indonesia, dan atas pengendalian internal yang dianggap perlu oleh manajemen untuk memungkinkan penyusunan laporan keuangan yang bebas dari kesalahan penyajian material, baik yang disebabkan oleh kecurangan maupun kesalahan.

Tanggung jawab auditor

Tanggung jawab kami adalah untuk menyatakan suatu opini atas laporan keuangan tersebut berdasarkan audit kami. Kami melaksanakan audit berdasarkan Standar Audit yang ditetapkan oleh Institut Akuntan Publik Indonesia. Standar tersebut mengharuskan kami untuk mematuhi ketentuan etika serta merencanakan dan melaksanakan audit untuk memperoleh keyakinan memadai tentang apakah laporan keuangan tersebut bebas dari kesalahan penyajian material.

Suatu audit melibatkan pelaksanaan prosedur untuk memperoleh bukti audit tentang angka-angka dan pengungkapan dalam laporan keuangan. Prosedur yang dipilih bergantung pada pertimbangan auditor, termasuk penilaian atas risiko kesalahan penyajian material dalam laporan keuangan, baik yang disebabkan oleh kecurangan maupun kesalahan. Dalam melakukan penilaian risiko tersebut, auditor mempertimbangkan pengendalian internal yang relevan dengan penyusunan dan penyajian wajar laporan keuangan entitas untuk merancang prosedur audit yang tepat sesuai dengan kondisinya, tetapi bukan untuk tujuan menyatakan opini atas keefektivitasan pengendalian internal entitas. Suatu audit juga mencakup pengevaluasian atas ketepatan kebijakan akuntansi yang digunakan dan kewajaran estimasi akuntansi yang dibuat oleh manajemen, serta pengevaluasian atas penyajian laporan keuangan secara keseluruhan.

Soho Pancoran, Splendor Mega 16th Floor Unit S-1612 Jl. MT. Haryono Kav. 2-3, Pancoran Jakarta 12810 - Indonesia T. +62 21 5010 1677 (Hunting) | F. +62 21 5010 1678 | E. kap.wbs@gmail.com | W. www.wbspublicaccountants.co.id
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Kami yakin bahwa bukti audit yang telah kami peroleh adalah cukup dan tepat untuk menyediakan suatu basis bagi opini audit kami.

Opini

Menurut opini kami, laporan keuangan terlampir menyajikan secara wajar, dalam semua hal yang material, laporan aktivitas *Environmental Support Programme (ESP3) Support to the Indonesia Climate Change Trust Fund (ICCTF)* Sumber Dana dari DANIDA dan laporan arus kasnya untuk tahun yang berakhir pada tanggal 31 Desember 2017, sesuai dengan basis kas yang merupakan basis akuntansi komprehensif selain Standar Akuntansi Keuangan di Indonesia.

Hal lain

Laporan ini dimaksudkan semata-mata untuk informasi dan digunakan oleh manajemen *Indonesia Climate Change Trust Fund (ICCTF)*, dan tidak digunakan untuk tujuan lain.

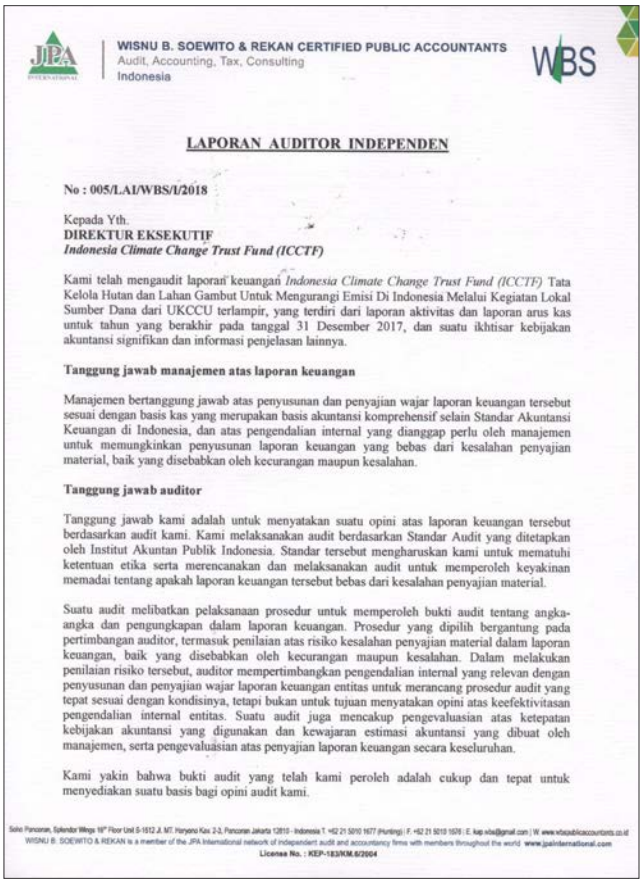
Laporan keuangan *Environmental Support Programme (ESP3) Support to the Indonesia Climate Change Trust Fund (ICCTF)* Sumber Dana dari DANIDA untuk tahun yang berakhir pada tanggal 31 Desember 2016 diaudit oleh auditor independen lain yang menyatakan opini tanpa modifikasian atas laporan keuangan tersebut pada tanggal 25 Januari 2017.

KANTOR AKUNTAN PUBLIK
WISNU B. SOEWITO & REKAN
Izin Usaha No. KEP – 183/KM.6/2004

R. Dwi Karsono Soewito, CPA
Nomor Registrasi Akuntan Publik : AP.0358.

Jakarta, 04 Januari 2018

UKCCU Audit Report



WISNU B. SOEWITO & REKAN CERTIFIED PUBLIC ACCOUNTANTS
Audit, Accounting, Tax, Consulting
Indonesia

LAPORAN AUDITOR INDEPENDEN

No : 005/LAI/WBS/I/2018

Kepada Yth.
DIREKTUR EKSEKUTIF
Indonesia Climate Change Trust Fund (ICCTF)

Kami telah mengaudit laporan keuangan *Indonesia Climate Change Trust Fund (ICCTF)* Tata Kelola Hutan dan Lahan Gambut Untuk Mengurangi Emisi Di Indonesia Melalui Kegiatan Lokal Sumber Dana dari UKCCU terlampir, yang terdiri dari laporan aktivitas dan laporan arus kas untuk tahun yang berakhir pada tanggal 31 Desember 2017, dan suatu ikhtisar kebijakan akuntansi signifikan dan informasi penjelasan lainnya.

Tanggung jawab manajemen atas laporan keuangan

Manajemen bertanggung jawab atas penyusunan dan penyajian wajar laporan keuangan tersebut sesuai dengan basis kas yang merupakan basis akuntansi komprehensif selain Standar Akuntansi Keuangan di Indonesia, dan atas pengendalian internal yang dianggap perlu oleh manajemen untuk memungkinkan penyusunan laporan keuangan yang bebas dari kesalahan penyajian material, baik yang disebabkan oleh kecurangan maupun kesalahan.

Tanggung jawab auditor

Tanggung jawab kami adalah untuk menyatakan suatu opini atas laporan keuangan tersebut berdasarkan audit kami. Kami melaksanakan audit berdasarkan Standar Audit yang ditetapkan oleh Institut Akuntan Publik Indonesia. Standar tersebut mengharuskan kami untuk mematuhi ketentuan etika serta merencanakan dan melaksanakan audit untuk memperoleh keyakinan memadai tentang apakah laporan keuangan tersebut bebas dari kesalahan penyajian material.

Suatu audit melibatkan pelaksanaan prosedur untuk memperoleh bukti audit tentang angka-angka dan pengungkapan dalam laporan keuangan. Prosedur yang dipilih bergantung pada pertimbangan auditor, termasuk penilaian atas risiko kesalahan penyajian material dalam laporan keuangan, baik yang disebabkan oleh kecurangan maupun kesalahan. Dalam melakukan penilaian risiko tersebut, auditor mempertimbangkan pengendalian internal yang relevan dengan penyusunan dan penyajian wajar laporan keuangan entitas untuk merancang prosedur audit yang tepat sesuai dengan kondisinya, tetapi bukan untuk tujuan menyatakan opini atas keefektivitasan pengendalian internal entitas. Suatu audit juga mencakup pengevaluasian atas ketepatan kebijakan akuntansi yang digunakan dan kewajaran estimasi akuntansi yang dibuat oleh manajemen, serta pengevaluasian atas penyajian laporan keuangan secara keseluruhan.

Kami yakin bahwa bukti audit yang telah kami peroleh adalah cukup dan tepat untuk menyediakan suatu basis bagi opini audit kami.

Soho Pancoran, Splendor Wings 16th Floor Unit S-1512 Jl. MT. Haryono Kav. 2-3, Pancoran Jakarta 12810 - Indonesia T. +62 21 5010 1677 (Hunting) | F. +62 21 5010 1678 | E. kap.wbs@gmail.com | W. www.wbspublicaccountants.co.id
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Licensa No. : KEP-183/KM.6/2004

Opini

Menurut opini kami, laporan keuangan terlampir menyajikan secara wajar, dalam semua hal yang material, laporan aktivitas *Indonesia Climate Change Trust Fund (ICCTF)* Tata Kelola Hutan dan Lahan Gambut Untuk Mengurangi Emisi Di Indonesia Melalui Kegiatan Lokal Sumber Dana dari UKCCU dan laporan arus kasnya untuk tahun yang berakhir pada tanggal 31 Desember 2017, sesuai dengan basis kas yang merupakan basis akuntansi komprehensif selain Standar Akuntansi Keuangan di Indonesia.

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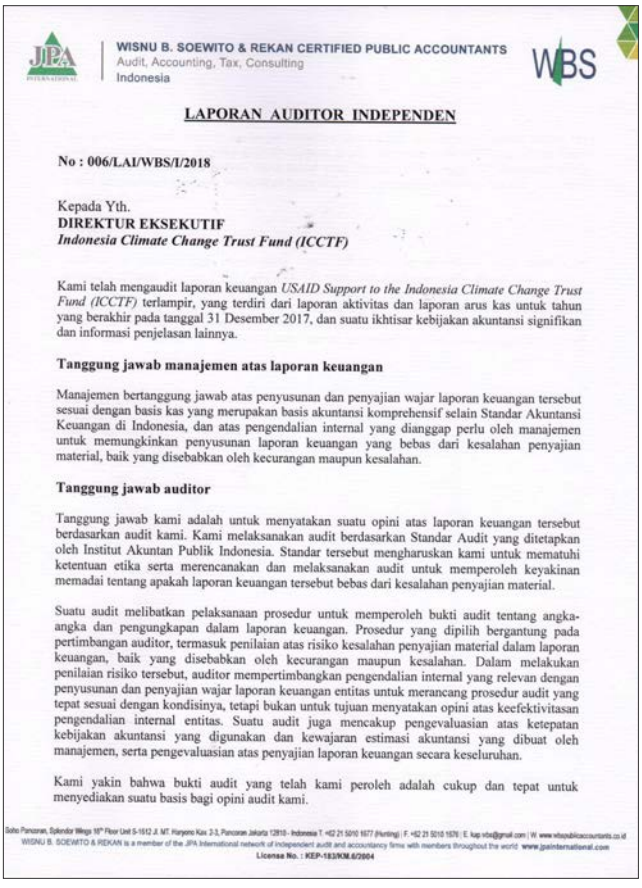
KANTOR AKUNTAN PUBLIK
WISNU B. SOEWITO & REKAN
Izin Usaha No. KEP – 183/KM.6/2004

R. Dwi Karsono Soewito, CPA
Nomor Registrasi Akuntan Publik : AP.0358.

Jakarta, 29 Januari 2018

USAID Audit Report



WISNU B. SOEWITO & REKAN CERTIFIED PUBLIC ACCOUNTANTS
Audit, Accounting, Tax, Consulting
Indonesia

LAPORAN AUDITOR INDEPENDEN

No : 006/LAI/WBS/I/2018

Kepada Yth.
DIREKTUR EKSEKUTIF
Indonesia Climate Change Trust Fund (ICCTF)

Kami telah mengaudit laporan keuangan *USAID Support to the Indonesia Climate Change Trust Fund (ICCTF)* terlampir, yang terdiri dari laporan aktivitas dan laporan arus kas untuk tahun yang berakhir pada tanggal 31 Desember 2017, dan suatu ikhtisar kebijakan akuntansi signifikan dan informasi penjelasan lainnya.

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Opini

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KANTOR AKUNTAN PUBLIK
WISNU B. SOEWITO & REKAN
Izin Usaha No. KEP – 183/KM.6/2004

R. Dwi Karsono Soewito, CPA
Nomor Registrasi Akuntan Publik : AP.0358.

Jakarta, 29 Januari 2018

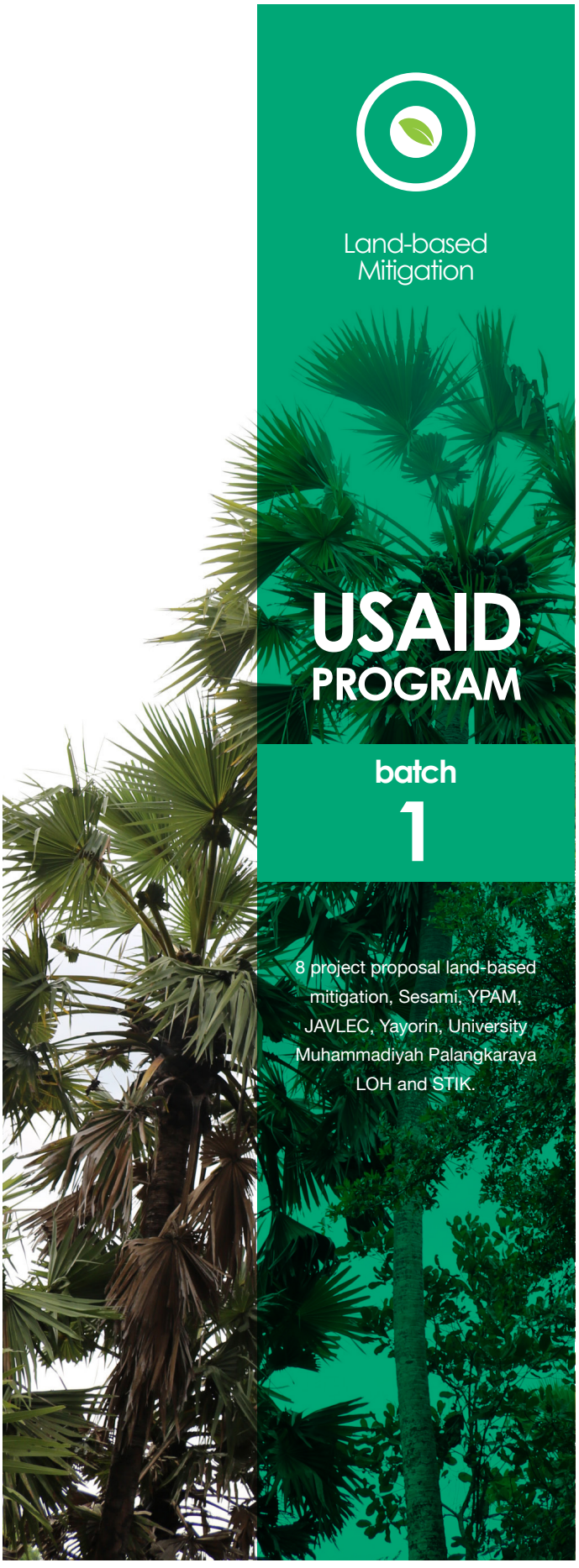
LAND-BASED MITIGATION

ICCTF funded 31 out of 42 land based mitigation projects currently running across Indonesia, with funds from USAID and UKCCU grants. These projects are located in Sumatera (12 projects), Kalimantan (9 projects), Java (8 projects), Nusa Tenggara Barat and Maluku (1 project each). These projects involved land rehabilitation, including mineral-based soils as well as peatlands, the management of forest fires, strengthening local communities through improved livelihood options and awareness raising on climate change and its impacts for communities and school children.

Under land rehabilitation schemes, 348,560 trees were planted. ICCTF also funded the development of an early warning system (EWS) to help prevent and control forest fires. At least 9 sites now have procedures developed and in place for tackling forest fires. Setting up the EWS included the building of 9 watch towers and 10 guard posts. A total of 203 canal sluice-gates were constructed. Land-use plans were developed in 15 areas. ICCTF also funded the construction of 647 deep wells and 24 water storage units.

ICCTF involved 1,317 people in these activities and improved the understanding of 9,150 pupils on climate change. Village regulations related to land-based mitigation were developed by 35 villages, and 11 local kings in Maluku agreed to adopt climate change issues in their policies. Individual project achievements during 2017 are described below.

Land-based Mitigation



1

Implementing Partner

Wahana Pelestarian dan Advokasi Hutan Sumatera (Walestra)

Program Title

Community-based Forest Conservation and Climate Change Mitigation in the Kerinci Seblat Landscape.

Budget

Rp 3,274,690,000

Implementation period

24 months
(April 2016 - March 2018)

Site

Sarolangun and Kerinci Districts, Jambi Province; Solok Selatan District, Sumatera Barat Province

Background

Need to involve 10 community groups from 10 villages in the management of 7,000 ha of traditional forest and 5,000 ha of critically degraded land around the Kerinci Seblat National Park, reducing emissions and improving incomes.

Goal

To save the forests in the buffer zone of the 338.000 ha Kerinci Landform through developing social forestry schemes to support climate change mitigation and GHG emission reduction.

Achievements

1. Parbokalo, Kerinci, Jambi traditional (*adat*) elders made a written statement supporting management to protect the traditional forest (*adat* forest). A minimum of 7,000 ha forest cover maintained and managed under a village/*adat* forest scheme:

a. Study by the team on the potential for social forestry scheme replication through an FGD.
b. Agreements between the team and relevant communities for the development of social forestry at 6 sites to have 4 sites ready for facilitation.
c. FGD and Forest Mapping to support the Social Forestry Model at project sites.
d. Drafting the documents needed to request permission for social forestry at project sites.
e. Construction of Guard Posts and Village/*Adat* Forest Protection at 10 project sites.
f. Mapping village administrative boundaries at project sites.
g. FGD to make the adat forest work plan.
h. *Adat* forest proposal submitted to the local government, resulting in the promulgation of official recognition.
i. Construction of 6 information panels for 7 *adat* forests.
j. Monthly patrols (Smart Patrols) by 5 *Adat* Forest Management Units (KPHA) and 1 Village Forest Management Body (LPHD).

2. Improved community economy through productive economic activities based on non-wood resources:
   a. Participative study on village-level micro-finance in Raden Anom village.
   b. FGD on the drafting of village regulations on village micro-scale spatial planning in 3 villages.
   c. Field surveys of non-wood forest product potential and multi-purpose tree species (MPTS) at 7 sites.
3. Rehabilitation of critically degraded land in the Kerinci Seblat landform:
   a. Development of nurseries and seedling production at 10 project sites to rehabilitate 500 ha of critically degraded land.
   b. FGD to identify suitable economic development activities at 6 project sites.
   c. Producing a Business Plan in Limok Manaih village, followed by the establishment of 2 community business groups.
4. Awareness building on climate change issues, with socialisation in two upper secondary schools in Solok Selatan: SMAN 6 and SMAN 1.

Beekeeping by the Nagari Forest Management Organisation (LPHN) in Lubuk Gadang Selatan village, Solok Selatan District, Sumatera Barat.

LPHN members on a “smart patrol”.

One of the nurseries established in each village.

2

Implementing Partner
Perkumpulan Sesami

Program Title
Using Biogas to Provide Households with Energy and to Support the Environmental Conservation Movement.

Budget
Rp 996,730,000

Implementation period
18 months
(June 2016 - December 2017)

Site
Magelang District,
Central Java Province

Background
In view of the vast extent of abandoned sand mines, this program promoted the reforestation of ex-sand mining lands with trees which grow well through the use of organic fertiliser produced by a community biogas business, also replacing forest wood as fuel by biogas, reducing emissions and raising incomes.

Goal
Assist 2 sub-districts in Magelang District to develop community cooperatives; construct 10 digester units (6 m^3), producing bioslurry at a rate of 4-5L/unit/day (priced at $ 0.8/l) and biogas for cooking, reducing household energy costs, reducing wood harvesting for energy, and reforesting the buffer zone of Gunung Merapi National Park (TNGM) with 7,000 trees.

Achievements
1. Seedlings planted, mostly in sandy ground. Strategies included the choice of sengon (Albizia chinensis), a tree legume which can grow in sandy soils, as well as selecting areas with relatively higher soil content. In addition, fertiliser was used to mulch the seedlings.
2. In areas with low soil content, seedlings were planted in bamboo pots. Bamboo was chosen because it is a natural product and can retain soil.
3. In areas where the soil was stony and water would infiltrate too quickly, water storage containers were made from empty bottles to allow the water to be retained and regulate its gradual flow to the seedling roots. This activity also promoted the reuse of empty bottles.
4. The natural fertiliser used was bioslurry produced as a biogas waste or by-product. Therefore the project began with the construction of biodigesters. By the end of 2017, 10 biodigesters had been built within the 3 villages, all of which were functioning properly.
5. Further consolidation and coordination with stakeholders was undertaken, in order to set the boundaries of the 7.5 ha area to be rehabilitated. Levelling of the site and preparation of the land for planting were done manually by people from the local communities.
6. The team held meetings with government representatives from the Dukun Sub-District, Keningar, Sumber and Ngargomulyo villages, in order to select the digester sites and ensure their future. The team worked with the Magelang District Environmental Agency Procurement Tender Team in order to appoint a construction company to build the biodigesters through restricted tender process.
7. A compost management unit was built in Keningar village.
8. The nursery centre has produced 5,000 seedlings so far.
9. The Keningar Hijau Group was formed with 25 members from the Keningar village community.
10. 15.000 seedlings have been planted.


Biodigester construction.

Harvesting bioslurry.

Nursery.


Critically degraded ex-sand quarry being rehabilitated.

3

Implementing Partner

Yayasan Pengembangan Akhlaq Mulia (YPAM)

Program Title

Increasing golden bamboo cultivation to reclaim critically degraded land in Grenjeng sub-watershed, Serang watershed, Sampetan Village, Ampel Sub-District.

Budget

Rp 415,133,250

Implementation period

24 months
(April 2016 - March 2018)

Site

Boyolali District, Central Java

Background

A program to engage the community of Sampetan Village, Ampel Sub-District, in rehabilitating critically degraded land within the Serang watershed, in the Gunung Merbabu National Park (TNGMb) buffer zone, reducing emissions and increasing local incomes.

Goal

Support the programs of the Pemalijuana Watershed Management Board (BBWS), PDAM Boyolali, the Gunung Merbabu NP, the Public Works Service, the Agriculture, Plantations and Forestry Service, the Environmental Agency, 3 community groups (100 members), 300 primary school pupils. Set up 1 bamboo nursery unit; grow 4,200 bamboo seedlings, restore 3 ha of critically degraded land with 3,500 bamboo plants, 300 pupils environmentally aware, 1 community group established (30 members).

Achievements

1. The proportion of women participating in YPAM training increased from 1% at the start of the program to 13% in 2017.
2. FGD with Sampetan village officials and community members, followed by an Activity Planning Workshop attended by representatives of the village government, the community, and the Boyolali District Government.
3. Community environmental group establish as a legal entity through an Act legalised by a registered notary.
4. Survey for propagules of giant bamboo (Dendrocalamus asper) in Yogyakarta and for fruiting plants in Semarang.
5. Planting and husbandry of 1,500 golden bamboo (Phyllostachys aurea) plants at a 3 ha rehabilitation site.
6. Group workshop followed by on-going support for organisational management and administration.
7. In addition to watershed protection, the bamboo planting also opened up opportunities for local people to use bamboo in artisanal handicrafts and cottage industries. In September 2017 there was a benchmarking visit to bamboo artisans in Yogyakarta, after which 10 female and 5 male members were inspired to start up bamboo arts and crafts businesses, producing brooms and various items crafted from bamboo.

Giant bamboo seedlings growing well.

Wina avocados growing on a community member's land.

Golden bamboo prepared as raw material for crafts.

4

Implementing Partner
Yayasan Javlec Indonesia

Program Title
Land-based mitigation in karst region critical watersheds and conservation areas.

Budget
Rp 3,410,770,000

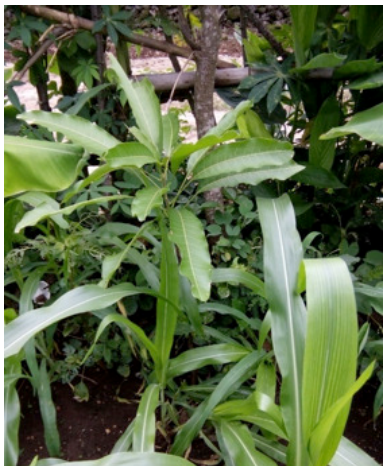
Implementation period
24 months
(April 2016 - March 2018)

Site
Gunungkidul District, Daerah Istimewa Yogyakarta (DIY)

Background
The importance of land area based mitigation in the Gunungkidul karst region, which comprised critical watersheds and conservation areas, in order to reduce GHG emissions and maintain surplus ground water supplies for the DIY, especially through maintaining the Opak-Oya and Bribin watersheds.

Goal
Implement land area based mitigation in a karst region with critical watershed and conservation areas.

Achievements
1. Training in and practical application of Carbon Stock Evaluation methods in 20 villages with 80 trainees. Post-training, on average the trainees had increased their level of understanding by 60%. The average value of carbon stocks calculated at project sites was 30.01 ton CO_2eq . The community members were trained in Community Carbon Accounting (CCA) by trainers from the Java Madura Forestry Planning Office (BPKH) and the Faculty of Forestry, Gadjah Mada University.
2. In addition to calculating carbon stocks and emissions under their own program, the Yayasan Javlec Indonesia also facilitated two other ICCTF partners: Yakkum Emergency Unit (YEU) and Yayasan Penyu Berau.
3. In order to increase carbon stocks, 62,553 tree seedlings of 27 kinds were planted over 3,351.95 ha in 20 villages, in four types of community and village forests. Around 100 ha of critically degraded land and land around a lake were also replanted.
4. Three community training events were held.
5. Forest management planning documents: 11 documents were produced across the four types of community/village forest. Forest management studies are in progress at project sites.
6. Provisional village profile data have been compiled. Facilitation of spatial planning in 6 villages (Kedung Poh, Kepek, Pacarejo, Putat, Banyusoca, Purwodadi) resulted in the drafting of 6 village spatial planning documents, 6 village planning document, Studies/ Academic Policy Papers, and 6 multi-stakeholder meetings.


Flourishing mango seedlings.

Teak trees marked and secured through delayed felling.


Teak trees marked and secured for delayed felling.

5

Implementing Partner
Lembaga Olah Hidup (LOH)

Program Title
Land and forest rehabilitation through community forest development to increase the Moyo watershed carrying capacity.

Budget
Rp 1,002,270,000

Implementation period
24 months
(April 2016 - March 2018)

Site
District Sumbawa,
Nusa Tenggara Barat

Background
Based on the underlying goal of watershed restoration, community forestry involving 710 families from Lito village was developed on 2,418 ha in the Moyo watershed, in order to protect 3 Sub-Districts from dangerous erosion and floods in the wet season and severe droughts in the dry season, while reducing emissions and improving incomes.

Goal
To develop an effective and sustainable ecological management model which increases land/forest carrying capacity while sustainably improving local community economic welfare.

Achievements
1. Community institutional capacity building through implementing agroforestry and community forestry. The 32 trainees (35%) were able to transfer their knowledge to other group members. On-going support was provided for planting and post-planting care, routine group meetings, post-harvest processing to produce saleable products, and participatory learning in nursery management.
2. Improvement in land and forest resource condition in the critical watershed area: 100 ha each year, planting at least 10 native species to conserve biodiversity, including:
   a. Planting timber and fruiting tree species by 5 groups over 40 ha in 2016.
   b. Monthly evaluation of community forestry activities of 5 member groups. Lessons and knowledge gained from program experiences shared with stakeholders and the general public.
   c. Participatory survey to select rehabilitation sites with Ropang Forest Management Agency, the local military police (Babinsa), and village officials.
   d. Planting of 67,000 seedlings in 2017 over 92 ha (within and outside the community forestry area).
3. Carbon budget calculations by LOH in partnership with the Samoko Lito forest farmers group, The Bage Tiang and Ai Keban groups, the Forest Management Agency, ICCTF and the Ministry for National Development Planning/National Development Planning Agency. This study produced an estimate of 47,087 tons for the biomass of all plot sites.
4. A documentary film is being made in stages, and will continue until the end of the program.
5. 3 groups are currently learning about post-harvest processing of edible crops.
6. 4 products are currently undergoing pilot marketing tests (sumbawa medicinal oil, majareal peanut snacks, siong meatballs, and instant ginger/turmeric).


First year teak seedling growing on critically degraded land.


HKTH Samoko nursery centre in Lito village.


Teak seedlings in their second year.

6

Implementing Partner

Yayasan Orangutan Indonesia (Yayorin)

Program Title

Conservation of Nypa palm ecosystems and buffer zone forests east of Sungai Lamandau Reserve as an alternative community forest (HKm) area.

Budget

Rp 2,576,720,000

Implementation period

24 months
(April 2016 - March 2018)

Site

Kotawaringin Barat District, Kalimantan Tengah

Background

An initiative to involve local communities in protecting an area of the Sungai Lamandau Reserve buffer zone, which is becoming degraded, comprising 200 ha of nypa palm and mangrove forests and 2,000 ha of terrestrial forest, resulting in reduced emissions and increased local incomes.

Goal

To contribute to the reduction of emissions through the protection and rehabilitation of peatlands, conservation areas, areas with a high conservation value, and mangrove (nypa) ecosystems in the eastern buffer zone of Sungai Lamandau Reserve, Kotawaringin Barat District, Kalimantan Tengah, and to support the Sustainable Production Forest Management Program.

Achievements

1. Zero burning agriculture demonstration plot (demplot) with 3 planting systems (hazton, SRI and conventional/tabela) has successfully produced rice. This demplot can be used as a model for replication by peatland communities in Kotawaringin Barat.
2. Aquaculture demplots using floating net cages and tarpaulin ponds have already been replicated locally using village funds and support from the Kalimantan Tengah conservation agency (BKSDA).
3. Forest conservation through tree planting, with jelutung (Dyera costulata) and other species: Local communities have begun to plant vegetables and fruiting plants in their plantations and fields. There has not yet been any burning of lands in Tanjung Putri village to open up land for plantations or fields, as it is forbidden under a local government regulation. 300 farming/plantation families in Tanjung Putri village don't burn their lands, and 114 farmers support the zero-burning demplot for vegetable/seasonal crops. During the first phase, 120 rows around 1 km in length were planted with nearly 5,000 seedlings out of a total of 20,000.
4. Nypa and forest ecosystem conservation through village regulations and community forests established in the buffer zone by decree of the District Head (Bupati). Nypa and Forest Ecosystem mapping involving 5 community groups in the di Kotawaringin Barat Community Forest within a previously mapped area. Preparation of village regulations on ecosystem protection. Local government support in the form of a recommendation for establishing a Community forest from the Kotawaringin Barat District Head to the KLHK. Establishment of Community Firewatch Groups (MPA) in 2 villages. Meetings with village officials and community leaders to socialise the Tanjung Putri village regulations on nypa ecosystem protection and conservation. Secretariat established as a meeting place for discussions with/between group members and planning forest conservation activities.
5. Efforts to improve the local economic and food security resilience through low emission farming and fisheries activities:
   a. Demplot to showcase zero-burn agricultural practices: 2,500 m2 in Tanjung Putri village.
   b. Construction of 10 floating net cages, appointment of a Cage Manager-in-Chief by the SEPAKAT community forestry group. Fish harvested from the first 3 cages yielded 20-40 kg each (striped and giant snakeheads).
   c. Development of a business centre (outlet) and secretariat by the SEPAKAT community forestry group.
   d. 4 fishponds managed by the Wanita Mandiri women's group.
6. Raising the level of knowledge of and support for conservation in Tanjung Putri village. Socialisation regarding the benefits of forest conservations and the impacts of climate change with100 participants form the community and relevant government agencies. Monitoring and outreach meetings with the Tanjung Putri community forest group on average 7 times a month.
7. Yayorin will calculate GHG emissions from representative sampling areas in the community forest. The KHG Buluh-Kotawaringin Lama will be used to sample carbon emissions from the proposed community forest area. This activity is planned for the 3rd and 4th weeks in February 2018 (2 weeks) and should be completed by the second week in March. Yayorin will work with GAIA to carry out this study.

Tarpaulin pond aquaculture demonstration plot for giant snakehead, gourami and striped snakehead in Tanjung Putri village, Kotawaringin Barat District.

Nypa palm management in Tanjung Putri village.

Aquaculture harvest in Tanjung Putri village.

Zero burning agriculture demonstration plot in Tanjung Putri village.

Giant snakehead floating cage culture demonstration plot in Tanjung Putri village.

7

Implementing Partner
Muhammadiyah Palangkaraya University

Program Title
Conservation and Rehabilitation of Hutan Amanah Lestari Peat Swamp Forest as a Working Classroom for Muhammadiyah Palangkaraya University.

Budget
Rp 2,419,987,500

Implementation period
24 months
(April 2016 - March 2018)

Site
Barito Selatan & Timur Districts, Kalimantan Tengah Province

Background
There is an urgent need to improve the management of the PT. Hutan Amanah Lestari concession which covers 25,804 ha and 3 villages, and is a peatland ≥ 2 m deep at high risk from fire due to agricultural land burning, in order to reduce emissions and improve local incomes.

Goals
Improve management of the 25,804 ha PT. Hutan Amanah Lestari concession comprising 4 villages and critical habitat for the primate species proboscis monkey (Nasalis larvatus); reduce the extent of critically degraded land; increase local climate change knowledge and awareness; improve the forest condition for/through training and research; plant 100,000 trees in the forest, and implement mitigation in the national park buffer zone.

Achievements
1. Forest Management and Peat Burning Prevention Work Plan produced. The plan identified fire risk sites and future actions.
2. Innovative solutions for degraded or burnt peatland rehabilitation and reforestation applied.
   a. Land cover map based on Landsat 2015 satellite data, drone photographs, and camera traps at 2 sites.
   b. Filed survey to collect faunal biodiversity data in the eastern and western areas of the project site; 100 nests of the key species Orangutan identified.
   c. Training and providing demonstration plots (demplots): training in general and financial administration, hydroponic agricultural methods, the *Beje* aquaculture system (2 pond demplot), tree planting with local species on a 1.5 ha plot.
   d. 2500 weeping paperbark (Melaleuca leucadendra) and 625 Shorea balangeran seedlings planted.
3. Setting up a Fire Prevention System and Peatland Hydrological Control Monitoring to obtain data on areas at high risk of fire and to enable fast response to fire outbreak detection reports, using email confirmations from Global Forest Watch:
   a. Fire-fighting teams established and survey/mapping of canals by drone completed.
   b. Map of fire outbreaks in the project area over the past 6 years.
   c. Forest patrols by the Rantau Kujang Suburb fire-fighting team in southern and eastern project sites.
   d. Forest patrols by the Kalanis village fire-fighting team in western and eastern project sites.
   e. Operational support for the fire-fighting teams.
4. Field study on GHG emissions and biodiversity.
   a. Filed visits by students and lecturers: 5 visits to project sites.
   b. Establishing a plot for students to observe seedlings, saplings, young adult, and mature trees.
   c. Student activities including planting, hydroponic and seedling monitoring, socialisation, and non-wood forest product training.
   d. Students gained much knowledge, experience, and data during project activities.
5. Completed activities include training on the exploitation of non-wood forest products (NWFP) and the development of activities such as water chestnut hydroponics and *Beje* fish farming.

Hydroponic rice farming.

Jelutung (Dyera costulata) plants becoming established in peatland.

Honey bear.

Proboscis monkey.

Babirusa are still found at Hutan Amanah Lestari forest.

Socialisation and training on harvesting non-wood products, forest patrol training, and training on forest fire prevention and control/fire-fighting.

8

Implementing Partner

Yayasan Teungku Chik Pante Kulu Sekolah Tinggi Ilmu Kehutanan (STIK)

Program Title

Protection, Rehabilitation and Conservation of the Sekolah Tinggi Ilmu Kehutanan (STIK) Teaching Forest (HP-STIK).

Budget

Rp 3,488,079,500

Implementation period

24 months
(April 2016 - March 2018)

Site

Aceh Besar District, Aceh Province

Background

A program initiated to protect the STIK Teaching Forest, established under Decree of the Forestry Minister SK Menhut No. SK. 724/MENHUTII/2009, with GHG emission reductions achieved principally through rehabilitation aiming to restore Sumatra tiger (*Pantera tigris sumaterae*) and Orangutan (*Pongo abelii*) habitat.

Goal

Improved forest management for training and research as per Ministerial Decree SK Menhut No. SK.724/MENHUT- II/2009 through reducing critically degraded land; increased community knowledge and awareness regarding climate change; forest for training and research in good condition; 100,000 new trees surviving and growing in the forest.

Achievements

1. Forestry conflict study through meetings, socialisation and FGD.
2. The nursery area has been cleared, and seeds/seedlings of 18 species obtained locally and from outside the area through contacts with seed/seedling procurement permits from the relevant authority (Balai Pembenihan Tanaman Hutan/ BPTH).
3. Procurement of materials and construction of nursery facilities.
4. Preparing the land for planting before and after placing seeds/seedling in holes (digging, routine weeding, watering, seed/seedling selection/ thinning) to produce 100,000 seedlings in an area of 80 ha.
5. Procurement of nursery supplies (water, name tags/plates, chemicals/ herbicides, security fence).
6. The proportion of women involved in program activities reached 50%.
7. Problems with seedling survival rate. This is related to the construction of the security fence which should have been completed by November 2017 but was still not finished by the end of the year. The fence-building plan encountered administrative problems, because the budget code for this item is unclear, so that the building contractor awarded this work cannot yet sign the procurement documents.

Nursery centre.

STIK teaching forest area.

Pinang seedlings ready to plant.

Yayorin nypa palm forest..

Land-based Mitigation

USAID PROGRAM

batch 2

12 land-based mitigation project proposals were funded by USAID under the second phase. They were implemented by: Gaia Consortium, UGM Faculty of Forestry, FWI Consortium, Jember University, Yayasan Terumbu Karang Indonesia, Yayasan Taman Nasional Tesso Nilo, Yayasan Penyu Berau, Yayasan Palung, Yayasan Tiara Pusaka, Yayasan Leuser International, Indonesian Forestry and Governance Institute (IFGI) and the Rubber Research Centre.

1

Implementing Partner

Gaia-DB Consortium, CFES, and LMDH Puncak Lestari

Program Title

Community-based rehabilitation of the Ciliwung Watershed hinterland (Ciliwung 0 Km).

Budget

Rp 2,000,000,000

Implementation period

17 months (February 2017 - June 2018)

Site

Bogor District, Jawa Barat

Background

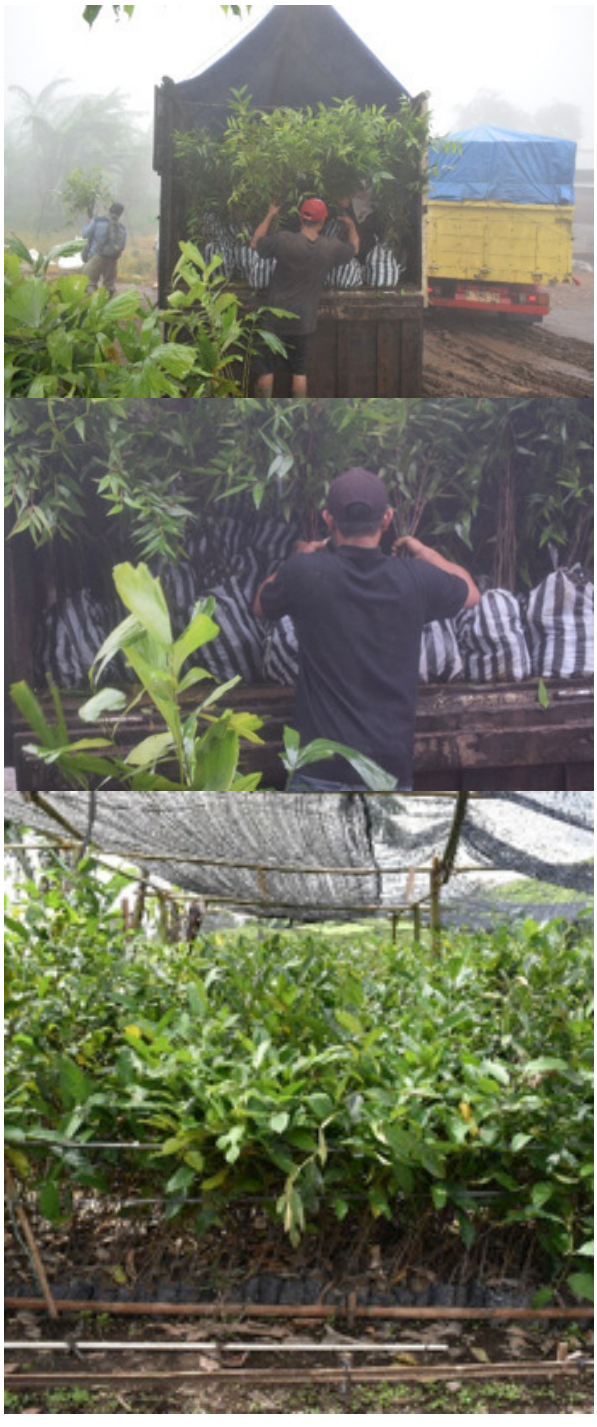
The Ciliwung watershed hinterlands are degraded with an average tree density of only 86 /ha. The aim of this project is to improve the condition of these degraded lands through agroforestry systems, with a target density of 400 trees/ha.

Goal

Rehabilitation of the Ciliwung watershed upland ecosystem through sustainable community-based agroforestry systems.

Achievements

1. Sustainable forest management plan for the Tugu Utara village forest (HPD) in the Telaga Warna Strict Nature Reserve (TW-CA) buffer zone: socialisation; finalisation of the report on participatory mapping of rehabilitation blocks.
2. Implementation of agroforestry systems and protection in the Tugu Utara village forest (HPD) in the (TW-CA) buffer zone: analysis of non-wood forest product survey; survey and research on market chains for primary village products; workshop on forest management; workshop on visual recording and production of publications at the village level.
3. Knowledge management platform on sustainable ecosystem rehabilitation: workshop on knowledge gathering and management; and outreach and extension with forest management groups.
4. Facilitating the knowledge management platform compilation.
5. Start of non-wood forest product and environmental service management knowledge and skills development and applications.



Seedlings ready for planting.

2

Implementing Partner
Faculty of Forestry, Gadjah Mada University

Program Title
Agrarian Reform Model to increase forest productivity in order to accelerate the achievement of food security, poverty eradication, and reduction of GHG emissions.

Budget
Rp 2,000,000,000

Implementation period
17 months (February 2017 - June 2018)

Site
Blora District, Jawa Tengah and Ngawi District, Jawa Timur

Background
There is a need for an under-developed area development acceleration model for national forests through improved forest management without converting forests to other land uses. The target parameter is increase community welfare, a model for agrarian reform promised in the Nawa Cita.

Goal
Increase forest productivity through the application of technology and semi-organic farming to reduce GHG emissions through agrarian reform.

Achievements
1. Adoption of an integrated forestry and farming system demonstration plot through the development of Gogo Rice to support output 1: “A 50 ha IFFS demplot established”.
2. Land-cover map produced using remote-sensing techniques to interpret aerial photographs: completed for 8 village forests in the Getas – Ngandong Education and Research Forest.
3. Participatory Plan completed and forest management organisational structure established.
4. Initiation of local policies for forest management in line with climate change issues and mitigation programs.


Critically degraded land reforested with teak.


Preparations for rice planting.


Rice seedlings after planting.

3

Implementing Partner

Forest Watch Indonesia Consortium, Center for Regional Planning and Development Studies (P4W)–LPPM IPB

Program Title

Strengthening Stakeholder Collaboration on Climate Change Mitigation in the Ciliwung Watershed Uplands.

Budget

Rp 1,983,360,000

Implementation period

16 months (February 2017 - May 2018)

Site

Bogor District, Jawa Barat

Background

Forest Watch Indonesia (FWI) records show that, from 2000 to 2009, forest loss in the Ciliwung watershed was almost 5,000 ha, an area equivalent to that of Sukabumi city. By 2013 the remaining natural forest cover was only 3,400 ha, about 8,985 of the total area of the Ciliwung watershed.

Goal

Achieve collaboration between stakeholders (village governments, farmer groups in forest areas, the Government-run forestry company Perum Perhutani, Gede Pangrango National Park Authority, Bogor District Government, PTPN Gunung Mas and PT Sumber Sari Bumi Pakuan) in achieving low GHG emission management of the forest and land resources in the upper reaches of the Ciliwung watershed in Bogor District.

Achievements

1. Increased stakeholder participation in the protection of the remaining forest areas and increased rehabilitation of land resources in the upper reaches of the Ciliwung watershed: statistical analysis and overlaying of land-use maps and land/forest cover with spatial planning functional categories in Tugu Utara and Tugu Selatan villages.
2. Formation of grass-roots community groups for climate change mitigation action: establishment of nurseries in Kampung Cibulao and Tugu Selatan with outreach and extension on nursery husbandry/management.
3. Workshop on coffee management series I, II, III and IV with practical activities: cultivation, soil and water conservation, organic coffee-growing practices, and sustainable use of environmental/ecosystem services.
4. Map of rehabilitation blocks produced through participatory and collaborative processes. Planting planned to start in February 2018.

Nursery centre.

Forest density survey.

4

Implementing Partner
Jember University

Program Title
Managing the Meru Betiri National Park (MBNP) Rehabilitation Zone through development of a Demonstration Plot designed to prioritise plant species providing soil cover throughout the year.

Budget
Rp 1,996,055,637

Implementation period
17 months (February 2017 - June 2018)

Site
Jember District, Jawa Timur

Background
The MBNP rehabilitation zone in Wonoasri village covers 290 ha, with an average tree cover <16%, density of 234 trees/ha and low species diversity (H <1). The stratification has also remained homogenous over the past 15 years, consisting solely of mature trees and agricultural or horticultural crops.

Goal
Increase the endemic species diversity and canopy stratification in the MBNP rehabilitation zone as a protected area based on biophysical indicators while improving the welfare of communities living around the conservation area through the development of creative economy clusters.

Achievements
1. Survey and evaluation of standing trees prior to enrichment planting in the protected forest.
2. Workshop in Curah Lele sub-village on the creative economy concept socialisation of forest corridors and multi-functional farms as an economic capacity building activity for local communities.
3. Preparations underway to rehabilitate 285 ha. Husbandry of pakem (*Pangium edule*) and candlenut seedlings as a secondary forest demonstration plot in the Wonoasri Resort rehabilitation area of the MBNP.
4. Estimation of (baseline) carbon stocks and ecological value of the MBNP secondary forest.
5. Organic fertiliser added to increase soil fertility in order to raise the currently low organic carbon levels (SOM ±1%), cation exchange capacity, base saturation, and pH.

Forest plants growing in the forest corridor.

Discussion on climate and rehabilitation.

Jember University ICCTF program demplot.

5

Implementing Partner

Yayasan Terumbu Karang Indonesia

Program Title

Belitung Mangrove Park: transforming an ex-mining area into a Mangrove Tourism Park for Ecosystem Rehabilitation and Carbon Sequestration.

Budget

Rp 2,000,000,000

Implementation period

17 months (February 2017 - June 2018)

Site

Belitung District, Bangka Belitung

Background

Ecosystem impacts from lead mining in Bangka Belitung include derelict ponds, loss of biodiversity and vegetation loss. Once the land had been covered with mining holes, lead mining shifted to the coast, including mangroves and other coastal forests. The loss of mangroves and other coastal forests has made a disproportionally large contribution to carbon emissions and biodiversity loss, and has increased the vulnerability of coastal communities. However the Belitung District Government target for tourism is 100,000 visitors per year.

Goal

Reduce climate change impacts on Belitung District ecosystems and communities through rehabilitating mangrove forests in ex-mining areas, through community forest management rights.

Achievements

1. The community forest management group supported by Yayasan Terangi, Juru Seberang Bersatu, Juru Seberang village, Tanjung Pandang Sub-District, Belitung-Babel, was placed 1st in the District level reforestation competition, and won 3rd place at national level in the community forest management group class.
2. Outreach and extension on seedling care for rehabilitating 300 ha of mangrove forest severely degraded by mining.
3. Production of seedlings, planting, and mangrove mapping in the Juru Seberang community forest.
4. Carbon stock mapping (baseline).
5. Capacity building for 20 locals in mangrove park management to promote marine ecotourism.
6. Construction of the first floor of the watch tower.
7. Outreach and extension on site clean-up and making supporting poles for 300 m of mangrove boardwalk track.

Mangrove carbon sampling.

Seedlings in the mangrove rehabilitation area.

District Award certificate: 1st Place.

National Award: 3rd Place for community forest rehabilitation.

6

Implementing Partner

Yayasan Taman Nasional Tesso Nilo

Program Title

Community-Based Ecosystem Restoration and Protection in Tesso Nilo National Park (TNNP) and Improved Welfare for Nearby Communities.

Budget

Rp 2,000,000,000

Implementation period

13 months (February 2017 - February 2018)

Site

Pelalawan District, Riau

Background

The TNNP ecological functions are being lost due to the conversion of 75% of the original forest cover to palm oil plantations, scrub, and invasive species, reducing the carrying capacity of TNNP forests for threatened species. Reasons behind the high pressures on the TNNP include a general perception among neighbouring communities that they don't benefit from the TNNP and the degradation of local wisdom/ traditions.

Goal

Undertake a suite of activities to reduce the extent of degraded land within the TNNP through ecosystem rehabilitation, protection of the remaining forest, and improving the welfare of nearby communities.

Achievements

1. Community-based tree planting to rehabilitate 375 ha of degraded lands.
2. Facilitating the use of non-woof forest products for handicrafts through training followed by production and marketing support.
3. Women's groups training in seedling production including seed seeking/selection and nursery techniques, to improve the welfare of 120 families.
4. Routine patrols by villagers from of Lubuk Kembang Bunga (LKB), Air Hitam and Situgal to protect 20,000 ha and reinforce/preserve local traditions and knowledge.

Nursery centre.

Patrol members find and extinguish a fire.

Patrol members find a bridge built by people illegally exploiting forest resources.

7

Implementing Partner
Yayasan Penyu Berau

Program Title
Integrated Mangrove Forest Management for Climate Change Mitigation and Community Welfare in Batu Putih Sub-District, Berau District.

Budget
Rp 2,000,000,000

Implementation period
16 months (March 2017 - June 2018)

Site
Berau District, Kalimantan Timur

Background
The Batu Putih Sub-District mangrove forests are within the boundaries of the Derawan Islands Coastal Park conservation area, a coastal and small islands conservation area in Berau District. The greatest threat to the Batu Putih mangroves is land-use change entailing deforestation.

Goal
To establish a local marine and mangrove forest conservation area management model in Batu Putih Sub-District run by a Sub-District level management unit to support the management effectiveness of the Berau District marine conservation area through developing ecotourism to increase local incomes.

Achievements
1. Establishment of sustainable mangrove forest management through ecotourism which will ensure that the Batu Putih Sub-District mangrove forest resources which can contribute to community welfare are maintained through facilitation of a community forest group in mangrove tourism, construction of a mangrove tower and a mangrove track (boardwalk). The ecotourism area has been officially recognised by decree of the Village Head.
2. Construction of a mangrove nursery, and facilitation of mangrove seedling production to increase carbon stocks in a 20 ha plot in Batu Putih Sub-District.
3. Construction of simple wave breakers/breakwaters in front of Batu Putih village.

Training on carbon estimation.

Mangrove boardwalk bridge.

Harbour and visitor parking area sites.

8

Implementing Partner
Yayasan Palung

Program Title
Sustainable Management of Some Community Livelihood Options to Increase the Perceived Value of Peatlands around Gunung Palung National Park.

Budget
Rp 2,000,000,000

Implementation period
17 months (February 2017 - June 2018)

Site
Kayong Utara District, Kalimantan Barat

Background
Since the extensive forest and peatland fires around Gunung Palung National Park in 2015, little has been done to prevent further fires, restore the burned areas, or to ensure sustainable peatland management by local communities.

Goal
To maintain the ecological functions of and promote biodiversity conservation in the peatland ecosystems around Gunung Palung National Park through sustainable management of community livelihood sources.

Achievements
1. Construction of 20 canal sluice-gates to improve plantation and rice field management so that they are more productive and better adapted to peatland conditions.
2. Facilitation of an agroforestry demonstration plot (demplot).
3. Preparing land for swampland rice farming in 5 villages.
4. Filed schools held in 5 fire-damaged areas on sustainable peatland management.
5. Workshops on non-wood forest product (coconut oil and palm sugar) development in 5 villages to regulate sustainable peatland forests and common land protection and management.
6. Peatland based non-wood product village enterprises businesses established (nypa palm sugar, coconut oil, charcoal and liquid smoke from coconut shells, pandan leaf weaving, and nypa brooms).
7. Marketing workshop to improve cultivation, post-harvest, and marketing systems.

Canal sluice-gate.

Biodiversity survey.

Training for women's groups.

9

Implementing Partner
Yayasan Tiara Pusaka

Program Title
Empowering local communities in GHG and land-based global warming mitigation through organic in Pulau Saparua.

Budget
Rp 2,000,000,000

Implementation period
17 months (February 2017 - June 2018)

Site
Maluku Tengah District, Maluku

Background
Changing the way of life of Pulau Saparua communities who happily burn their rubbish and use fire to clear their farmlands, as well as still using inorganic fertiliser and pesticides which contribute to GHG emissions.

Goal
Contribute to GHG and global warming mitigation through changing the behaviour of local community members and improving land-use (organic farming).

Achievements
1. Socialisation to increase GHG awareness among local kings and the *Latupati adat* council so that they can actively contribute to addressing GHG and global warming issues.
2. Signing of an agreement by 11 Kings and promulgated in 11 territories to form a GHG and global warming mitigation Network.
3. Workshop on organic horticultural farming methods, organic fertiliser/compost and pesticide production, followed by outreach and extension during the planting of seeds and transplanting of nutmeg seedlings as an environmentally friendly plantation and farming activity.

Harvesting mustard greens (*sawi*).

Harvesting organic cucumbers.

Harvesting organic *kangkung* (*Ipomoea aquatica*).

10

Implementing Partner
Yayasan Leuser Internasional

Program Title
Rehabilitation of Protected Forests and Increasing Carbon Sequestration through Environmentally Friendly Coffee Agroforestry.

Budget
Rp 2,000,000,000

Implementation period
17 months (February 2017 - June 2018)

Site
Bener Meriah District, NAD

Background
Climate change is having impacts on coffee production. Climatic uncertainty and higher air temperatures are resulting in longer dry seasons, changes in rainfall timing and intensity, shifts in harvest periods, and increasing the risk of pest and disease attacks.

Goal
Rehabilitate protected forest and watersheds in protected forest areas which have been cleared by local communities, increasing carbon sequestration and coffee farmer incomes through enrichment planting and applying Climate Smart Coffee Production System technology.

Achievements
1. Seedlings raised by the community group (*Kelompok Swadaya Masyarakat* - KSM) in the nursery centre to rehabilitate 100 ha of protected forest with 20,000 *meranti* (*Shorea spp.*), *sengon (Albizia chinensis), jengkol (Archidendron pauciflorum*), bitter bean (*Parkia speciosa*), and avocado plants.
2. Environmental awareness of 100 local household heads in Pepanyi and Nosar Baru villages, Permata Sub-District raised while increasing their technical skills in cultivation and post-harvest processing.
3. Planting of hedges and shading plants by the KSM to protect 4,000 productive tree crop plants – citrus fruits and avocados.
4. Preparation of an enclosure for livestock husbandry - local (beef) cattle.
5. Facilitation of compost making to provide organic fertiliser.

Ripe Arabica coffee ready for harvest.

Establishing the community association (KSM).

11

Implementing Partner

Indonesian Forestry and Governance Institute (IFGI)

Program Title

Land-Based Climate Change Mitigation around the Gunung Halimun Salak National Park to Prevent Land-Use Change in Community Forests through Increasing Agricultural Productivity in Lebak District, Banten Province.

Budget

Rp 2,000,000,000

Implementation period

17 months (February 2017 - June 2018)

Site

Lebak District, Banten

Background

The high rate of community forest conversion to other land-uses (mining and residential) in Lebak District is due to the low productivity of this land. Local people tend to sell their forest land for other uses because of its low added value and the lack of any significant contribution to their incomes.

Goal

Improve the management of community forests to promote environmentally friendly ways to increase productivity in order to inhibit the conversion of Lebak District community forests.

Achievements

1. Agroforestry Pilot Site of 100 ha in 9 villages in Cigemblong Sub-District, Lebak, Banten through outreach and extension on patchouli and mixed fruit tree planting.
2. Community capacity building in agroforestry community forest management models, with on-site facilitation of non-wood forest product (NWFP) planting and a NWFP workshop.
3. Working with a patchouli exporter in Jakarta and other companies to ensure a market for products from the community forests.
4. Coordination with sub-district and village governments to gain support for agroforestry.
5. Carbon calculations underway, planned to be completed by March 2018.

Nursery centre.

Making *jamu* (traditional health drinks) from harvested spices.

12

Implementing Partner
Rubber Research Center

Program Title
Reducing CO_2 Emissions from Peatland through Water Management using a Natural Rubber Based Composite for Water Level - Canal Blocking.

Budget
Rp 2,000,000,000

Implementation period
17 months (February 2017 - June 2018)

Site
Banyuasin and Ogan Ilir Districts, Sumatera Selatan

Background
One reason for the prevalence of failure in peatland water level management is the poor choice and implementation of canal blocking systems. The design of current canal blocking systems fail to adequately take into account the need to establish and maintain the water levels appropriate to each peatland, and generally do not consider practical aspects such as the strength and longevity of materials and ease of operation. Wood, the traditional material, is becoming harder to find and furthermore its use for canal blocking is a threat to the environment.

Goal
Improving peatland quality and productivity, and improving air quality in surrounding areas through zero-burning peatland water management in Sungai Rengit village, Banyuasin District and Patra Tani village, Ogan Ilir District.

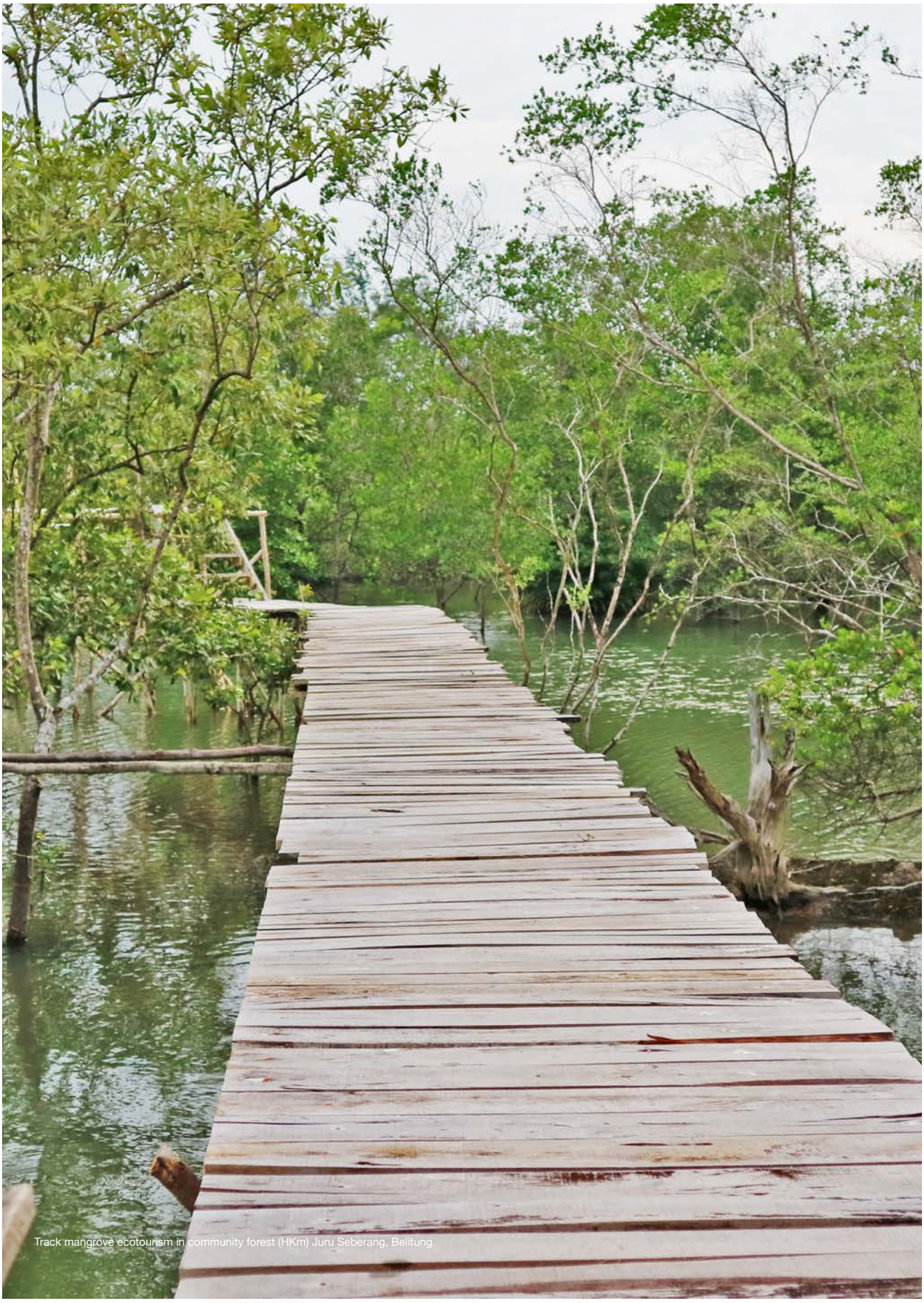
Achievements
1. Agroforestry demonstration plot in Sungei Rengit as a means of improving land productivity.
2. Prototype rubber composite canal blocking design installed. To date, 1 canal blocking unit is in place and rewetting progress is being monitored.
3. Socialisation on water management and village level work plan to make a community socio-economic map as well as an economic development and organisational roadmap in Sungai Rengit.
4. Canal blocking unit construction and installation.


Site visit to a potential canal blocking site.


A canal which will be blocked.


A canal constructed under the project.


Collecting soil samples.



Track mangrove ecotourism in community forest (HKm) Juru Seberang, Belitung.

Land-based Mitigation

UKCCU PROGRAM

The UKCCU funded 11 land-based mitigation projects in 5 Provinces: Riau, Jambi, Sumatera Selatan, Kalimantan Barat and Kalimantan Tengah. These projects were implemented by 11 organisations or Consortiums: Yayasan Mitra Insani, the Faculty of Fisheries and Marine Science (FAPERIKA) of Riau University, Riau Women's Working Group (RWWG), Yayasan Lembaga Bantuan Hukum Lingkungan (YLBHL) as lead institution for the Jambi Peatland Restoration Consortium, Walhi Sumatera Selatan, Perkumpulan Forest Kita Institute, Perkumpulan Sahabat Masyarakat Pantai (SAMPAN) Kalimantan, Walhi Kalimantan Barat Consortium, Perkumpulan Pemberdayaan Masyarakat Dayak Pancur Kasih (PPK), Center for Fire Control and Forest Rehabilitation (P2KLH) Palangkaraya University, and Yayasan Borneo Nature Indonesia.

1

Implementing Partner
Yayasan Mitra Insani

Program Title
Climate change mitigation through increasing stakeholder participation in forest and peatland management based on peatland hydrological units.

Budget
Rp 4,349,834,000

Implementation period
15 months (January 2017 – March 2018)

Site
Siak and Pelalawan Districts, Riau

Background
The loss of peatland forests has caused many problems in Riau, including ecosystem degradation and biodiversity loss, lowering of the water table through disruption of hydrological cycles, and damaging fires. These fires are most common and most dangerous in peatlands, as they are not limited to the surface vegetation but can also remain alive and propagate underground.

Goal
Improve Forest and Peatland management through direct collaboration with/between national and local governments.

Achievements
1. Stakeholder coordination in 2 districts: Siak and Pelalawan.
2. Briefs on financing/budget policy for peatland management in Siak and Pelalawan Districts.
3. Peatland Restoration Action Plan in 2 districts (Siak and Pelalawan) to support the Regional Peatland Restoration Agency (BRG) and Peatland Restoration Team (TRG) Restoration Action Plans.
4. Peatland restoration in 7 villages within the target area of the Peatland Restoration Agency through the construction of 19 canal blocking units.
5. Village regulations on forest and peatland fire prevention in 7 villages within the project site.
6. Village Forest document drafting facilitated in 2 villages.
7. Agroforestry pilot site (demplot) established with 17,500 seedlings of useful trees/plants.
8. Mangrove ecotourism development in 3 villages.
9. 5 fire-fighting groups established, trained, and provided with fire-fighting equipment.
10. Development of community radio to disseminate information, increase awareness and knowledge of issues related to forest fires and human health.
11. Dissemination events in 14 schools and 5 community health centres (*Puskesmas*) to increase awareness and knowledge of issues related to forest fires and human health.
12. Standard Operating Procedures (SOPs) and Early Warning System (EWS) for responding to fires in 7 villages.

Canal sluice-gate in Kampung Penyengat as part of a rewetting program.


Community radio broadcast to disseminate information on forest and peatland fire prevention.


Checking a canal sluice-gate as part of community-based monitoring.


Mangrove boardwalk to promote mangrove ecotourism management.

2

Implementing Partner

Faculty of Fisheries and Marine Science, Riau University

Program Title

Conservation of peatland forest through fisheries for community welfare in Sungaitohor village, Kepulauan Meranti District, Riau Province.

Budget

Rp 1,697,992,000

Implementation period

16 months (January 2017 – April 2018)

Site

Kepulauan Meranti District, Riau

Background

The peatlands of Kepulauan Meranti District, Riau are in an outermost island area of national importance, and a priority for national peatland restoration. These peatlands are particularly vulnerable to threats which can reduce their extent. The major threats are forest fires and land-use conversion. Without swift and effective action, the extent of these peatland swamps and the forests they support will continue to decline, affecting carbon stocks based on standard normal forest potential (at least 35-100 tons of CO_2eq).

Goals

1. Carry out bio-ecological studies of the peatland swamp ecosystems.
2. Study options for ecologically based peatland swamp ecosystem conservation for aquaculture development.
3. Provide local community members with skills in aquaculture/ fish husbandry and post-harvest handling to ensure high quality, market-ready products.
4. Outreach and extension for local communities in sustainable peatland swamp conservation as well as marketing and processing aquaculture harvest.
5. Pioneer the establishment of a field laboratory for research on peatland swamp ecosystems.

Achievements

1. Establishment of 4 community groups (32 people) accompanied by aquaculture training.
2. Establishment of 5 community groups (20 people) and training in fisheries post-harvest handling/processing.
3. Planting 4,000 mangrove propagules/seedlings.
4. Capacity building for local communities through training in aquaculture, fisheries processing, conservation and revegetation, marketing, and ecotourism.
5. Peatland ecosystem restoration over around 500 ha through revegetation, conservation and ecotourism, with 42,260 coconut and sago palms planted both for revegetation and conservation and to promote peatland agroforestry.
6. Development of a Mangrove Ecotourism Community.
7. Establishment of a pilot site for sustainable and economically valuable peatland use in the form of 2 ha of aquaculture ponds as a means of 'rewetting' peatlands
8. Production of two types of maps 2 of the Sungaitohor village area.

Training in post-harvest processing of fisheries produce.


Preparing the aquaculture demonstration plot.


Aquaculture ponds.

3

Implementing Partner
Riau Women Working Group

Program Title
Initiating women's groups into the reduction of emissions from forest, plantation, and peatland fires in the Pelintung, Guntung, Mundam and Teluk Makmur suburbs of Dumai City (through a collaborative approach between women's groups and fire prevention groups in addressing forest and peatland fires to reduce carbon emissions).

Budget
Rp 2,561,944,000

Implementation period
14 months (January 2017 – February 2018)

Site
Dumai City, Riau

Background
Spatial planning management in the 4 suburbs (Pelintung, Guntung, Mundam and Teluk Makmur, all of which are inextricably linked within the Giam Siak Kecil peatland hydrological unit) has enabled palm oil plantations and canal construction to cause drying out of the peatlands in and around the project area, making the area extremely vulnerable to fire hazards in the dry season. The fire hotspot analysis of NASA showed 683 fire spots with firm confidence above 70 in this area during the period 2012-2014.

Goals
1. Community-based management of peatland lands and forests.
2. Collaboration with local government in the management of peatland lands and forests.
3. Participation of women's groups in land area based mitigation activities.

Achievements
1. Action Plan Document produced as a contribution to fire prevention and control efforts.
2. Establishment of 4 community groups (40 people) followed by facilitation and training in agroforestry.
3. Agroforestry in peatland ecosystems initiated and promoted through the planting of 600 ginger rhizomes and 1,000 jelutung (*Dyera costulata*) seedlings.
4. Establishment of 4 fire prevention community groups and providing them with fire-fighting equipment.
5. Dissemination and socialisation of forest, plantation, and peatland fire issues through printing 2,000 posters.
6. Production of Standard Operating Procedures (SOP) and Early Warning System (EWS) fire response documents
7. Capacity building for local communities through training in making feed pellets for fish from peatland weeds (*pakis cycads* and *kelakai - Stenochlaena palustris*).
8. Provision of aid in the form of 4 machines to make fish pellets.

Red ginger agroforestry demonstration plot planted by Guntung Suburb women's group.


Building a canal sluice gate at the project site.


Fish pellets produced to feed cultured fish and for sale.

4

Implementing Partner

Yayasan Lembaga Bantuan Hukum Lingkungan (YLBHL) as lead institution for the Jambi Peatland Restoration Consortium

Program Title

Development of a sustainable farming model and land-use based rehabilitation of fire damaged peatland ecosystems.

Budget

Rp 4,094,759,000

Implementation period

15 months
(January 2017 – March 2018)

Site

Tanjung Jabung Timur District, Jambi

Background

One of the priority peatland conservation areas in Indonesia, the Berbak landform is declining in area and functionality due to a variety of pressures such as increased use of land for agriculture, industrial timber and oil palm plantations, illegal logging, and residential development. The construction of canals in connection with oil palm plantations, industrial timber plantations, illegal logging, agriculture, and residential development is the main driver of peatland subsidence and has serious consequences in terms of forest and peatland degradation. Floods in the rainy season, fires in the dry season, lowering of the water table by several metres, and saline intrusion affecting farming and residential lands are among the impacts due to peatland forest and swamp ecosystem degradation and destruction.

Goal

Support measures to achieve national and local government mitigation and peatland restoration targets through improving the ways in which peatlands are used.

Achievements

1. Capacity building for forest and peatland management through direct collaboration with national and local government through:
   - Drafting local government policy documents for peatland management planning at the provincial level.
   - Launching Regulation Governor Policy (*Pergub) No.* 31 of 2016 on Technical Guidelines for Implementing *Perda* No. 2 of 2016 on Forest and Peatland Fire Prevention and Control.
   - Construction of 6 canal blocking units at program target sites to promote peatland re-wetting.
   - Establishing agroforestry groups in 3 villages (45 people) with 2 ha each.
   - Agroforestry demplot established and10.000 seedlings planted.
   - Agroforestry Field School established
2. Improved understanding and implementation of fire prevention strategies and fire awareness campaign as well as community best practices through:
   - Establishment of 5 fire control groups in 5 villages (50 people).
   - Drafting of SOP and EWS documents for extinguishing forest and peatland fires.

Community members practicing forest fire prevention skills.

A canal sluice gate at the Jambi KRG project site.

Launching regulation *Pergub* No.31 of 2016 on Technical Guidelines for Regulation *Perda* No.2 of 2016 on forest and peatland fire prevention and control by the Governor of Jambi.

5

Implementing Partner
Walhi Sumatera Selatan

Program Title
Peatland protection and management through a village ecological scheme.

Budget
Rp 1,381,999,000

Implementation period
15 months
(January 2017 – March 2018)

Site
Ogan Komering Ilir District, Sumatera Selatan

Background
Farming systems in the communal peatlands of Bangsal village are limited to rain-fed rice with just one harvest per year. With minimal information and outside aid, harvests have failed several times due to farming practices poorly adapted to peatlands, with economic impacts lasting 1-2 years after each failed harvest.

Goals
1. Accelerate the development of peatland villages with an ecological approach, to reduce emissions through local action.
2. Establish a site plan for agroforestry based peatland management incorporating local traditions.
3. Initiate local policies regarding mitigation and climate change programs.

Achievements
1. Implementation of good practices for agro-ecological farm management in peatlands with regard to carbon emission reduction and improving the condition of the Peatland Hydrological Unit (KHG) through the construction of 2 canal blocking units.
2. Realisation of the Plan for Peatland Management through Agroforestry Pilot Sites through the establishment and facilitation of 2 agroforestry groups in 2 villages.
3. Planting of 1,000 seedlings in the agroforestry demplot
4. Dissemination of information on forest and peatland fire issues to 500 people.
5. Establishment of 2 fire-fighting groups in 2 villages (20 people).
6. Initiation of local policies regarding climate change mitigation through the drafting of action plan documents in 2 villages.
7. Drafting of SOP and EWS documents for responding to fire outbreaks.

Women in Bangsal Village harvest vegetables in the peatland agroforestry demonstration plot.

Hand tractor, technical aid from ICCTF to the KOMPAG group in Nusantara Village to improve their farming yields.

An agroforestry demonstration plot for organic rice farming in Nusantara Village.

6

Implementing Partner
Perkumpulan Hutan Kita Institute

Program Title
Building a Demplot and Peatland Restoration Pilot in fire damaged peatland forest swamps as demonstration sites at MUBA and OKI District Peatland Restoration Agencies program priority sites in Sumatera Selatan.

Budget
Rp 4,238,705,000

Implementation period
17 months
(January 2017 – May 2018)

Site
Musi Banyuasin (MUBA) and Ogan Komering Ilir (OKI) Districts, Sumatera Selatan

Background
Fire damaged peatlands in Sumatera Selatan cover 410,962 ha, with 57% (234,277 ha) in OKI District and 24.5% (100.584 ha) in MUBA District. The impact of these fires is not limited to the direct impacts felt by local and traditional (adat) communities, but also reach national and international levels. Losses to the nation from forest and peatland fires and the resulting pall of smoke in 2015 are estimated at Rp 221 billion. There is a lack of stakeholder participation in fire prevention and fire damaged peatland forest restoration.

Goals
1. Promote the formation of district and village level policies regarding peatland restoration and fire prevention.
2. Establish a demonstration plot (demplot) to set an example of peatland agroforestry development particularly in fire-damaged areas.
3. Promote capacity building for local governments and communities.
4. Promote the emergence of local initiatives for peatland restoration and fire prevention/control.
5. Demonstrate an alternative approach to planning for peatland management and use based on local village initiatives.

Achievements
1. Drafting of 2 action plan documents and 2 policy documents for the establishment of Peatland Restoration Working Groups, in Musi Banyuasin and Ogan Komering Ilir Districts.
2. Formation, facilitation, and training of 4 farmer groups.
3. Development of agroforestry demplots on 26 ha of peatland ecosystem and peatland agroforestry promotion in 4 villages.
4. Planting of 10,000 seedlings.
5. Pilot sites implement regulations and procedures for the restoration and rewetting of fire-damaged lands including the construction of 10 tabat mini dams to partially block canals.
6. Training on fire-fighting for community members and local government staff through the establishment of 4 fire control groups (100 people).
7. Drafting of SOP and EWS documents for responding to fire outbreaks.
8. Dissemination of information on [forest and peatland] fire and human health issues to 100 schoolchildren and through printing 500 posters.


A Menang Raya villager ready to replant peatlands.


Agroforestry demonstration plot on burnt peatland.


Teluk Makmur Village Head in front of the forest and peatland watch post built with a grant from ICCTF.

7

Implementing Partner

Perkumpulan Sahabat Masyarakat Pantai (SAMPAN) Kalimantan

Program Title

Strengthening community participation through optimisation of non-wood forest products and environmental services from village forests to promote peatland ecosystem restoration and protection in the Padang Tikar coastal zone.

Budget

Rp 3,626,169,000

Implementation period

17 months
(January 2017 – May 2018)

Site

Kubu Raya District,
Kalimantan Barat

Background

The Padang Tikar coastal zone includes the Batu Ampar Peatland Hydrological Unit (KHG). The biophysical condition of this peatland hydrological unit is classified as poor/degraded, largely due to damage from the 83 fires which occurred between January 2015 and September 2016, and is in urgent need of restoration. Meanwhile, the Tanjung Harapan Peatland Hydrological Unit is still in relatively good condition, and needs protection as well as optimisation of non-wood forest products and environmental services to maintain ecosystem condition and provide economic benefits to the local communities. Fire prevention and burned peatland restoration efforts are not synergised, and there is minimal stakeholder participation.

Goals

1. Promote the implementation of provincial, district, and village level policies on peatland restoration and forest and peatland fire in Padang Tikar coastal zone village forests.
2. Develop a community-based peatland restoration model for Padang Tikar coastal zone village forests.
3. Promote capacity building for village government and community members in peatland restoration and fire control.
4. Promote the emergence of local initiatives for community based forest and peatland restoration and fire control.
5. Develop alternative sources of income for local people from peatland ecosystem non-wood forest products and environmental services.
6. Promote community understanding and awareness regarding the causes of and hazards associated with forest and peatland fires.

Achievements

1. Direct collaboration with national and local government agencies in drafting a baseline data document for Padang Tikar coastal zone village forests as a basis for setting restoration action plan targets and indicators.
2. Drafting a community based peatland restoration action plan document for Padang Tikar coastal zone village forests.
3. Pilot sites with regulations and procedures on the restoration and rewetting of fire-damaged lands with the construction of 15 deep wells and 1 fire-watch tower, and the development of a village information system.
4. Agroforestry implemented and promoted in Padang Tikar coastal zone village forest peatland ecosystems through the planting of 18,000 seedlings of economically valuable plants/trees.
5. Training in fire-fighting for community members and government staff through forming 10 fire-fighting groups in 10 villages (50 people).
6. Dissemination and training on issues related to forest/peatland fires and human health in 10 villages and 10 schools.

Preparing burnt peatlands for replanting.

Fire-fighters during training.

Coconut palm plantation on a burnt peatland site in Tasikmalaya Village.

8

Implementing Partner
Walhi Kalimantan Barat Consortium

Program Title
Facilitating the rehabilitation of Peatland Swamp Forests degraded by fire in 4 Districts of Kalimantan Barat Province.

Budget
Rp 5,754,183,700

Implementation period
17 months (January 2017 – May 2018)

Site
Kapuas Hulu, Ketapang, Kubu Raya, and Sanggau Districts, Kalimantan Barat

Background
During 2015, there were at least 2,495 fire hotspots in Kalimantan Barat, the smoke from which caused at least 10,010 cases of acute respiratory infection. Property destroyed by fire over an area of 42,183 ha included 24,529 ha of company owned palm oil plantations and 1,728 ha of industrial timber plantations, with the remainder consisting of open access lands and lands under community management schemes (Walhi Kalbar, 2015). Areas designated as peatland swamps in the Reference Map for the Moratorium on New Concessions (PIPIB) comprised 25,613 ha of the total fire-swept area. There is still a lack of proper peatland swamp ecosystem management including a lack of protection form land-use change.

Goal
Implement land area based mitigation actions to stop the rise in forest degradation/destruction and to rehabilitate fire-damaged peatland swamp ecosystems in 4 Districts of Kalimantan Barat.

Achievements
1. A study report on the current conditions with regards to peatland degradation and exploitation in the 4 districts.
2. Construction of 8 canal blocking units, 24 ponds (*embung*), and 24 deep wells to prevent and control fires.
3. Construction of 4 fire-watch towers.
4. Planting of 6,000 Jernang rattan (*Daemonorops draco*) shoots in a 20 ha peatland area.
5. Rehabilitation of 100 ha of fire-damaged peatland through planting 50,000 seedlings in 8 demplots across the 4 districts.
6. Training in fighting peatland fires with the formation of 4 fire-fighting groups and the provision of fire-fighting equipment.
7. Drafting of forest fire prevention and control SOP and EWS documents in 4 districts.
8. Dissemination of information on forest fire hazards and impacts in 50 schools, 50 community health centres/clinics and printing of 6,000 posters.


Forest and peatland fire prevention watchtower built with ICCTF support.

Group photo with the fire-fighters during the forest and peatland fire-fighting training.

Televised dissemination campaign to prevent forest/peatland fires.

9

Implementing Partner

Perkumpulan Pemberdayaan Masyarakat Dayak Pancur Kasih (PPK)

Program Title

Improved forest and land management through prevention of forest and peatland fires and reforestation for community welfare.

Budget

Rp 3,292,945,000

Implementation period

17 months (January 2017 – May 2018)

Site

Kubu Raya and Ketapang Districts, Kalimantan Barat

Background

Spatial land-use in Kalimantan Barat, which is dominated by powerful large scale investment interests, has resulted in ecosystem degradation and reduced both ecological quality and carrying capacity, while local communities have lost [access to] production assets including land, clean water, and forests, threatening biodiversity loss and increasing agrarian conflict.

Goal

Implement actions to prevent forest and peatland fires and address the impacts, as means of climate change mitigation in fire-degraded peatlands and lands vulnerable to forest and peatland fires now and in the future.

Achievements

1. Organisational training and official formation of 14 farmer groups (510 people).
2. Training in peatland restoration, forest and peatland fire prevention and control for 14 groups (510 people).
3. Peatland ecosystem agroforestry and conservation area established with the planting of 47,500 high value seedlings.
4. Media gathering with 11 local mass media organisations/ units.
5. Drafting of 7 SOP documents on forest and peatland fire prevention.


8

LIPUTAN KHUSUS

Perkumpulan Pancur Kasih dan ICCTF Tanam 65.400 Bibit

Newspaper article about ICCTF supported Pancur Kasih program.

Site for the reforestation of burnt peatland forest.

Farmer group establishment and organisational capacity training.

10

Implementing Partner

Center for Fire Control and Forest Rehabilitation (P2KLH), Palangka Raya University Research and Community Service Institute

Program Title

Drilling deep wells and making fire breaks for peatland fire prevention in Kalimantan Tengah.

Budget

Rp 4,507,181,000

Implementation period

18 months
(January 2017 – June 2018)

Site

Pulang Pisau District, Kalimantan Tengah

Background

There is a need to prevent a recurrence of the devastating fires which swept lands and peatland swamp forests in 2015, which were the worst peatland fires in history and became a national issue. Peatland fires threatened the Kalimantan Tengah peatland kubah over 1,492,846 ha. As 60% of land and peatland swamp forest fires in Kalimantan Tengah occurred in Pulang Pisau District, this district has become a priority for peatland restoration efforts.

Goals

1. Provide supporting infrastructure and equipment for peatland rewetting to help prevent peatland and forest fires.
2. Provide organisational strengthening for fire-fighting groups in target villages.
3. Prepare a fire prevention action plan.

Achievements

1. Community fire-control groups established at village level and 12 such groups from 6 villages (120 people) trained and provided with fire-fighting equipment.
2. Training in deep well construction for 120 fire-control group members.
3. Construction of 600 deep wells, 100 in each target village, following regulations and procedures on the restoration and re-wetting of fire-damaged lands issued by the Peatland Restoration Agency (BRG).
4. Construction of 3 fire-watch towers, in Taruna Jaya, Pilang and Gohong villages.
5. Making a 4 metres wide fire-break 5 km in length, planted with fire-resistant plants such as Shorea balangiran, Jelutung (*Dyera costulata*) and Sago.
6. Planting 5,000 seedlings of fire-resistant plants along the fire-break.
7. Constructing 12 well-making machines in each village, 2 per village, to promote well construction.

Fire-Watch tower built with ICCTF support.


Visit by members of the Indonesian Chamber of Representatives (DPR RI) to an deep well drilling site.


Drilling the deep well.

11

Implementing Partner
Yayasan Borneo Nature Indonesia

Program Title
Peatland Protection and Restoration in the Sabangau River catchment, Central Kalimantan.

Budget
Rp 1,468,145,000

Implementation period
15 months
(January 2017 – March 2018)

Site
Palangka Raya City, Kalimantan Tengah

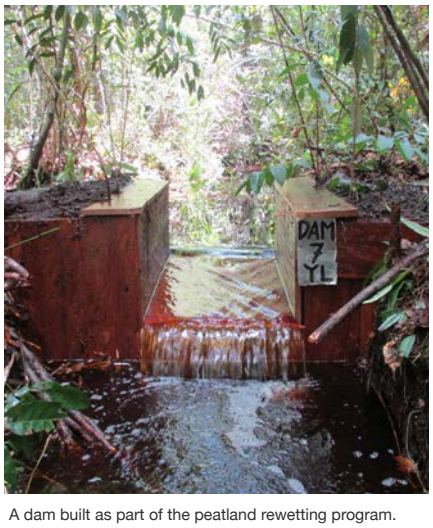
Background
There is a need to protect and rehabilitate the 50,000 ha peatland swamp forest in Natural and Peat Forest Laboratory (LAHG). According to history, this site has become degraded due to drainage, tree felling, and forest fires. One reason why it is important to conserve this peatland and the biodiversity it contains is the more than 12 m depth of the peat. According to Huijnen et al. (2016), around 14.2 Tg C will be released if all 50,000 ha of the LAHG is burned to an average depth of 26 cm.

Goals
To reduce carbon emissions through peatland re-wetting to reduce peatland loss, degradation and oxidisation; to increase carbon capture through reforestation; and to reduce the release of carbon through burning, by forming and strengthening community fire-fighting teams.

Achievements
1. Restoration of 5,190 ha of priority fire-damaged peatlands in Sabangau, Kalimantan Tengah through the construction of 150 canal blocking units.
2. Rehabilitation of 272 ha of peatlands through reforestation, planting 1,700 seedlings of local [tree] species.
3. Protection of LAHG peatland swamp forests from the threat of fire through community participation by forming and training 2 fire-fighting groups.
4. Drafting of 2 forest and peatland fire prevention/control action plan documents.
5. Awareness and capacity building through disseminating information on forest and peatland fire issues in 2 schools and 2 community health centre/clinics (150 people).

Community-based replanting of burnt peat bogs in the Sebangau area.

Seedlings raised by the community for the replanting of fire-damaged peat bogs in the Sebangau area.



A dam built as part of the peatland rewetting program.

ADAPTATION & RESILIENCE

ICCTF funded 11 adaptation and resilience projects using funds from USAID. These projects were distributed as follows: 2 projects in Nusa Tenggara Timur, 2 projects in Nusa Tenggara Barat, 1 project in Jawa Barat,1 project in Jawa Tengah, 1 project in Jogjakarta, 1 project in Sulawesi Selatan, 1 project in Gorontalo, 1 project in Maluku and 1 project along the South Java Sea coast.

Under this focus area, 30 year climate change projection models were developed for NTT and Subang, Jawa Barat. Climate change impact vulnerability maps were prepared for communities along the Java Sea coast, in Subang, Gorontalo and Rote Ndao. The climate change projections and vulnerability maps provided recommendations to local governments on ways to adapt to climate change impacts. The fishermen along the coasts of the South Java Sea also need to prepare for climate change. Rice farmers can adapt to climate change through adopting the SRI rice-farming method which uses little water and is adapted to climate change.

Achievements under the initiatives funded by ICCTF and its partners include the planting of 2,000 trees, the construction of 200 catchment wells and 100 water storage tanks. Initiatives under this focus area have involved 81 villages and provided direct benefits to 3,225 farmers and 140 fishermen. These initiatives are still underway. However achievements during 2017 are summarised below.

Adaptation & Resilience

1

Implementing Partner

Yayasan Lingkungan Hidup Seloliman (YLHS)

Program Title

Conservation of Spring Sources in the Northern Block Slopes of the Dieng Mountains, Batang District, as a Climate Change Mitigation and Adaptation Effort.

Budget

Rp 1,000,000,000

Implementation period

15 months
(April 2016 – June 2017)

Site

Batang District, Central Java

Background

This adaptation program aims to fulfil fresh water needs of local communities and contribute to water resource availability for the Batang public water supply (PDAM from the Bismo spring which is affected by water catchment areas in 2 villages: Bismo and Keteleng. It is important to increase water permeation and storage through increasing the number of catchment wells and restoring land cover in the surrounding area, which will also help increase stored carbon stocks.

Goal

Ensure stable water debit from the Bismo spring and its surroundings, protect and restore the function of water catchment area in as an example of community based sustainable adaptation and mitigation.

Achievements

1. Study of the program site. In normal conditions, the public water company (PDAM) can produce around 240 l/s from the Bismo spring to supply the inhabitants of Batang District. However the debit of the Bismo Spring has declined by around 20-30%.
2. After training on catchment well site identification, 200 suitable sites were identified and have obtained permission from land owners and community groups.
3. A total of 200 catchment wells have been constructed in the Bismo water catchment area, 100 each in Bismo and Keteleng villages.
4. The growing of 2,000 trees in Keteleng and Bismo villages to help conserve local water resources under the management of community groups KSM Bismo Sejahtera and KSM Tirta Kamulian.
5. Village regulations on environmental management in Keteleng village drawn up and socialised with support from YLHS, Regional Environment Agency (BLH) and Batang District Law Department which indirectly support the good management, maintenance and use of trees and catchment wells. The village regulations (*Perdes*) have been signed by the Village Head and were socialised to the Keteleng villagers on 8th August 2016.
6. A democratically constituted community group (KSM) represents the interests of community members and village government officials.
7. A stakeholder agreement on co-operation in the protection of the Bismo spring has been signed by the Environmental Service, the Water Company (PDAM), the community group (KSM) and the Keteleng Village Head.
8. Establishment of the "Forum Komunikasi Sendang Kemuliaan", a multi- stakeholder forum for the protection of the Bismo spring, took place on 31st March 2017.

Catchment well.

Overview of the target village site.

2

Implementing Partner

Department of Agricultural Engineering and Biosystems, Faculty of Agricultural Technology, Gadjah Mada University

Program Title

Climate projection and strategy for adaptation to regional climate change in Nusa Tenggara Timur through SRI (System of Rice Intensification) rice farming with an integrated climate - crops - soil - water modelling approach.

Budget

Rp 1,000,000,000

Implementation period

24 months (April 2016 - March 2018)

Site

Nusa Tenggara Timur

Background

The importance of adaptation to climate change in Nusa Tenggara Timur (NTT) where the dry seasons are becoming longer, calls for the introduction of and applied research on adaptive rice farming methods (maximising the limited water available to produce high yields), specifically the SRI (System of Rice Intensification) method, as an input to rice production planning for NTT in the context of the Provincial Medium Term Development Plan (RPJMD).

Goals

1. Future climate projection and investigation of the relationship between agricultural productivity and global climate indices, specifically the Southern Oscillation Index (SOI) and Sea Surface Temperature (SST)
2. Development of an appropriate optimised model for implementing the System of Rice Intensification (SRI) which has the potential to produce high yields/ productivity. The optimisation model includes climate, water, fertiliser/mulch management, in line with plant growth.

Achievements

1. Finalisation of the study on the effect of global climate indices (SOI and SST) on agricultural production in NTT to support the resilience of local agriculture.
   a. Introducing the “Climate projection and strategy for adaptation to regional climate change in Nusa Tenggara Timur through SRI (System of Rice Intensification) rice farming with an integrated climate - crops - soil - water modelling approach” program to the local government and farmers, including site visits and socialisation.
   b. Selection of demplot sites in Baumata village and Tarus suburb, followed by rice seed planting at both sites using the SRI method.
   c. Installation of the telemetry equipment to help monitor climatic and crop conditions in real time, with development of a data management dashboard underway.
   d. Document on climate projection for the next 30 years drawn up, but so far without using modelling or climate scenarios.
2. Increased farm productivity (ton/ ha) with the SRI method.
   a. Secondary data on socio-economic aspects in the two target villages is being compiled. The first harvest using the SRI method gave good results.
   b. As of December 2016, harvests from the SRI demplots have been 20% higher than for conventional rice farming.
   c. Pilot implementation of SRI technology for dryland rice farming in drought vulnerable areas still underway. The first two harvests produced higher yields than conventional rice farming.
   d. Drafting of recommendations for the use of the adaptive SRI methodology as input to the Provincial Medium Term Development Plan (RPJMD) is still in progress.

A field of SRI rice ready to harvest.

Telemetry station.

Harvesting the SRI rice.

Meteorological station measuring precipitation.

SRI rice ready to harvest.

3

Implementing Partner

Yayasan Transformasi Kebijakan Publik Indonesia (YTKPI)

Transformasi
Center for Public Policy Transformation

Program Title

Organisational capacity building for local government to support the integration of climate change adaptation into Regional Development Plans.

Budget

Rp 1,000,000,000

Implementation period

14 months (April 2016 – May 2017)

Site

Gorontalo District and Gorontalo City, Gorontalo

Background

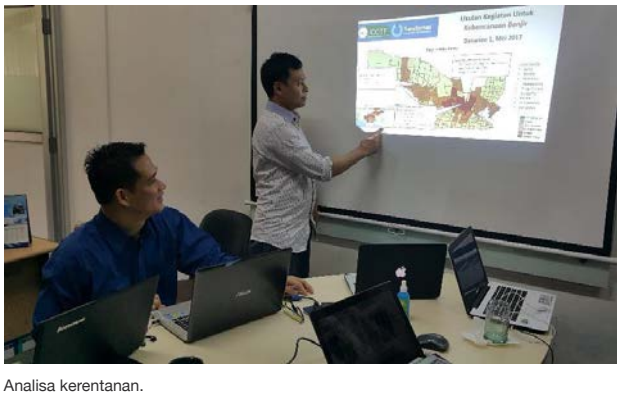
There is a need for support in the drafting of multi-sectoral development planning in the context of climate change to be included in Regional Medium Term Development Plans (RPJMD). This is especially important in Gorontalo in view of the high and increasing risk of disasters such as floods and drought. Gorontalo District is among the 50 most drought vulnerable Districts in Indonesia, with the greatest dryland extent and highest drought index in the Province, and a harvest failure rate of 50%.

Goal

To increase the capacity of the target local government in drafting short and medium term climate change adaptation strategies which are effective and efficient as well as adapted to the particular vulnerabilities of the area.

Achievements

1. Data compiled on vulnerability in Gorontalo District, the capacity of relevant government entities, and local initiatives, based on the results of analyses carried out previously.
2. Gorontalo District Climate Working Group (WG) established under a Decree issued by the District Head (SK Bupati). The process of establishing the climate change adaptation WG and producing the WG work plan in the target area was facilitated by Development Planning Agency (Bappeda Gorontalo) with stakeholder participation and supported by Bupati of Gorontalo.
3. Capacity Development Need study method developed the as an analysis tool. Vulnerability and risk data compiled through a literature/desk study and document written: Development of a Rapid Appraisal of Climate-Related Disaster (vulnerability, risk and adaptation options) for Gorontalo District, as a reference for the Regional Medium Term Development Plan (RPJMD).
4. Gorontalo District Regional Medium Term Development Plan (RPJMD) for 2016-2021 has already been approved. A Chapter on Climate Change Adaptation has been added to this document.
5. The Gorontalo District climate change adaptation development plan for 2017 was realised through a Joint Plan for 2017 comprising 24 activities in the 2017 Government Workplan (RENJA) and Budgets and Workplan (RKA). These activities will require a budget of Rp. 54 Billion provided from the Gorontalo District regional budget (APBD) for 2017 which is around Rp 500 Billion. This is proof of the strong commitment of Gorontalo District Government in addressing climate change.
6. Drafting and dissemination of a Climate Change Adaptation Strategy and a stakeholder advocacy plan.



Analisa kerentanan.

Discussion on climate change adaptation policy.

4

Implementing Partner
YAKKUM Emergency Unit (YEU)

Program Title
Promoting Climate Adaptive Community Food Security Resilience in Gunungkidul, Yogyakarta.

Budget
Rp 1,000,000,000

Implementation period
24 months (April 2016 – March 2018)

Site
Gunungkidul District, Daerah Istimewa Yogyakarta

Background
There is a need to develop rice [farming systems] that can adapt to climate change in Gunungkidul, and to repair the water catchment area because locals are finding their harvest yields falling and the lake in Purwosari Sub-District is drying up, so that the need to buy water is raising their cost of living.

Goal
To realise strong and sustainable food security resilience, from supply, distribution, and accessibility aspects, through the development of food crop farming systems resilient to climate variability and change.

Achievements
1. The Ngudi Rahayu Forest Farmers Group (KTH) facilitated by YEU in Purwosari Sub-District, Gunungkidul District won first prize in a national competition on organic arable/ livestock farming practices related to climate change adaptation.
2. Survey and analysis on food security vulnerability, as well as climate change impacts, disaster risk, and capacity [to cope] at village level disaster and climate change risk analysis maps produced for 4 villages, and the 4 villages have community-based action plans for climate-adaptive food security resilience.
3. Agreement on a conservation action plan for Telaga Makam Lake, involving 8 Neighborhood Unit (RT) from the Temon sub-village community. Conservation of the lake has already begun through the planting of suitable trees and infrastructure construction.
4. Climate-adaptive farming was initiated through the loan of land from 2 villages for trials of organic paddy field rice farming and rice seed improvement. Training was given in making organic fertiliser and organic livestock feed (silage). After training, by September 2016 there were 3 groups engaged in producing organic fertiliser, self-supported through an arisan system. An interesting aspect of this activity was that each farmer group wanted to be self-sufficient in obtaining the raw materials for the organic fertiliser: manure from livestock, *seresah* (dry leaves, twigs, etc.), and doing the work.
5. By December, rice was growing well in the organic rice-farming demonstration plots (demplots). On one demplot seed heads had already formed. Activities continued with training in the production and application of organic pesticides.
6. Monitoring of preparations for organic climate-adaptive crop planting in Purwosari; and Panggang Sub-Districts.
7. Monitoring the production of organic fertiliser and biological pesticides in 8 villages within Panggang and Purwosari Sub-Districts.
8. The study report will be comprised of 8 documents. Four of these have been submitted to ICCTF, for the 4 villages in Purwosari Sub-District. The remaining 4 for Panggang Sub-District are being compiled.
9. A letter of recommendation for replication activities was issued by the Agricultural Advisory Agency (BPP) in Panggang Sub-District for 4 villages, with a partnership MoU between YEU and the BPP.

First prize in national forestry group competition won by YEU supported group.

Harvesting organic rice.

1st Prize Trophy won by the forestry group.

5

Implementing Partner

Department of Geophysics and Meteorology, Faculty of Mathematics and Natural Sciences, Bogor Agricultural University

Program Title

Farming climate management strategy based on strengthening community resilience to climate change.

Budget

Rp 995,000,000

Implementation period

18 months
(April 2016 – October 2017)

Site

Subang, Jawa Barat

Background

Subang District is one of the major rice producing areas in West Java but also one of those most frequently experiencing floods and droughts due to climate change. Therefore Subang District needs to develop climate change adaptation options to maintain/increase farming productivity.

Goal

To develop climate-based farming decision-making tools for strategic management in the context of climate change adaptation.

Achievements

1. Regional Climate Profile and Projection Document produced for Subang, Jawa Barat, based on daily rainfall data from NASA MIROC5 and CSIRO with a resolution of 25 km2 and data on climate-related disasters and climate extremes, with climate projection data based on scenario RCP 4.5, projected rainfall and temperature maps based on climate projection data under other scenarios for the period 2025–2035, discussion of climate projection information, map of projected rainfall and temperature in Subang District with detailed maps for the 5 most vulnerable sub-districts, and information on projected climate characteristics in Subang District, with further detail for the 5 most vulnerable sub-districts.
2. Facilitating the Subang District Climate Team formation, with three meetings, and the team will soon be officially established under a Decree of the District Head (SK Bupati Subang). This team was formed to mainstream adaptation strategies in government and community policies.
3. Modelling the interrelation between local climate, physical characteristics, and agricultural production; mapping physical characteristics (land cover, topography, slope), production areas of key farming commodities, and agro-climatic zones for key farming commodities; thematic map of the interrelation between climate zones, physical characteristics, and agricultural production, as well as guidelines for the use of agro-climatic zones for agricultural development planning now and in the future.

Rice field validation.

Rice harvest.

Climate change team meeting.

6

Implementing Partner

Centre for Climate Change, Bandung Institute of Technology

Program Title

Capture fisheries adaptation to climate change along the south coast of Java Island based on risk analysis.

Budget

Rp 998,250,000

Implementation period

15 months
(April 2016 - June 2017)

Site

Sukabumi District, Jawa Barat; Pangandaran and Cilacap Districts, Jawa Tengah; Banyuwangi District, Jawa Timur

Background

Fishing Zone (WPPRI) 573 which stretches from the south coast of western Java to Nusa Tenggara is a large and productive fishing are which will be affected by climate change. Therefore there is a need for innovations in capture fisheries systems, developed with community participation, especially in the major fishing centres of Jawa Barat (Sukabumi and Pangandaran District), Jawa Tengah (Cilacap) and Jawa Timur (Banyuwangi).

Goal

To reduce the climate change related risks to the capture fisheries sector and to downstream sub-sectors in order to build climate change resilience into local community livelihoods.

Achievements

1. Draft document on climate projections and adaptation options with respect to the accessibility to fishing fleets of dynamically changing fishing grounds based on climate change risk profiles.
2. Data and information compiled through FGDs, surveys and workshops. Data and information on the scientific basics, risks and vulnerability obtained for 4 fishing port sites (PPS Cilacap, PPN Pelabuhan Ratu, PPN Banyuwangi and PPI Pangandaran).
3. Development of an integrated fisheries adaptation strategy to increase the resilience of fisheries productivity to climate change, based on the [above-mentioned] studies.
4. Study on the south coast capture fisheries sector climate change impact and risk profile.
5. Policy recommendations and regional action plans for climate change adaptation in the capture fisheries sector prepared for central and local governments.
6. Technical recommendations and implementation strategy modules on climate change resilient fishing practices produced.

Small fishermen feel the impacts of climate change.

Workshop 'Risk-Assessment-Based Adaptation to Climate Change for Capture Fisheries along the South Coast of Java.

Focus Group Discussion 'Risk-Assessment-Based Adaptation to Climate Change for Capture Fisheries along the South Coast of Java.

7

Implementing Partner

Anthropology Study Centre (PUSKA), Faculty of Social and Political Science, University of Indonesia (UI)

Program Title

Establishment of Regional Networks for a Rural Response to Climate Change with Farmers, Scientists, and Extension.

Budget

Rp 1,000,000,000

Implementation period

24 months
(April 2016 – March 2018)

Site

Indramayu, Jawa Barat;
Lombok Timur, Nusa Tenggara Barat

Background

The importance of community involvement in scientific observation and understanding of changes in the weather to increase farmer resilience and ability to adapt to climate change in Lombok Timur and Indramayu. Training-of-trainers (ToT) for modern farmers in SFSs (Science Field Shops) involving agricultural extension officers and relevant government agencies will accelerate uptake and dissemination at target sites.

Goal

Increase the knowledge and adaptation capacity of farmers in Indramayu, Lombok Timur, and some other districts in Indonesia with respect to climate change, while maintaining ecosystem resilience and food crop production.

Achievements

1. Empower agricultural extension officers (BP4K staff), independent facilitators, and Daily Weather Observation Groups (KPCH) to act as agents of social change through facilitating farmers with respect to climate change adaptation.
2. Facilitating the extension of adult education in agro-meteorology through the establishment of satellite clubs to enable the participation of an additional 120 farmers in Indramayu and Lombok Timur in SFSs (Science Field Shops).
3. Training for extension officers and farmer facilitators in Indramayu and Lombok Timur (and other districts) and on-going outreach/extension

Precipitation measuring equipment (*omplong*).

Harvesting the rice.

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activities with the officers and facilitators.
   a. Two ToTs held in Indramayu for the senior KPCH facilitators.
   b. Two ToTs held in Lombok Timur for farmer facilitators and BP4K extension officers.
4. Replication of Science Field Shops through the establishment of satellite clubs inside and outside Indramayu and Lombok Timur.
   a. New satellite club in Pranggong village, Indramayu.
   b. 8 new satellite clubs in Lombok Timur spread over 3 Sub-Districts.
   c. Facilitation of SFS (Science Field Shop) harvest evaluations.
   d. *Berugak* (Lombok traditional barn) group) meeting.
   e. Rainfall measurement.
   f. Pandanwangi farmer experiments.
   g. SFS Workshops in Indramayu and Lombok Timur.
5. Integration of SFSs in local government policy.
   a. Indramayu: workshop with Puska UI, KPCH members and Food Security and Agricultural Extension Agency (BKP3) followed by a ToT.
   b. Lombok Timur: collaboration with the BP4K through an agreement on running ToTs involving extension officers from Lombok Timur District.
6. Dissemination of SFS outputs to the wider farming community, relevant agencies/stakeholders, and the general public.
   a. Presentation of papers at 4 international conferences (2 presented in London during May 2016), 2 papers submitted to international compendiums, 3 in-country papers in Indonesian and one paper in the ASEAS Journal.
   b. One article in the magazine Farming Matters, reporting of the Lombok Timur ToT by *Corong Rakyat* (a local online media) and a local television channel.
   c. Publication on the science field shops and INSAM websites.

Omplong Standardisation.

Adaptation
& Resilience

USAID PROGRAM

batch 2

The USAID second phase funded 4 adaptation and resilience project proposals, implemented by: Volunteer Association CIS Timor, Yayasan Baileo Maluku, Yayasan FIELD (Farmer Initiatives for Ecological Livelihoods and Democracy), and Yayasan Rumah Energi.

1 Implementing Partner
CIS Timor Volunteer Association

Program Title
Food security and water resilience to promote climate resilient communities in Rote Ndao District.

Budget
Rp 1,000,000,000

Implementation period
16 months (March 2017 – June 2018)

Site
Rote Ndao District, NTT

Background
The way in which Rote Ndao communities water their crops is related to dryland limiting factors so that most people rely on rain water to water their fields. Agricultural productivity has declined and crop failures are becoming more frequent due to mistaken crop planting decision-making caused by climate change related shifts in rainy and dry season timing.

Goal
Increase the incomes of poor households through developing environmentally friendly dryland horticultural farming and improving the management and use of water resources.

Achievements
1. Facilitating the preparation and planting of horticultural crops in a 6 ha horticultural farming demonstration plot (demplot).
2. Production of documents including a study analysing climate change vulnerability and adaptation at district level, Climate Change Adaptation Action Plans for Rote Ndao District and for 3 villages, involving district/village stakeholders:
   - Program socialisation with Rote Ndao District Government (once).
   - Program socialisation with village officials and other stakeholders (once).
3. Baseline and Endline survey on the dissemination of good practices for climate change adaptation in the community, and on-going commitment of district/village governments to the program.

Climate change team discussion.

Vulnerability assessment discussions.

2

Implementing Partner
Yayasan Baileo Maluku

Program Title
Household vulnerability based food security and economic resilience to promote adaptation and resilience to climate change impacts.

Budget
Rp 1,000,000,000

Implementation period
16 months (March 2017 – June 2018)

Site
Kepulauan Aru District, Maluku

Background
The east monsoon (May-September) and west monsoon (December-February) bring storms and exceptionally high tides, with tidal waves accompanied by heavy rainfall. From 2014 to 2015 there were 2 spring high tide floods, occurring in April and December of each year reaching a height of ± 50 cm and inundating towns more than 700 metres inland from the coast. Such events disrupt livelihood activities and make it difficult for people to access basic daily needs. There is a general feeling that there has not been any serious intervention to strengthen the capacity of the community and vulnerable groups.

Goal
The residents and government of Kabofin and Tasinwaha villages have strategic plans for climate change adaptation and resilience which are formulated in village development plans and programs, which are then integrated into the District development [plan].

Achievements
1. Socialisation of the program at District level.
2. Preliminary evaluation of vulnerability in 2 Sub-Districts and 7 villages in Kepulauan Aru District to enable the preparation of a study document on capacity and vulnerability with respect to climate change, as well as baseline income/economic data on the inhabitants of each village.
3. FGD to obtain ideas and opinions regarding the plans for an adaptation strategy in order to draft strategic plans for adaptation and resilience in 3 villages.
4. Meeting for the formation of 12 aquaculture groups and group activity planning.
5. Meeting for the formation of 10 farming groups.

Participatory vulnerability assessment.

Discussion with local people.

Climate change socialisation.

3

Implementing Partner

Yayasan FIELD (Farmer Initiatives for Ecological Livelihoods and Democracy)

Program Title

Building food security and economic resilience of vulnerable groups through Sustainable in high drought risk areas of Pangkep District, Sulawesi Selatan.

Budget

Rp 1,000,000,000

Implementation period

16 months (March 2017 – June 2018)

Site

Pangkajene Kepulauan District, Sulawesi Selatan

Background

The dry seasons are becoming more severe, as seen in 2014 and 2015 where two consecutive dry years have placed 1,000 ha of farmland at risk of drying out and crop failure. This situation has been exacerbated by the poor functioning of the Tabo-Tabo Dam. As regards rice production, the Pangkep District Government stated that rice production is not reaching the targets set. If this situation is allowed to continue, rice production will continue to decline, and the food security of the Pangkep population will worsen.

Goals

1. Improve the knowledge and farming technology of vulnerable groups (small farmers and women) as a strategy for adaptation to local climate change.
2. Increase grass-roots access to government facilities and services (information on food crops/food security, farming technology, and climate).
3. Bridge the communication gap between stakeholders (farmers, government agencies, private sector, NGO) with regards to food crops/food security and climate change adaptation.

Achievements

1. Capacity-building training for farmers in climate change adaptation:
   - 2 Climate Adaptation Field Schools (FS): on organic fertiliser and pesticide production.
   - Polyculture and Brackish-water Pond (Tambak) Field Schools (FS).
2. Model plot for implementing climate change resilient horticultural production: organic farming methods.
3. Polyculture Field Schools underway in 3 villages: Kanaungan, Bara Batu, and Taraweang, Labakkang Sub-District, Pangkep District, Sulawesi Selatan, with 77 participants, and 7 meetings to date.

Field school brackish-water pond.

Field school plot.

Women farmer group members attending a field school.

4

Implementing Partner
Yayasan Rumah Energi

Program Title
Climate change adaptation through bioslurry implementation in Lombok (ASA-Lombok).

Budget
Rp 1,000,000,000

Implementation period
16 months (March 2017 – June 2018)

Site
Lombok Utara District, NTB

With a background of putatively climate change caused “anomalies” in rainfall and shifts from dry seasons to periods of drought, the farming community of Salut village faces the risk of crop failure. To address this risk, the people need to find ways to increase soil moisture content/ water retention capability and soil nutrient content to improve productivity, and the practice of intercropping to increase the variety of crops produced to anticipate the risk of rice or maize crop failure in some planting seasons.

Goals
1. Develop farming systems through the rehabilitation of soils with low organic content and low moisture content/water retention capacity using bioslurry.
2. Provide access to sustainable sources of fresh water through the affordable collection and storage of rainwater, for domestic purposes and to help farmers obtain higher yields/ make a better living from their land.
3. Build target community capacity through transfer of applied technology, farming systems, and effective communication techniques.
4. Increase the number of people using bioslurry and rainwater harvesting/storage facilities.

Achievements
Construction of 100 water tanks (volume 10-17 tons/unit) complete through building the capacity of local builders.

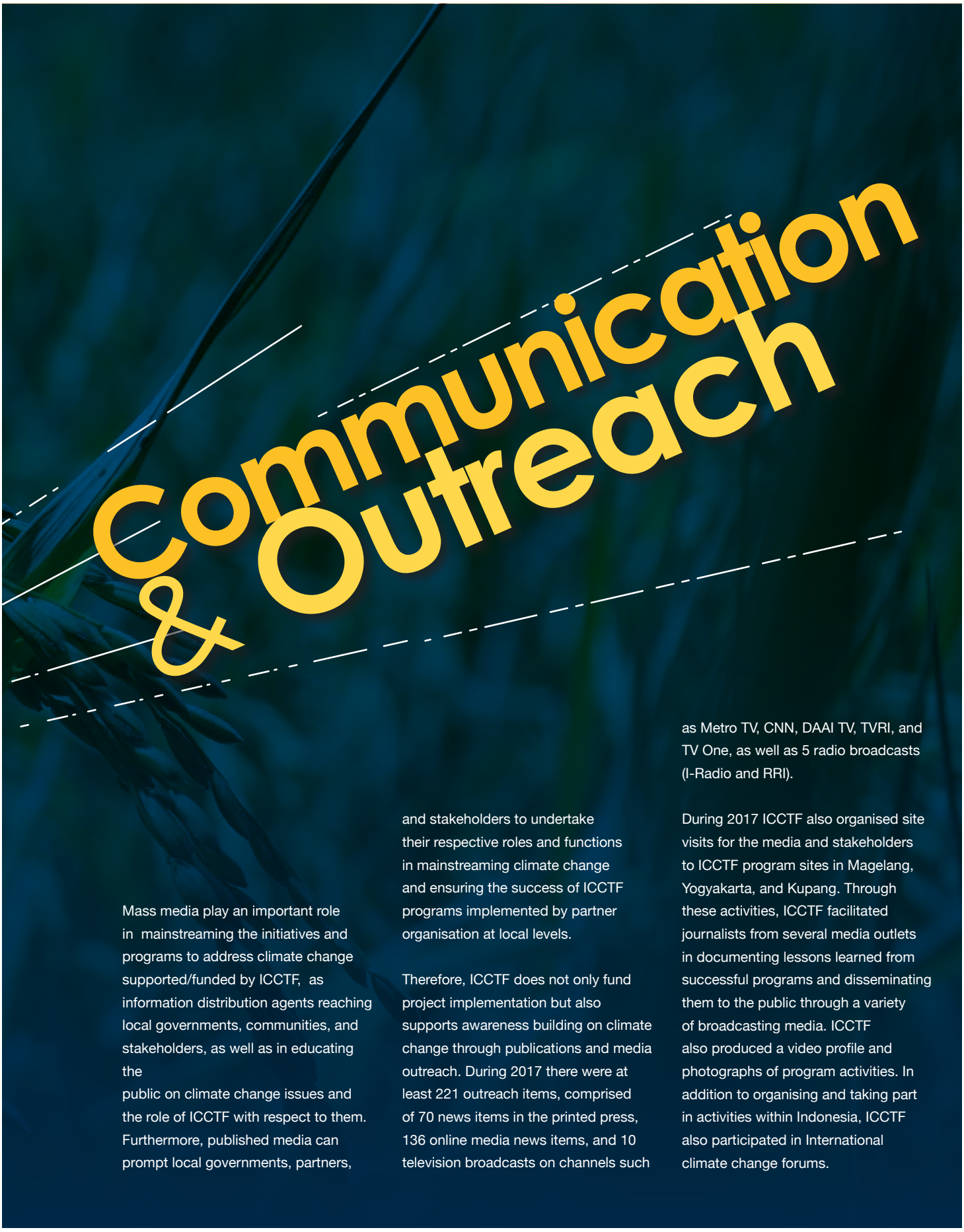
Building a water storage tank.

Testing a manual water pump.

Bioslurry storage tanks.

Mr Niko, a local farmer facilitator in Baumata village, demonstrates the use of a telemety unit to provide data for climate projection.

Climate change issues are not limited to concerns about the living environment, but also inextricably linked to national development as a whole, and thus require multi-sectoral and multi-stakeholder cooperation. Public involvement in addressing climate change issues is a key factor in all initiatives. Publishing and extending communications outreach to share lessons learned from the programs is a vital key for strengthening the positive image of ICCTF which has been formed through the promotion of quality programs for addressing climate change issues initiated and supported by ICCTF, as well as for campaigning regarding the importance of supporting government GHG emission reduction targets through implementing the Low Carbon Development Plan policies.



Communication & Outreach

Mass media play an important role in mainstreaming the initiatives and programs to address climate change supported/funded by ICCTF, as information distribution agents reaching local governments, communities, and stakeholders, as well as in educating the public on climate change issues and the role of ICCTF with respect to them. Furthermore, published media can prompt local governments, partners, and stakeholders to undertake their respective roles and functions in mainstreaming climate change and ensuring the success of ICCTF programs implemented by partner organisation at local levels.

Therefore, ICCTF does not only fund project implementation but also supports awareness building on climate change through publications and media outreach. During 2017 there were at least 221 outreach items, comprised of 70 news items in the printed press, 136 online media news items, and 10 television broadcasts on channels such as Metro TV, CNN, DAAI TV, TVRI, and TV One, as well as 5 radio broadcasts (I-Radio and RRI).

During 2017 ICCTF also organised site visits for the media and stakeholders to ICCTF program sites in Magelang, Yogyakarta, and Kupang. Through these activities, ICCTF facilitated journalists from several media outlets in documenting lessons learned from successful programs and disseminating them to the public through a variety of broadcasting media. ICCTF also produced a video profile and photographs of program activities. In addition to organising and taking part in activities within Indonesia, ICCTF also participated in International climate change forums.

1 Participation in UNFCCC COP 23

The UNFCCC COP 23 was held on 6-17 November 2017 in Bonn, Germany. The participation of delegations from the National Development Planning Agency (Bappenas) and ICCTF at UNFCCC - COP 23 was aimed at disseminating the Indonesian Low carbon Development Plan policy, and raising international support for implementing the National Action Plan on GHG Emission Reduction (RAN-GHG) and the National Action plan on Climate Change Adaptation (RAN-API) through climate change funds managed by the Indonesia Climate Change Trust Fund (ICCTF).

The United Nations Framework Convention on Climate Change – Conference of the Parties

(UNFCCC – COP) is a key agenda for nations around the world to focus on climate change. The 2017 Forum was held in Bonn, Germany on 6–17 November 2017, and reinforced the commitment of the UNFCCC member nations to seriously address climate change issues. Several of the many meetings held during the UNFCCC- COP 23 resulted in the taking of important decisions and some important conclusions with respect climate change issues. The meeting also aimed to advance the implementation of the Paris Agreement, ratified by world leaders including Indonesia.

In fact, Fiji, a small island nation at extremely high risk from sea level rise and extreme weather/storms, was nominated to hold COP 23. However, due to practical considerations, COP 23 was actually held in Bonn, Germany.

Several important decisions were reached and conclusions drawn on climate change issues during the meetings held during UNFCCC COP-23 from 6–17 November 2017, such as CMP-13, CMA- 1.2, SBI-47, SBSTA-47, and APA-1.4. First

and foremost, this global negotiation forum reached agreement on text of an advanced draft of the modalities, procedures and Operational guidelines for implementing the Paris Agreement which was included in the COP 23 decision (Dec. 1/CP.23) "Fiji Momentum for Implementation" which includes the finalised Paris Agreement Work Programme, the Talanoa Dialogue Approach with a mandate to convene a facilitative dialogue among Parties in 2018, and pre-2020 implementation and ambitions.

As a one proof of the Indonesian Government's commitment to addressing climate change, the Ministry for National Development Planning/National Development Planning Agency has developed the "Low Carbon Development Plan (LCDP)" policy instrument. This policy instrument was compiled to realise inclusive economic growth through efforts to attain equitable development and reduce poverty, while preserving the quality of the environment and availability of natural resources. Low carbon development will help Indonesia to achieve Goal 13 of the Sustainable Development Goals (SDGs) on Climate Action.

This LCDP is also in line with UNFCCC article 3.4 which stresses that climate change policy must be integrated into national development programs. In this regard, the Ministry for National Development Planning/ National Development Planning Agency has a strategic role in ensuring the mainstreaming of climate change issues in national development planning. To support the implementation of the LCDP, the Indonesian Government has established three secretariats for mainstreaming climate change in development planning and finance: the Secretariat to the National Action Plan for Greenhouse Gas Reduction (RAN- GHG), Secretariat to the National Action Plan on Climate change Adaptation (RAN-API) and the Indonesia Climate Change Trust Fund (ICCTF) Secretariat.

During 2017, the Ministry for National Development Planning/National Development Planning Agency was supported by ICCTF, RAN-GHG, and RAN-API Secretariats, as well as development partners (GIZ INFIS, DANIDA, ICRAF) who participated actively in promoting the national mission and interests through negotiation as well as outreach and campaigns, including the organisation of side events, parallel events and participation in the Indonesian Pavilion. The participation of a delegation from the Ministry for National Development Planning/National Development Planning Agency in UNFCCC COP 23 was intended to socialise the Indonesian Low Carbon Development Plan (LCDP) policy and initiatives as well as to seek international support for implementing the National Action Plans on GHG Emission Reduction (RAN-GHG) and Climate Change Adaptation (RAN-API) through climate change funds managed by the Indonesia Climate Change Trust Fund (ICCTF).

The Ministry for National Development Planning/National Development Planning Agency supported by the

Secretariats of ICCTF, RAN-GHG and RAN- API as well as development partners (GIZ and ICRAF) took the opportunity to hold an event on the theme of "Low Carbon Development Plan" at the Indonesian Pavilion on Wednesday, 15 November 2017 and a Parallel Event on the theme "Mobilizing Domestic & International Resources to Support Indonesia's Low Carbon Development Plan" in the Grand Event Room, Hotel Grand Kameha Bonn, on Thursday, 16 November 2017.

In addition the Indonesian Delegation, headed by the Minister for National Development Planning/Head of the National Development Planning Agency himself, participated actively in a variety of side events, parallel events and pavilion events organised by Ministries/National Agencies, Development partners (Bilateral/ Multilateral), the private sector, and International NGOs/CSOs. These events included several high level meetings to discuss collaboration on climate change finance as well as presentations of lessons learned from the implementation of climate change programs in the field.

The Minister for National Development Planning/Head of the National Development Planning Agency also attended and gave a speech at several strategic meetings to disseminate Low Carbon Development Plan (LCDP) implementation policy and initiatives already underway in Indonesia as well as to rally international support for implementing the national action plans (RAN- GHG and RAN-API) through ICCTF; this received positive responses from development partners, the private sector, and International NGOs/ CSOs. Many parties expressed their appreciation of and support for these policies, and will provide technical and/or financial support for the future development of these initiatives. Results from the participation of the Ministry for National Development Planning/National Development Planning Agency at UNFCCC COP 23 include valuable input on the development of climate change mitigation and adaptation in Indonesia. With respect to mitigation policies, input was obtained on the preparation of legal frameworks, potential financial resources, organisational systems, technological development, publications on addressing climate change, etc. Regarding adaptation, there were opportunities to learn about integrating adaptation into the SDG's and disaster response, mainstreaming gender, goals & indicators, the role of the private sector, empowering grass-roots action, etc. The output from the negotiating processes at UNFCCC COP 23 also included agreements regarding NDC and Paris Agreement pre-2020 implementation.

In addition to policy issues, participation in UNFCCC COP 23 also had a significant effect on the identification of sources of finance for climate change action in Indonesia. ICCTF, as the organisation mandated to manage climate change funds in Indonesia, had valuable opportunities to introduce the portfolio of successful programs implemented from 2010-2017 and to promote key program plans for the future (concept note proposals) directly to potential development partners. ICCTF also had many opportunities for networking and exploring potential collaboration with experts and International NGOs/ CSOs for developing a variety of studies, models, and programs on climate change in Indonesia, linked with economic, social and other parameters. It is hoped that the extended networking developed with development partners and private sector parties will result in financial support and collaboration/ partnerships for the implementation of programs to address climate change issues.

Potential sources of finance identified included up to 35–45 million Euro from BMUB-Germany for climate change, the natural environment and biodiversity in Indonesia, with the hope that ICCTF could be one of the recipients in Indonesia. The Japanese Government also gave a commitment to support LCDP implementation, especially regarding adaptation. The potential for private sector investment both national (KADIN) and international

(KfW, etc.) for renewable energy development in Indonesia was also noted as an option to be maximised by ICCTF in the future.

These most satisfactory outcomes from the attendance of the Ministry for National Development Planning/ National Development Planning Agency delegation at UNFCCC COP23 provide valuable capital for the future development of LCDP policies and climate change financing through ICCTF. However the opportunities created need to be maximised and followed-up through systematic and targeted actions by the Ministry for National Development Planning/ National Development Planning Agency and ICCTF in 2018, in order to realise national low carbon development targets and support targets/ commitments with respect to global. climate change.

2 International Peatlands Restoration Research Alliance Symposium

Representatives from ICCTF Board of Trustees participated in the "International Peatland Restoration Research Alliance Symposium" from 10-14 May 2017 in Brisbane, Australia. This symposium was organised by the Queensland University School of Earth and Environmental Sciences and School of Biological Sciences. During this symposium, ICCTF Board of Trustees Secretary gave a presentation and input on the formation of an international peatland restoration alliance which could collaborate with ICCTF in the future.

3 *Talkshow Inclusive Green Economic Growth 2017*

ICCTF provided financial support for "Inclusive Green Economic Growth" activities organised by Bogor Agricultural University (IPB) at the Dramaga Campus. These activities took place from 28 September to 1 October 2017 to widen the insights and knowledge of students in Economy and Farming Based Management. On 1 October 2017, an ICCTF representative attended as one of the speakers/resource persons to introduce ICCTF and its role in national and international climate change finance. This Talkshow was also attended by Endah Murniningty as an SDG expert to explain the importance of green economy in Indonesia.

4 Media visits to & Coverage of ICCTF Program Sites

ICCTF organised Media Visits and Coverage events ICCTF Program Site twice during 2017. ICCTF- SESAMI (Magelang) and ICCTF-JAVLEC (Yogya) program sites were selected for media and stakeholder visits on 7–8 August 2017, and ICCTF-FTP UGM (Kupang) program site was visited on 20–23 October 2017. At total of 16 media journalists took part in the media visit and coverage activities in Kupang, while 7 media journalists joined the first media visit in Magelang-Yogya. All participating media outlets produced outputs in the form of publication in top-ranking national media such as Kompas, The Jakarta Post, Tempo magazine, Metro TV News, CNN TV, TVRI, Mongabay, SINDOnews, Kompas.com, Republica, Bisnis Indonesia, ANTARA, Kompas TV, and Media Indonesia.

These media visit and coverage activities at ICCTF program sites are an important part of the agenda for mainstreaming ICCTF funded program initiatives and lessons learned for addressing climate change, reaching local governments, communities, development partners, and other stakeholders, as well as educating the general public on climate change issues and the role of ICCTF. Furthermore, media publications can inspire local governments, partners, and stakeholders to play key roles and functions in mainstreaming climate change and ensuring the success of ICCTF programs implemented on the ground by regional partner organisations.

5 Media Gathering ICCTF 2017 —

This activity is part of ICCTF strategy to keep up good relations with the media and ensure the media are updated on current ICCTF activities and programs. These gatherings are kept informal, with an accent on relaxed and entertaining conversation. During 2017, ICCTF organised a media gathering with Vanantara Communication, at the Ritz Carlton Hotel in Jakarta on 8 December 2017 with the theme: “Climate Change Now”: Harmonising Economic Development and Environmental Sustainability”. At this event, ICCTF took the opportunity to invite resource persons including the Director of Living Resources, National Planning Agency as Secretary of ICCTF Board of Trustees, ICCTF Executive Director, the PMU Team Leader for USAID Projects, and the UKCCU. ICCTF also took part inviting young environmentalists from Bali to share

6 Visit to the Kompas Editorial Office

One ICCTF activity to build and strengthen good relations with the media, and to introduce ICCTF organisational profile, vision and mission to mainstream national media, was a visit to the KOMPAS daily newspaper offices. During this visit, ICCTF Executive Director communicated ICCTF programs and activities to date as well as the commitment of ICCTF to addressing climate change in Indonesia. The KOMPAS editorial team said that climate change issues tend to be quite difficult to understand, so that it is important to discuss climate change phenomena in simple ways which make it easy for people to understand. Presenting information on programs which are successful and address issues close to the everyday lives of ordinary people are one easy way to present such issues to a wide and varied audience, and the media [Kompas] will help with the process of disseminating such information. Their goal is to enable the general public to readily grasp and understand climate change concepts, and take an active part in addressing the issues.

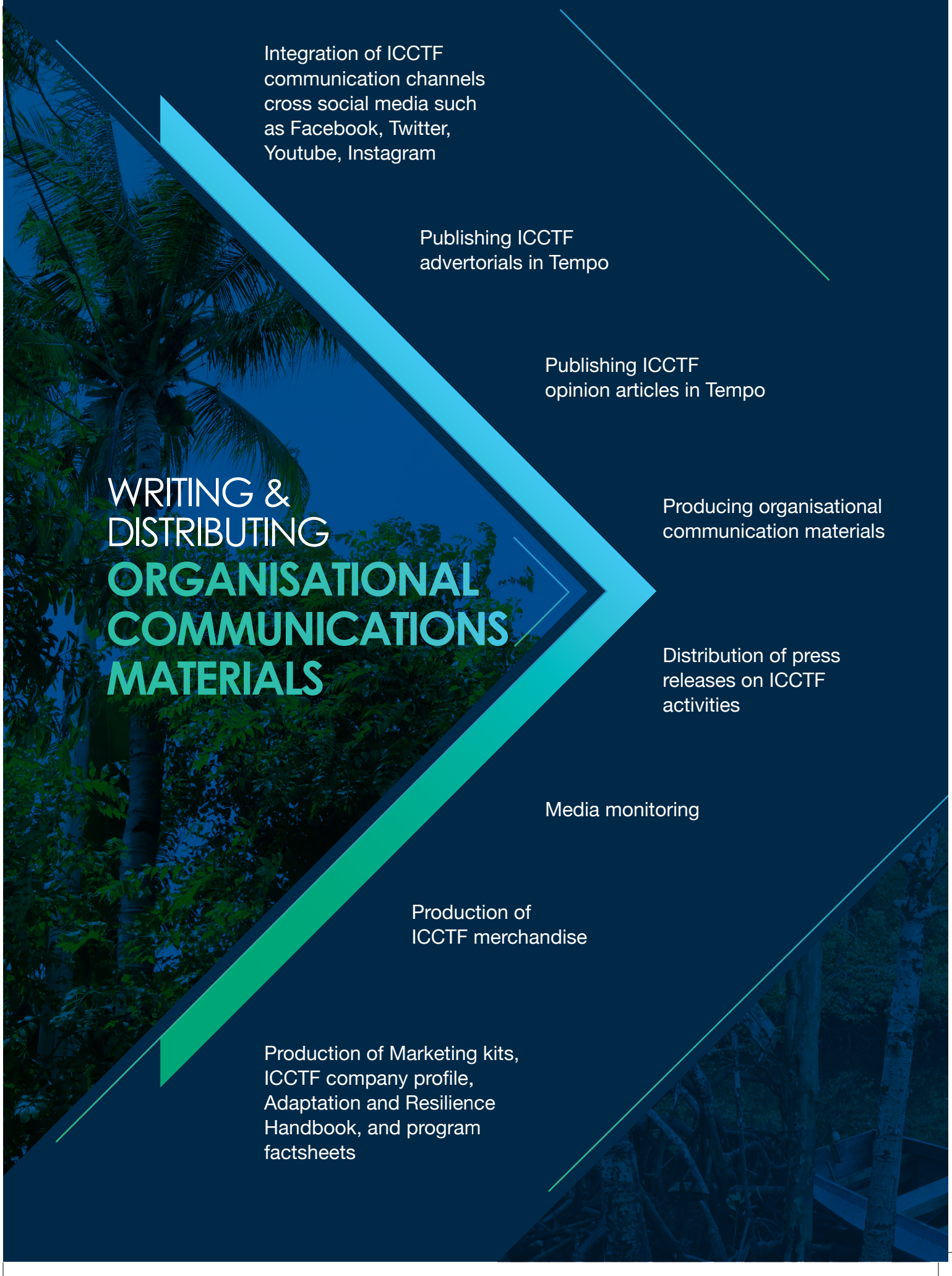
their experiences, young people's perspectives on climate change, and their contribution through actions in everyday life.

7 ICCTF Talkshow on I-Radio

Radio Talkshows are one way in which ICCTF communicates with the public to introduce the role of ICCTF in supporting the government in implementing the Low Carbon Development Plan (LCDP) as well as the contribution of ICCTF with regards to climate change in Indonesia. The two talkshows this year were on 26 September 2017 with the theme "The role of ICCTF in Climate change Action in Indonesia" and on 24 October 2017 with the theme "The role of ICCTF in supporting government policy on low carbon development". The key ICCTF resource persons introduced to the public through these talkshows were the Director for Living Resources, National Planning Agency as Secretary of ICCTF Board of Trustees and ICCTF Executive Director. In addition to talking on the subject of low carbon development policy, these speakers also talked about ICCTF programs to support climate change policies in Indonesia with a focus on three main aspects: land area based mitigation, energy, and climate adaptation and resilience.

8 Socialising ICCTF Programs to Regional Government Planning Agencies & Stakeholders

ICCTF needs to ensure the sustainability of the programs it has implemented through winning the support of local governments, Regional Planning Agencies (Bappeda), relevant local government line agencies, and all elements of civil society, so that they will continue to look after and manage programs to keep them going. In order to ensure program sustainability and promote mainstreaming of ICCTF programs in local government policy, ICCTF communication team and PMU have run activities to socialise and expose ICCTF programs to regional government planning agencies (Bappeda) and other relevant provincial level stakeholders. During 2017, ICCTF organised socialisation and exposure programs in three provinces: Kalimantan Tengah, Jawa Tengah, and Yogyakarta. Similar activities will be organised in other provinces where ICCTF interventions take place during 2018.



WRITING & DISTRIBUTING ORGANISATIONAL COMMUNICATIONS MATERIALS

Integration of ICCTF communication channels cross social media such as Facebook, Twitter, Youtube, Instagram

Publishing ICCTF advertorials in Tempo

Publishing ICCTF opinion articles in Tempo

Producing organisational communication materials

Distribution of press releases on ICCTF activities

Media monitoring

Production of ICCTF merchandise

Production of Marketing kits, ICCTF company profile, Adaptation and Resilience Handbook, and program factsheets

SUPPORT FOR ACTIVITIES IN COMMUNICATIONS & OUTREACH

Jambi *Pergub* Launch

The Indonesia Climate Change Trust Fund (ICCTF) and United Kingdom Climate Change Unit (UKCCU) promoted the initiation and drafting of an action plan for forest and peatland fire prevention and control, taking an active part in the process from drafting to the promulgation of Jambi Provincial Regulation (Perda) No. 2 of 2016 and Regulation of the Governor of Jambi (Pergub) No.31 of 2016. ICCTF and UKCCU have joined to support activities under the "Forest and Peatland Management to Reduce Emissions in Indonesia through Local Activities" initiative with a total budget of £ 3,000,000.00 and target programs at five (5) priority sites: Riau, Jambi, Sumatera Selatan, Kalimantan Tengah, and Kalimantan Barat.

Launching PEP *Online* dan Perencanaan Pembangunan Rendah Karbon oleh Sekretariat RAN-GRK dan Kementerian PPN/Bappenas

One way in which ICCTF is supporting implementation of the Low Carbon Development Plan, developed by the Ministry for National Development Planning/ National Development Planning Agency (Bappenas), is by contributing to the "Launching PEP Online and Low Carbon Development Plan" activities on 25 October 2017 at the Bappenas Headquarters. ICCTF assisted in preparing press releases and their distribution to the media, and organising a press conference on Launching the Low Carbon Development Plan Policy for Indonesia, in partnership with the Bappenas Public Relations Office and Vanantara Communication. Monitoring results showed that all resulting news items took a positive perspective.

Launch of the Joint Action Plan for Peatland Restoration

ICCTF together with the Peatland Restoration Agency invited local and national media to attend and report on an event presenting the results of a program supported by a grant from ICCTF- UKCCU in Pulang Pisau, Kalimantan Tengah, with speakers including the Head of the National Peatland Restoration Agency, the Norwegian Ambassador, a representative from the UK Embassy, a Member of the DPR Committee IV, the Director of Living Resources, National Planning Agency, and the P2KLH Program Manager from Palangka Raya University.

In addition, ICCTF shared lesson learned and experiences covering a wider scope through discussions, a workshop, and a conference. ICCTF shared experiences during a discussion on the "Stern Review on the Economics of Climate Change" in October 2017. In November 2017, ICCTF shared its experience regarding sustainable financing mechanisms during the development of the Indonesian Blue Carbon strategy. The Blue Carbon Initiative in Indonesia is coordinated by the National Development Planning Agency (Bappenas) as an instrument for mainstreaming Blue Carbon issues into medium term development plans.

ICCTF held discussions with students from the University of Indonesia during the talkshow "UI Youth Environmental Action 2017" at the UI Depok campus. Students from the University of Indonesia and student delegations from 15 other Indonesian Universities shared their experiences regarding climate change issues.

ICCTF held a workshop on renewable energy in December 2017. The Indonesian Government is committed to sourcing 23% of the nation's energy from renewable sources by 2025 and minimising the use of subsidised fossil fuel energy. GIZ Green Chillers presented the Green Cooling Program (IGCP). The NGO EnerBI shared their experience in developing solar panels in Gunungkidul DIY. EnerBi recounted how the construction was preceded by discussions with local people for at least a year. This approach can increase the sense of ownership and thus [positively] affect maintenance efforts. GIZ GE LAMA presented on POME (palm oil mill effluent) Biogas. PT PGI presented a Biomass project. PT PGI worked with the Mendol Island community in Kepulauan Riau to develop a biomass energy grid providing 900 kW. IDEAS Consultants shared their experiences with wood pellets. The Kadin (Chamber of Commerce) talked about solar panel projects. Overall, this renewable energy workshop showed that renewable energy is the future of the Indonesian energy sector, but still needs strong support from government policy.

Organisational Performance

Administration and Human Resources (HR)

As the sole Climate Change Trust Fund in Indonesia, ICCTF is a vital instrument for the Indonesian Government in achieving climate change mitigation and adaptation targets set in national and regional action plans (RAN/RAD-GHG and RAN API). It is therefore important for ICCTF to continuously endeavour to improve its organisational structure in order to face growing challenges and opportunities through a system for strong and targeted management of human resources (HR). A strong HR management system will ensure that the process involved from planning through implementation, monitoring and evaluation will run properly and sustainably. One initiative undertaken by ICCTF has been a study on workload analysis. Workload analysis can be used as an objective way to detect, monitor, evaluate and discover employee needs, unit/position effectiveness and efficiency, and work accomplishments of positions/units. It is hoped that benefits from implementing the results of the workload analysis will enable the organisation to obtain higher levels of efficiency from employees, which in turn should increase the productivity of the organisation/company.

In addition, ICCTF has paid particular attention to human resources (HR) capacity building. Staff capacity building activities during 2017 included:

1. **IPSAS Training for ICCTF Financial Staff**
   As a result, ICCTF 8 financial staff obtained certificates in online IPSAS studies with high pass grades.
2. **Training in Specific Fields of Expertise**
   ICCTF offer the opportunity for each member of staff to submit a proposal for attending training in their respective fields of expertise, in order to further their personal skill development. One staff member from ICCTF Procurement Department attended training on the procurement of goods and services and obtained a certificate in procurement.
3. **Staff Capacity Building**
   ICCTF runs staff capacity building events twice a year with different themes each year. The aim of this Capacity Building program is to increase problem-solving skills and the ability to make decisions swiftly and appropriately, based on the ability to recognise the root/core of a problem, as well as increasing capacity to provide appropriate leadership and empowerment in different situations. During 2017, ICCTF held two Capacity Building events, in Sumatera Barat and Jawa Timur.

In addition, to provide a more conducive working environment for the ICCTF work force, routine maintenance of infrastructure and facilities includes computer maintenance, periodic servicing of the email server, and general office maintenance.

Management Information System

TDuring 2017 ICCTF implemented the Enterprise Resources Planning (ERP), based on the Oracle Database. ERP is an integrated and multi module program applications package developed to serve and support the various functions carried out within ICCTF, to improve work efficiency and provide more accurate reports and information to all stakeholders.

The ERP System used by ICCTF secretariat integrates 3 modules:

1. **Oracle Financials** (General Ledger, Accounts Receivable, Accounts Payable, Fixed Assets and Cash Management)
2. **Oracle Purchasing** (Supplier Management, Purchasing)
3. **Oracle Grant Accounting** (Project Planning)

Through integrating the three modules above, the data on financial administration, human resources, assets, and the activities of ICCTF in managing grants to 42 Partner Organisations, are all integrated into the ERP ICCTF system to be consolidated, so that the levels of data integration and accuracy are improved.

Future Plans

In line with guidelines from the Minister for National Development Planning/National Development Planning Agency Menteri PPN/ Bappenas, ICCTF anticipates playing an increasingly active role in financing renewable energy. This sector is especially important for the remoter small island groups. Initial discussions on a number of such schemes took place during meetings at COP 23 in Bonn, Germany.

In view of the global importance of Indonesia when it comes to climate change finance, ICCTF should set it's sights on a number of key opportunities. The marine sector should be a major asset for ICCTF in terms of future climate change funding in Indonesia. Blue carbon ecosystems have a high capacity for carbon storage and sequestration. Indonesia has the most extensive mangrove forests and seagrass meadows in the world. ICCTF is in a strong position as a blue carbon pioneer.

Some of ICCTF's main activities in 2018 are as follows:

ICCTF Milestone in 2018

Quarter 1 (Jan-Mar)

- Closure of USAID Batch I Projects
- Management of additional funds from DANIDA & UKCCU
- Emissions and Carbon Calculations
- ICCTF Bylaw Amendment
- ICCTF SOP Arrangement
- ICCTF Social Media Optimization

Quarter 2 (Apr-Jun)

- Closure of UKCCU Projects (11 Implementing Partner)
- Call for Institutions for new USAID & UKCCU Projects
- Validation of Emissions and Carbon Calculations
- USAID & UKCCU Media Visits
- ICCTF Days

Quarter 3 (Jul-Sep)

- Closure of USAID Batch 2 Projects
- Development of new fundraising proposals (GCF, GEF, NAMA Facility)
- Progress on New ICCTF (Institutional Arrangements)

Quarter 4 (Oct-Dec)

- UNFCCC COP-24
- Indonesia Low Carbon Development Initiative Conference in Bali
- Annual Report 2018
- Annual Work Plan 2019
- New ICCTF funding (COREMAP, IBC-METRO, etc.)

APPENDICES

APPENDIX

Compilation of Publications

PUBLICATIONS IN MASS MEDIA ON ICCTF 2017 PROGRAM

During 2017, there were significant advances made through the implementation of programs supported by grants from ICCTF-UKCCU under the framework program “Forest and Peatland Management to Reduce Emissions in Indonesia through Local” Activities in five priority provinces. Some results from this work on the ground were published in the local and national mass media, highlighting the results and advances of each featured program.

Similarly, ICCTF publications financed by USAID show a significant increase in publications during 2017. The PR approaches used with respect to media publications are considered more effective in reaching target audiences than placing advertisements in mass media. Public awareness raising through media publications is a communications channel which is closer to the daily lives of ordinary people, using simple language which is readily understood.

Below is a list of the publications about ICCTF during 2017 of which ICCTF managed to obtain clippings:

No.	Media	Publication Type	Original Title	Date Published	Key Person(s)	Writers
1.	Antara	Online news portal	*Dubes Inggris dijadwalkan* Launching *Perda Karhutla Jambi*	12 March 2017	Ida Suryani, UK Embassy	
2.	Antara	Online news portal	*Moazzam: Pemerintah Inggris dukung Perda dan Pergub Karhutla*	13 March 2017	H.E Moazzam Malik, UK Ambassador to Indonesia	
3.	Tribunnews Jambi	Online and printed news portal	*Dubes Inggris untuk Indonesia:* Congratulate *Jambi*	13 March 2017	H.E Moazzam Malik, UK Ambassador to Indonesia	
4.	Suara Indonesia	Online news portal	*Dubes Inggris untuk Indonesia Moazzam Malik, Dukung Pergub Jambi*	13 March 2017	• Zumi Zola, Governor of Jambi • H.E Moazzam Malik, UK Ambassador to Indonesia	
5.	Jambi Ekspres	Online news portal	*Dubes Inggris Sambangi Jambi Hari Ini, Ada Apa ya?*	13 March 2017	• H.E Moazzam Malik, UK Ambassador to Indonesia • Amirzan, Head of Jambi Province Public Relations Sub-Department	
6.	Kabarserasan .com	Online news portal	*Terbitkan Pergub Tentang Karhutla, Zola Dapat Dukungan Dubes Inggris*	13 March 2017	• H.E Moazzam Malik, UK Ambassador to Indonesia • Zumi Zola, Governor of Jambi • Colonel Refrizal, Leader Jambi forest/ peatland fire-fighting team	
7.	Kompas	Newspaper	*"*Bioslurry*" Efektif untuk Penyubur Tanaman.*	8 Agustus 2017	• Ines Septi Arsiningtyas, Sesami Program Officer • Purwanti, chile pepper farmer from Keningar • Tonny Wagey, ICCTF Executive Director	
8.	Kompas	Newspaper	*Pelestarian Alam Harus Sekaligus Menyejahterakan*	9 August 2017	• Panji Anom, Javlec Program Manager • Darmiyanto, Head of Ngudimakmur Farming and Forestry Group • Drajat Eko Saputro, Head of Putat Village Welfare Section	
9.	Kompas .com	Online	*Meningkatan Stok Karbon Tak Hanya Lewat Penanaman Hutan Saja*	9 August 2017	• Panji Anom, Javlec Program Manager • Darmiyanto, Head of Ngudimakmur Farming and Forestry Group • Drajat Eko Saputro, Head of Putat Village Welfare Section	
10.	Kompas .com	Online	*Pakai "*Bioslurry*", Panen Cabai Petani Ini Melimpah*	8 August 2017	• Sukijo, Head of the *Keningar Hijau* farmer's group • Ines Septi Arsiningtyas, Sesami Program Officer • Medrilzam, Director for Environment Affairs, Ministry for National Development Planning/National Development Planning Agency (Bappenas)	
11.	Sindonews .com	Online	*Menghijaukan Lahan Bekas Tambang Lereng Merapi*	13 August 2017		
12.	Sindo	Newspaper	*Menghijaukan Lahan Bekas Tambang Lereng Merapi*	13 August 2017		

No.	Media	Publication Type	Original Title	Date Published	Key Person(s)	Writers
13.	Tempo	Newspaper	*Bertanam Sengon di Gunung Pasir*	15 August 2017	• Ines Septi Arsiningtyas, Sesami Program Officer • Sarpono, Keningar villager • Sukijo, Head of the *Keningar Hijau* farmer's group	Ahmad Rafiq
14.	Republika	Newspaper	*Energi Terbarukan dari Kotoran Sapi*	28 August 2017	• Director of Yayasan Sedya Samahita Memetri Indonesia • Tonny Wagey, ICCTF Executive Director • Medrilzam, Director for Environment Affairs, Ministry for National Development Planning/National Development Planning Agency (Bappenas)	RR Laeny Sulistyawati
15.	Kompas	Newspaper	"Bioslurry", *Si Pupuk "Ajaib"*	4 September 2017	• Purwanto, Keningar villager • Gambir, Sesami Conservation Program Officer • Medrilzam, Director for Environment Affairs, Ministry for National Development Planning/National Development Planning Agency (Bappenas)	Larasati Ariandne Anwar
16.	Mongabay .com	Online	*Memulihkan Lahan-lahan Bekas Tambang Pasir di Desa Sekitar Merapi*	10 September 2017	• Ines Septi Arsiningtyas, Sesami Program Office • Purwanto, warga Keningar • Sukijo, Head of the *Keningar Hijau* farmer's group • Agus Widodo, Head of R&D Sub-Section 17: Sociocultural, Magelang Development Planning Agency (Bappeda)	Nuswantoro
17.	Mongabay .com	Online	*Menabung Karbon, Merawat Hutan ala Petani Gunungkidul*	14 September 2017	• Darmiyanto, Dempul villager • Panji Anom, Javlec Program Manager • Drajat Eko Saputro, Head of Putat Village Welfare Section	Nuswantoro
18.	Republika	Online	*Budidaya Sistem SRI Tingkatkan Produksi Padi di Kupang*	21 October 2017	• Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project • Yohanes Tayruba, Head of the NTT Agricultural Service	Christiyaningsih
19.	Republika	Online	*Gubernur NTT: Budidaya Padi SRI Layak Direplikasi*	21 October 2017	• Frans Lebu Raya, Governor of NTT • Yanes Sain, member of Tarus village farmer's group • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM	Christiyaningsih
20.	Netral News	Online	*Teknik Penanaman Padi dengan SRI, Hasilnya Mencengangkan*	21 October 2017	• Yanes Sain, member of Tarus village farmer's group • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	Lince Eppang (quoted from Antara)
21.	Cendana News	Online	*Pola Tanam Padi "SRI" Cocok Diterapkan di Kupang*	21 October 2017	• Yanes Sain, member of Tarus village farmer's group • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	Koko Triarko (quoted from Antara)

No.	Media	Publication Type	Original Title	Date Published	Key Person(s)	Writers
22.	Teras News	Online	*Padi SRI Tingkatkan Hasil Panen Hingga 100 Persen*	21 October 2017	• Yanes Sain, member of Tarus village farmer's group • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	Teras News
23.	Sindo News	Online	*Panen Raya Padi SRI di Kupang Tengah*	21 October 2017	• Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project • Franky Jan Saelan SE MP, Rector of Artha Wacana Christian University, Kupang • Benjamin Naha, Section Head for Irrigation Canal Maintenance, NTT Province Public Works Service • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Ir. Rohmat Supriadi, Head of Biro Renortala, Bappenas • Frans Lebu Raya, Governor of NTT • Tonny Wagey, ICCTF Executive Director • Yohanes Tayruba, Head of the NTT Agricultural Service	Ali Masduki
24.	Media Indonesia	Online	*SRI Tingkatkan Produksi Padi Sampai 100%*	21 October 2017	• Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	Palce Amalo
25.	Kaskus .co.id	Online	*SRI Tingkatkan Produksi Padi Sampai 100%*	21 October 2017	• Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	OL-4 (quoted from Media Indonesia)
26.	Kompas .com	Online	*Kekurangan Air Bukan Hambatan Hambatan Bertani di NTT, Ini Rahasianya*	22 October 2017	• Yanes Sain, member of Tarus village farmer's group • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project • Ir. Rohmat Supriadi, Head of Biro Renortala, Bappenas	Lutfy Marizal Putra
27.	Sindo News	Online	*Tingkatkan Produktivitas Padi dengan Metode SRI*	22 October 2017	Nikodemus Nainiti, SRI rice-farming lead field officer, Arta Wacana Christian University (UKAW), Kupang	Ali Masduki
28.	Republika	Printed media	*Gubernur NTT: Budi Daya Padi SRI Layak Direplikasi*	22 October 2017	• Frans Lebu Raya, Governor of NTT • Yanes Sain, member of Tarus village farmer's group • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM	Christiyaningsih

No.	Media	Publication Type	Original Title	Date Published	Key Person(s)	Writers
29.	Kompas.id	Online	*Hasil Panen Meningkat Tanpa Perlu Banyak Air*	22 October 2017	• Frans Lebu Raya, Governor of NTT • Tonny Wagey, ICCTF Executive Director	Brigitta Isworo
30.	Bisnis Indonesia	Online	*Hadapi Perubahan Iklim, Sistem* Monitoring *Pertanian Padi Diuji Coba*	22 October 2017	Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project	Juli Etha Ramaida Manalu
31.	Antaranews	Online	*Iklim NTT Cocok Kembangkan Padi SRI*	22 October 2017	• Dr Ir Leta Rafael Levis, Expert in Agriculture, Nusa Cendana University (Undana), Kupang • Frans Lebu Raya, Governor of NTT • Tonny Wagey, ICCTF Executive Director • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM	Hironimus Bifel
32.	The Jakarta Post	Online	Harvest Day	23 October 2017	• Frans Lebu Raya, Governor of NTT • Tonny Wagey, ICCTF Executive Director • Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project	Djemi Amnifu
33.	The Jakarta Post	Printed media	Harvest Day	23 October 2017	• Frans Lebu Raya, Governor of NTT • Tonny Wagey, ICCTF Executive Director • Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project	Djemi Amnifu
34.	Tempo.co	Online	*ICCTF dan UGM Kembangkan Bibit Padi SRI di Kupang*	23 October 2017	• Ir. Rohmat Supriadi, Head of Biro Renortala, Bappenas • Tonny Wagey, ICCTF Executive Director • Frans Lebu Raya, Governor of NTT	Yohanes Seo
35.	Lintas NTT	Online	*Metode SRI Tingkatkan Produksi Padi Sampai 100%*	23 October 2017	• Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	Canra Liza (quoted from Media Indonesia, Palce Amalo)
36.	Kompas	Printed media	*UGM Kembangkan Sistem Telemetri untuk Pertanian*	23 October 2017	Chusnul Arif, Scientist from IPB	Brigitta Isworo
37.	Kompas .com	Online	*Bisakah SRI Menggantikan Cara Bertani Orang Indonesia?*	24 October 2017	• Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project • Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM	Lutfy Marizal Putra
38.	Koran Sindo	Printed media	*Panen Raya Padi SRI*	24 October 2017	Bayu Dwi Apri Nugroho, Program Manager, SRI ICCTF-FTP UGM Project	Ali Masduki
39.	Bisnis Indonesia	Printed media	*Inovasi dari Timur*	24 October 2017	• Frans Lebu Raya, Governor of NTT • Yanes Sain, member of Tarus village farmer's group • Chusnul Arif, Scientist from IPB	Juli Etha Ramaida Manalu
40.	Realita.co	Online	*Gubernur NTT Minta Petani NTT Tingkatkan Metode SRI*	24 October 2017	• Frans Lebu Raya, Governor of NTT • Tonny Wagey, ICCTF Executive Director	(.bud)

No.	Media	Publication Type	Original Title	Date Published	Key Person(s)	Writers
41.	Mongabay .co.id	Online	*Adaptif Perubahan Iklim, Padi SRI Diperkenalkan Untuk Wilayah Bercurah Hujan Rendah*	24 October 2017	• Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director • Dr. Polce Nainiti, Lecturer at Arta Wacana Christian University	Ebed De Rosary
42.	Bisnis Indonesia	Online	*Teknologi dan Bendungan Bantu Kupang Hadapi Perubahan Iklim*	25 October 2017	• Nikodemus Nainiti, SRI rice-farming lead field officer, Arta Wacana Christian University (UKAW), Kupang • Chusnul Arif, Scientist from IPB • Frans Lebu Raya, Governor of NTT	Juli Etha Ramaida Manalu
43.	Cendana News	Online	*Tanam Padi SRI Cocok di NTT*	25 October 2017	• Frans Lebu Raya, Governor of NTT • Yohanes Tay Ruba, Head of the NTT Agricultural Service	Ebed De Rosary
44.	Cendana News	Online	*Tiga dari Target Tujuh Bendungan Sudah Dibangun di NTT*	25 October 2017	• Frans Lebu Raya, Governor of NTT • Yonas Tanui, Kupang resident	Ebed de Rosary
45.	Trubus.id	Online	*Tekan Peredaran Emisi, Kementerian PPN/Bappenas Ciptakan Aplikasi Pemantau*	25 October 2017	Bambang Brodjonegoro, Bappenas Minister	Agung
46.	Sindo News	Online	*Bappenas Luncurkan Aplikasi PEP Online*	25 October 2017	Bambang Brodjonegoro, Bappenas Minister	Ali Masduki
47.	Bisnis .tempo.co	Online	*Bappenas Targetkan Emisi Karbon Turun 26 Persen, Ini Caranya*	25 October 2017	• Bambang Brodjonegoro, Bappenas Minister • Tjatur Sapto Edy, Member of Commission VII, DPR	Imam Hamdi
48.	Beritasatu .com	Online	*Pertumbuhan Ekonomi Harus Disertai Peningkatan Kualitas Lingkungan*	25 October 2017	Bambang Brodjonegoro, Bappenas Minister	Ant/gor
49.	Katadata .co.id	Online	*Perpres Soal Perencanaan Pembangunan Rendah Karbon Akan Diterbitkan*	25 October 2017	Bambang Brodjonegoro, Bappenas Minister	Arief Kamaludin
50.	Kontan .co.id	Online	*Pengusaha Tak Perlu Panik Soal Aturan Karbon*	25 October 2017	Bambang Brodjonegoro, Bappenas Minister	Siti Rohmatullah
51.	Bisnis .tempo.co	Online	*Bappenas Luncurkan Aplikasi Pemantau Rendah Karbon Online*	25 October 2017	Bambang Brodjonegoro, Bappenas Minister	Imam Hamdi
52.	Koran Jakarta .com	Online	*Pertumbuhan Harus Sejalan Peningkatan Kualitas Lingkungan*	26 October 2017	Bambang Brodjonegoro, Bappenas Minister	Muhammad Adimaja
53.	Koran Tempo	Printed media	*Pemerintah Atur Program Rendah Karbon*	26 October 2017	• Bambang Brodjonegoro, Bappenas Minister • Tjatur Sapto Edy, Member of Commission VII, DPR	Retno Sulistyowati
54.	Media Indonesia	Printed media	*Pembangunan Rendah Karbon Harus Jadi Arus Utama*	26 October 2017	• Bambang Brodjonegoro, Bappenas Minister • Tjatur Sapto Edy, Member of Commission VII, DPR	Ths

No.	Media	Publication Type	Original Title	Date Published	Key Person(s)	Writers
55.	Kontan	Printed media	*Aturan Pembangunan Rendah Karbon Akan Diperkuat*	26 October 2017	Bambang Brodjonegoro, Bappenas Minister	Siti Rohmatullah
56.	Koran Sindo	Printed media	PEP Online	26 October 2017	Bambang Brodjonegoro, Bappenas Minister	Ali Masduki (Photo News)
57.	Metro TV	TV	*Hasil Panen Padi di Kupang Meningkat 100 Persen dengan Metode SRI*	26 October 2017	• Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	Resdhi Wibawa
58.	Media Indonesia	Printed media	*Metode SRI Tingkatkan Produksi Padi Sampai 100%*	27 October 2017	• Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director	Palce Amalo
59.	The Jakarta Post	Printed media	SRI Rice Cultivation Yield Significant Results in NTT	27 October 2017	• Murtiningrum, Secretary of the Departement of Acrigultural Engineering and Biosystems, Faculty of Acrigultural Technology, UGM • Tonny Wagey, ICCTF Executive Director • Ir. Rohmat Supriadi, Head of Biro Renortala, Bappenas • Frans Lebu Raya, Governor of NTT • Yanes Sain, Member of Tarus village farmer's group	Djemi Amnifu
60.	Kompas	Printed media	*Proyek Perubahan Iklim Dongkrak Ekonomi Warga*	9 December 2017	Efforts to mitigate climate change often provide dual benefits, not only reducing GHG emissions but also boosting the economic productivity of local communities.	Elsa
61.	www.suronews.com	Online	*ICCTF, Kurangi Efek Gas Rumah Kaca Untuk Perubahan Iklim Lebih Baik*	9 December 2017	ICCTF is an organisation established by the Government as a tangible measure to mitigate climate change in Indonesia and worldwide.	
62.	Media Indonesia	Printed media	*Pembangunan Rendah Karbon Diutamakan*	11 December 2017	One way in which the Indonesian Government is showing its commitment to addressing climate change is through the Low Carbon Development Plan (PPRK).	Denny

NEWS SUMMARY

MEDIA PUBLICATIONS ON ICCTF PROGRAMS

AUGUST-DECEMBER 2017

"Bioslurry" Effective for Crop Fertilisation

Using bioslurry as a fertiliser is more effective than using chemical fertilisers. The urine from local cattle is used to make this fertiliser in Keningar, Sumber, and Ngargomulyo villages, Dukun Sub-District, Magelang, Jawa Tengah. Bioslurry provides more nutrition than ordinary manure, because it contains a lot of urea and nitrogen. Being liquid, it is easily absorbed by crops. Purwanti, a chile pepper farmer from Keningar village, says that she saw drastic changes in plants fertilised with bioslurry. Her chile pepper plants are lush, fruitful, and productive; furthermore, with bioslurry fertiliser, she no longer needs to spend so much as a farthing on purchasing fertiliser. The bioslurry program was one of the winning proposals in the competition held by the Indonesia Climate Change Trust Fund (ICCTF) under the National Development Planning Agency. ICCTF Executive Director Tonny Wagey said that programs submitted [to ICCTF] had to be in line with the Government missions with respect to the National Action Plans on greenhouse gases and climate change.

Source: Kompas, page 16

Protecting Nature Must Improve Welfare

It is important to employ community forest use rights and national forests for community welfare. With such a goal, conserving the environment and disaster mitigation can promote economic empowerment. Javlec Program Manager, Panji Anom, explained that without financial benefits from exploitation, protecting the forests becomes a heavy burden. This raises the risk of timber theft. Javlec is one of the NGOs awarded grants by the Indonesia Climate Change Trust Fund under Bappenas (the National Development Planning Agency). This NGO is facilitating 20 villages in Gunungkidul. They are raising the capacity of locals to take care of national and community forests covering 700 ha. This capacity building consists of training in forest management, selective logging practices, polyculture, and village-based tourism.

Source: Kompas, page 16

Increasing Carbon Stocks is not Limited to planting Forests

Mitigation carbon emissions because of climate change caused by greenhouse gases is not just about planting trees. There needs to be synergy between the planning of forest management, village level spatial planning, and improving community welfare. Out of the 20 villages in the nine Sub-Districts in Gunungkidul, above-ground carbon stocks are only 31.04 tons per hectare, in the poor (low) category. Standards on ideal carbon stocks established by the Ministry/Agency for National Development Planning (Bappenas) are in the 35-100 ton per ha range. To increase carbon stocks, Javlec distributed 26,690 timber tree seedlings, 39,810 fruit tree seedlings, and 900 protecting tree seedlings to local communities. Javlec is one of the Partner Organisations selected to receive fund managed by the Indonesia Climate Change Trust Fund (ICCTF) in 2016. The grant funds came from the United States Agency for International Development.

Source: Kompas.com
http://sains.kompas.com/read/2017/08/09/150600323/meningkatan-stok-karbon-tak-hanya-lewat-penanaman-hutan-saja

With "Bioslurry", Farmer gets bumper Chile pepper crop

Sukijo (46 years old), a farmer in Banaran sub-village, Keningar village, Dukun Sub-District, Magelang District, Jawa Tengah, has every right to be pleased with himself. In three days time, he will once again harvest the chile peppers growing in his1,200 metre plot. Each time he harvests the chiles, he can pick around 35-40 kg every three days from 2,000 plants. The chile plant cycles changed after Sukijo stopped using chemical fertilisers. Using organic fertiliser, his plants stay alive and productive for around one year, while using chemical fertiliser they only lived for five months. The organic fertiliser he uses if the end product of livestock manure used to make biogas and is called bioslurry. To produce it, the farmers have been assisted by the NGO Perkumpulan Sesami, under a project funded by the Indonesia Climate Change Trust Fund (ICCTF) since 2016.

Source: Kompas.com
http://sains.kompas.com/read/2017/08/08/160300823/pakai-bioslurry-panen-cabai-petani-ini-melimpah

Greening Abandoned Mines on the Slopes of Merapi

There are many abandoned sand mines on the lands around the Merapi volcano, one of the being the Sumup mine in Dukun Sub-District, Magelang Jawa Tengah. Once the sand mining stopped, this site became critically degraded land which was derelict, bare, and difficult to farm because of low soil fertility. However the local people didn't give up in their struggle to find ways to regreen this critically degraded land. Eventually, through a combination of farming technologies such as the use of organic fertiliser, these wastelands were transformed to become fertile farmlands once more. The Ngudi Makmur Forest Farmer's Group made an inventory of the national forests managed by local communities in Panggang Sub-District, Gunungkidul District, Daerah Istimewa Yogyakarta, on Tuesday (08/8/2017). The Indonesia Climate Change Trust Fund (ICCTF) in partnership with the NGO Javlec facilitated village level spatial panning for villages slated to take part in climate change mitigation. One component is the facilitation of community-based management of national forests to increase their carrying capacity, in order to accelerate the accumulation of carbon stocks in forest areas.

Source:

1. *Sindonews.com: https://photo.sindonews.com/view/23827/pemberdayaan-kelompok-tani-hutan-untuk-mitigasi-berbasis-lahan*
2. *Koran Seputar Indonesia, page 10*

Planting Sengon (*Albizia chinensis*) on Sand Dunes

Conditions in Keningar village, once surrounded by derelict sand mines, have begun to change over the past year. The NGO Yayasan Samahita Memetri Indonesia (Sesami) began to show local people how to implement conservation activities on these ex-mining lands through planting sengon (Albizia chinensis). This tree was chose for its relatively fast growth. However growing sengon on sandy soils is not so easy and the seedlings require special treatment to enable them to grow properly. Through activities designed to empower local communities, Sesami brought simple technologies to the locals who joined a group called Kelompok Keningar Hijau. The group members worked on a voluntary basis to install a biodigester system to speed up the decomposition of organic materials.

Source: Koran Tempo, page 20

Ilmu&Teknologi 20

BERTANAM SENGON DI GUNUNG PASIR

Ampas biogas dipakai untuk menyuburkan sengon di lahan kering di lereng Merapi.

Renewable Energy from Cattle Manure

For the people living in three villages in Magelang, Jawa Tengah, getting gas to use for everyday needs is no longer a worry. Their living expenses have been greatly reduced since the start of the renewable energy use program initiated by Yayasan Sesami with the support of the Indonesia Climate Change Trust Fund (ICCTF) under which they are converting livestock waste (manure) into biogas. Yulius Krisdiyanto, Director of Sesami, said that this former sand mining area on the slopes of the Merapi volcano had been exploited from 2005 to 2013. The sorry condition of the lands inspired Sesami to initiate this program. Agus Widodo, Head of the Magelang District Development Planning Agency Sub-Department for Social Empowerment Research and Development, expressed his thanks to ICCTF for the support given which was in line with the vision and mission of Magelang District for conservation of the environment.

Liquid fertiliser from Biogas. Yayasan Sesami, supported by the Indonesia Climate Change Trust Fund (ICCTF), successfully used the biogas production waste to make liquid fertiliser or bioslurry. Kamis, a Ngargomulyo villager, agreed that the bioslurry made his crops more fertile and increased yields. He could now make a profit of Rp. 10,000-20,000/kg. Sukijo, Head of the Kelompok Keningar Hijau, said that motivators like Sesami were badly needed. Sesami taught the group members nursery techniques for seedling production, compost making, bioslurry use, and even how to make the biodigester. He hoped that the program would continue through partnership with the village government, including the allocation of village funds.

Source : Republika, page 17

"Bioslurry", the "Miracle" Fertiliser. Bioslurry Project launched just a few months ago

Keningar, Source and Ngargomulyo, three villages in Dukun Sub-District, now have 10 biodigesters between them. The main function of the biodigesters is to produce gas from the bioslurry. The bioslurry itself is made from livestock waste (manure) mixed with urine and water as well as molasses and some other ingredients, and can also be used to make liquid fertiliser. Medrilzam, Director Living Resources at the National Development Planning Agency, says that there should be more research on bioslurry use by local government line agencies for agriculture and universities. If the results were confirmed, in the future bioslurry use could be extended to other areas.

TEKNOLOGI PERTANIAN

"Bioslurry", Si Pupuk "Ajaib"

Menghemat biaya

(LARASATI ARIADNE ANWAR)

Source: Kompas, page 14

Rehabilitating ex-sand mining lands in villages around Merapi

Keningar village, right on the edge of Gunung Merapi National Park, has problems every time there is an eruption. According to Sarpono, who lives in the village, when the volcano erupts the village is covered in sand and stones, damaging crops and killing trees. However, Sarpono continued, since the villagers began working with Sesami, and NGO which received a grant from ICCTF, they have been assisted with the remapping of the lands affected by volcanic eruption, and also benefitted from using biogas and bioslurry. For the record, ICCTF provided almost Rp 1 billion for a program running from July 2016 to December 2017. According to ICCTF, owners of ex sand mining lands who benefitted from the program included 200 families in Keningar, 798 families in Ngargomulyo, and 12 sub-villages in Sumber.

Source: www.mongabay.co.id
Url Link: https://goo.gl/x7xqUV

Storing Carbon, Gunungkidul Farmers take care of their Forests

Darmiyanto, from Kampung Dempul, Gebang sub-village, Girisuko village, Panggang, Gunungkidul, lives on the edge of the forest, and is the Head of the Ngudi Makmur Farmer's Group. He and his group have a unique way of looking after their forest. Each teak tree trunk is marked. These 20 x 30 cm marks are made from white cloth, and carry a tally sheet with the group's delayed felling record. This record includes the species, girth and condition of the tree. Other remarks might include a felling date of 2035 or thinning to be done in 2020. For the group members, these records help to ensure trees are not felled before the right time. Furthermore, these records are extremely useful for calculating stored carbon. This way of recording the teak trees in their forest has been adopted by the Community Forest Farmer's Group as an aid to sustainable forestry.

Source: www.mongabay.co.id
Url Link: https://goo.gl/j4yGFo

Villages Adapting to Climate Change Through SRI (System Of Rice Intensification) Rice Farming: "Crop Yields Successfully Increased By up to 100% in Tarus & Baumata Villages, NTT"

SRI Farming System Increases Rice Production in Kupang

The system of rice intensification (SRI) has proven its ability to increase rice production. Over the past year, the Faculty of Technology, Gajah Mada University has done research on developing this system in Bautama village and Tarus suburb, Kupang District, NTT. SRI is an alternative method for farming rice, which uses less water and has lower emissions than conventional paddy field rice production. This research project was funded by the Indonesia Climate Change Trust Fund (ICCTF), and was also a trial for reducing GHG emissions. This system is particularly suitable for replication in dry areas, such as NTT.

Source: Republika.co.id
URL: http://nasional.republika.co.id/berita/nasional/daerah/17/10/21/oy5rdt414-budidaya-sistem-sri-tingkatkan-produksi-padi-di-kupang

Governor of NTT: SRI Rice Farming Merits Replication

The Governor of NTT considers that the system of rice intensification (SRI) is a suitable model and hopes that it will be implemented in all areas of NTT. According to the Bureau of Statistics (BPS), the productivity of rice farms in NTT was well below the national average in 2015. As a result, 20% of rice needs in NTT have to be imported from other areas such as Surabaya and Makassar. However, with the advent of the SRI method, he is hopeful that rice farming productivity in his Province will now be on the rise.

Source: Republika.co.id dan Republika Cetak, halaman 3
URL: http://nasional.republika.co.id/berita/nasional/daerah/17/10/21/nasional/daerah/17/10/21/oy6ag2423-gubernur-ntt-budi-daya-padi-sri-layak-direplikasi

Gubernur NTT: Budi Daya Padi SRI Layak Direplikasi

● CHRISTIYANINGSIH

JAKARTA — Gubernur Nusa Tenggara Timur (NTT) Frans Lebu Raya mengatakan, sistem budi daya padi *system of rice intensification* (SRI) merupakan sistem yang patut dicontoh dan diimplementasikan di seluruh NTT. Sistem itu disebut sebagai solusi dari persoalan masyarakat petani di Desa Baumata dan Tarus yang terkendala persediaan air untuk irigasi pertanian.

"Semoga metode ini dapat diterapkan di seluruh NTT karena hasil nyatanya sudah dirasakan oleh petani di Tarus dan Baumata," kata Frans dalam acara panen raya di Desa Tarus, Kabupaten Kupang, NTT, Sabtu (21/10).

Badan Pusat Statistik (BPS) mencatat, produktivitas petani padi provinsi NTT berada di bawah rata-rata nasional pada 2015 sebesar 3,56 ton gabah kering giling (GKG) per hektare. Angka tersebut 67 persen di bawah produktivitas nasional yang berada di level 5,34 ton per hektare. Akibatnya, 20 persen kebutuhan beras di NTT harus didatangkan dari luar daerah, seperti Surabaya dan Makassar.

Produktivitas petani padi NTT jauh di bawah provinsi tetangganya seperti NTB dengan 5,17 ton per hektare atau Maluku dengan 5,57 ton per hektare. Oleh karena itu, dengan metode SRI, diharapkan akan ada perbaikan produktivitas padi di provinsi yang dipimpinnya.

Jika metode SRI diterapkan dalam skala lebih luas disertai pendampingan dalam hal proyeksi cuaca untuk menentukan masa tanam berbasis teknologi, besar potensi NTT dapat menjadi provinsi dengan swasembada beras di masa datang. Kondisi tersebut dapat meningkatkan kesejahteraan petani.

Yanes Sain, anggota kelompok petani Desa Tarus, turut menyampaikan antusiasme karena ikut merasakan dampak positif program SRI. "Awalnya petani masih ragu karena pola tanam satu anakan ini kami anggap sangat berisiko," jelas dia.

Namun, hasil yang diperoleh justru sebaliknya. Lahan seluas 10 are *demplot* biasanya menghasilkan panen sebesar 600 kilogram gabah. Sejak menggunakan metode SRI, produksi padi meningkat 100 persen menjadi 1.200 kilogram.

Sekretaris Departemen Teknik Pertanian dan Biosistem, Fakultas Teknologi Pertanian Universitas Gadjah Mada (UGM), Murtiningrum, mengatakan implementasi program budi daya padi SRI ini dipilih Desa Baumata, Kecamatan Tabenu, Kabupaten Kupang, Nusa Tenggara Timur.

Pemilihan itu karena karakteristik desa yang berpenduduk 2.442 jiwa itu 95 persen warganya bermata pencaharian sebagai petani. Namun, kurang memadainya infrastruktur irigasi serta jalur irigasi yang tidak permanen membuat risiko gagal panen di desa ini sangat besar. Tercatat, pada 2015, dari 146 hektare lahan pertanian di Desa Baumata, 34,5 hektare gagal panen. ■ ed: nina chairani

"SRI" Rice Farming Methods Right for Kupang

Implementation of SRI (System of Rice Intensification) farming techniques can increase rice yields by up to 100%, as proven by farmers in Bautama village and Tarus suburb, Kupang District, NTT. The Indonesia Climate Change Trust Fund (ICCTF) and FTP UGM established SRI trial sites (demplots) in Tarus and Baumata during 2016.

Using SRI methods, productivity in the demplots increased substantially. Tonny Wagey, ICCTF Executive Director, said that the SRI method is an innovation for promoting food security resilience and anticipating climate change impacts which began to be adopted in Indonesia in 2002.

Source & URL:

1. *Netral News*
   http://www.netralnews.com/news/lingkungan/read/109396/teknik.penanaman.padi.dengan.sri..hasiln
2. *Cendana News*
   https://www.cendananews.com/2017/10/pola-tanam-padi-sri-cocok-diterapkan-di-kupang.html
3. *Teras News*
   http://terasnews.id/padi-sri-tingkatkan-hasil-panen-hingga-100-persen/

Bountiful SRI Rice Harvests in Kupang Tengah

Rice farmers reaped a bountiful harvest from fields cultivated using the SRI (System of Rice Intensification), as seen at the harvest festival in Tarus Suburb, Kupang Tengah, Kupang District, Nusa Tenggara Timur, on Saturday (21/10/2017). The Indonesia Climate Change Trust Fund (ICCTF), the sole trust fund for climate change in Indonesia, together with the Department of Agricultural Engineering and Biosystems, Faculty of Agricultural Technology, Gadjah Mada University (UGM) has succeeded in developing the SRI rice farming system which can increase the yield from rice seeds sown by up to 100%, from an average of 5.6 tons/ha to 12 tons/ ha, using much less water than when seedlings are raised using conventional methods.

The SRI Method is an innovation to promote both local food security resilience and adaptation to anticipated climate change impacts. The researches installed a Field Monitoring System (FMS), using telemetry technology to obtain and analyse micro-climate parameters such as rainfall, temperature, and soil moisture. The system is designed for farmers at project sites to have remote access [to analysis results].

Source: Sindo News
URL: https://photo.sindonews.com/view/24957/panen-raya-padi-sri-di-kupang-tengah

SRI Method Increases Rice Production by up to 100%

Data show that cultivating rice with the system of rice intensification (SRI) can increase rice production by up to 100%. This method has been successfully applied by the Indonesia Climate Change Trust Fund together with the Department of Agricultural Engineering and Biosystems, Faculty of Agricultural Technology, Gadjah Mada University (UGM) and Kristen Area Wacana University (UKAW), on farmlands belonging to the Rukun Tani farmer's group in Tarus village, Kupang Tengah, Kupang, Nusa Tenggara Timur. SRI is a sustainable rice farming method where young 7 day old seedlings are planted out with wide spacing, organic fertiliser, and intermittent irrigation. ICCTF is mandated to increase the effectiveness and efficiency of coordination with regards to addressing climate change impacts in Indonesia. Director ICCTF Tonny Wagey said that ICCTF is the sole Trust Fund for climate change in Indonesia.

Metode SRI Tingkatkan Produksi Padi sampai 100%

PENANAMAN padi dengan metode *system of rice intensification* (SRI) dapat meningkatkan produksi padi sampai 100%. Metode itu sukses diterapkan Indonesia Climate Change Trust Fund (ICCTF) bersama dengan Departemen Teknik Pertanian dan Biosistem, Fakultas Teknologi Pertanian Universitas Gadjah Mada (UGM), dan Universitas Kristen Arta Wacana (UKAW) Kupang di lahan Kelompok Tani Rukun Tani di Desa Tarus, Kupang Tengah, Kupang, Nusa Tenggara Timur (NTT).

ICCTF bersama Gubernur NTT Frans Lebu Raya, Kepala Biro Renortala Bappenas Rohmad Supriadi, serta perwakilan dari UGM dan UKAW Kupang melakukan panen raya padi SRI di Desa Tarus, Sabtu (21/10).

Budi daya padi sistem SRI juga diterapkan di persawahan Desa Baumata, Kecamatan Taebenu, Kabupaten Kupang.

SRI merupakan metode berkelanjutan untuk pertumbuhan tanaman dengan menggunakan bibit berumur muda atau tujuh hari setelah pembenihan, jarak tanam lebar, pupuk organik, dan irigasi terputus-putus yang memiliki produktivitas padi lebih tinggi jika dibandingkan dengan sistem konvensional.

Metode ini berbeda dengan sistem konvensional yang menggunakan bibit umur lebih panjang berusia 25 hari, penggenangan air secara terus-menerus, jarak tanam rapat, dan pemakaian pupuk kimia yang tinggi.

Direktur ICCTF Tonny Wagey mengatakan, ICCTF satu-satunya lembaga dana perwalian untuk perubahan iklim Indonesia dibentuk sejak 2009 sebagai salah satu komitmen pertemuan perubahan iklim di Bali (2007).

ICCTF bertugas meningkatkan efektivitas dan efisiensi dari koordinasi Indonesia dalam menanggulangi dampak perubahan iklim. Budi daya padi SRI merupakan bagian dari strategi adaptasi dan mitigasi perubahan iklim karena efek buruk perubahan iklim sudah dirasakan banyak masyarakat di berbagai daerah.

Apalagi, NTT daerah beriklim kering yang dipengaruhi angin musim. Di NTT, hasil panen padi kerap tidak konsisten.

Metode SRI menjawab tantangan masyarakat petani terutama di daerah kering dan rentan sebagai strategi adaptasi perubahan iklim yang paling tepat guna. (PO/H-1)

Source: Media Indonesia Online, Media Indonesia Cetak halaman 21 dan Lintas NTT Online
URL:

1. *Media Indonesia*
   http://www.mediaindonesia.com/news/read/128373/sri-tingkatkan-produksi-padi-sampai-100/2017-10-21
2. *Lintas NTT*
   http://www.lintasntt.com/metode-sri-tingkatkan-produksi-padi-sampai-100/
3. *Kaskus*
   https://m.kaskus.co.id/thread/59eb6f7d92523328128b4589/sri-tingkatkan-produksi-padi-sampai-100

Water Shortages Not an Obstacle to Farming in NTT, This is the Secret

As the dry periods get longer, droughts are becoming a common occurrence in Nusa Tenggara Timur. One way to cope with this situation is to plant rice using the System of Rice Intensification (SRI) system. This technique provides the rice plants with conducive conditions for growing. With a wider spacing, competition for nutrients can be avoided. As the land is not flooded with water, oxygen can enter the soil and make it more fertile. In this way, one planting hole can produce 120 rice stalks. The FTP UGM introduced SRI to Baumata village in November 2016. By October 2017, there had been three SRI rice harvests. This project is one of seven adaptation and resilience programs managed by the Indonesia Climate Change Trust Fund (ICCTF).

Source: Sains.kompas.com
URL:http://sains.kompas.com/read/2017/10/22/180700123/kekurangan-air-bukan-hambatan-bertani-di-ntt-ini-rahasianya

Increasing Rice Productivity with the SRI Method

The Indonesia Climate Change Trust Fund (ICCTF) together with the Department of Agricultural Engineering and Biosystems, Faculty of Agricultural Technology, Gadjah Mada University (UGM) and Kristen Arta Wacana University (UKAW) Kupang, established an SRI Demonstration Plot (Demplot) in parallel with conventional paddy field farming in the rice fields of Baumata village, Taebenu Sub-District, Kupang District, Nusa Tenggara Timur (NTT), as seen on Sunday (22/10/2017). SRI is a sustainable rice farming method where 7 day old seedlings are planted out widely spaced, with organic fertiliser, intermittent irrigation, weeding, and other treatments which increase the productivity compared to conventional rice farming systems. This program aims to develop a strategy for climate resilience, reducing the vulnerability of farmers and their lands to drought through SRI farming methods and an application technology based farming information system.

Source: Sindo News
URL: https://photo.sindonews.com/view/24968/tingkatkan-produktivitas-padi-dengan-metode-sri

Higher Yields with Less Water

An intensive but water-saving rice farming system touted as a climate change adaptation is claimed to have doubled yields from demonstration plots in Tarus and Baumata, Kupang District, Nusa Tenggara Timur. Frans Lebu Raya, Governor of NTT, expressed his hopes that this system can be replicated and extended to other areas.

Source: Kompas.id
URL: https://kompas.id/baca/nusantara/2017/10/22/hasil-panen-meningkat-tanpa-perlu-banyak-air/

To Face Climate Change, A System for Monitoring Rice Farming Goes on Trial

As a measure to anticipate the effects of climate change, the Faculty of Agricultural Technology, Gajah Mada University, is trialling a, IT based Field Monitoring System using what is called telemetry. This telemetry system consists of a set of sensors which have been placed in a 10 acre trial plot sown with rice using the SRI method, situated in Tarus, Kupang Tengah Sub-District, Kupang District, Nusa Tenggara Timur. It is claimed that its functions enable it to be used to measure or detect a number of factors which affect the growth of rice, such as solar irradiation, precipitation, humidity, as well as soil condition factors such as *duhu* and nutrients.

Source: industri.bisnis.com
URL: http://industri.bisnis.com/read/20171022/99/701758/hadapi-perubahan-iklim-sistem-monitoring-pertanian-padi-diuji-coba

NTT Climate Right for SRI Rice

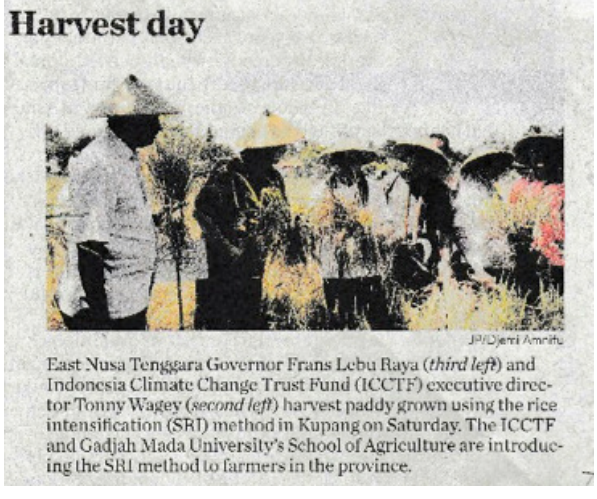
Dr Ir Leta Rafael Levis, an expert in agriculture from Nusa Cendana University (Undana), Kupang, said that the semi-arid climate of NTT, which has tended to become hotter of late, is just right for rice farming using SRI (System of Rice Intensification) techniques. In addition to its suitability for the local climate, the SRI system of planting rice can also increase yields by up to 100% compared to using regular seed, and requires much less water. The NTT Government is now continuously promoting the production and procurement of rice seed such as the gogo rice variety to the more than 64% of o are farmers, because this region is one of the most drought-prone in the country.

Source: antaranews.com
URL: https://kupang.antaranews.com/berita/4767/iklim-ntt-cocok-kembangkan-padi-sri

Harvest Day

East Nusa Tenggara Timur Governor Frans Lebu Raya (third left) and Indonesia Climate C hange Trust Fund (ICCTF) executive director Tonny Wagey (second left) harvest paddy grown using the rice intensification (SRI) method in Kupang on Saturday. ICCTF and Gadjah Mada University's School of Agriculture are introducing the SRI method to farmers in the province.

Source: The Jakarta Post Online dan The Jakarta Post Cetak halaman 5
URL: http://www.thejakartapost.com/news/2017/10/23/harvest-day.html


Harvest day

JP/Djemi Amelia

East Nusa Tenggara Governor Frans Lebu Raya (*third left*) and Indonesia Climate Change Trust Fund (ICCTF) executive director Tonny Wagey (*second left*) harvest paddy grown using the rice intensification (SRI) method in Kupang on Saturday. The ICCTF and Gadjah Mada University's School of Agriculture are introducing the SRI method to farmers in the province.

ICCTF and UGM Develop SRI Rice Seed in Kupang

The Indonesia Climate Change Trust Fund (ICCTF), as the trust fund for climate change in Indonesia, in partnership with Gadjah Mada University (UGM), have succeeded in developing the culture of SRI (System of Rice Intensification) rice seed. It is claimed that this seed can increase yields by up to 100% and can cope with lower moisture content. This rice seed was developed in the villages of Baumata, Tabenu and Tarus, Kupang District, Nusa Tenggara Timur. The SRI method is a solution to the challenges facing rice farmers, especially in regions with a dry climate and vulnerable to drought, making it a particularly appropriate strategy for climate change adaptation. Adaptation activities implemented under this program are aimed at developing a climate resilience strategy which reduces the vulnerability of farmers and farmland to drought through the introduction of SRI rice farming methods and an application technology based farming information system.

Source : tekno.tempo.co
URL: https://tekno.tempo.co/read/1027132/icctf-dan-ugm-kembangkan-bibit-padi-sri-di-kupang

UGM Develops a Telemetry System for Farming

The Faculty of Agricultural Technology, Gadjah Mada University (FTP UGM) is developing a telemetry system for agricultural adaptation. This system measures several meteorological parameters as well as sub-surface soil condition. Chusnul Arif from FTP UGM went on to further explain the system. Five system sensors monitor wind speed, relative humidity, soil moisture, radiation (sunlight) and rainfall. Data captured by the sensors are recorded and transmitted to the UGM data centre. Based on data analysis results, farmers can know when to sow seeds, when to water their crops, and when to harvest them. (Kompas, 4)

Source: Kompas page 4

UGM Kembangkan Sistem Telemetri untuk Pertanian

Fakultas Teknologi Pertanian Universitas Gadjah Mada (FTP UGM) mengembangkan sistem telemetri untuk adaptasi pertanian. Sistem itu mengukur berbagai parameter meteorologi dan kondisi bawah permukaan tanah. Demikian diungkapkan Chusnul Arif dari FTP UGM, Minggu (22/10), di Desa Baumata, Kecamatan Taebenu, Kabupaten Kupang. Dalam sistem itu, lima sensor mengamati kecepatan angin, kelembaban udara relatif, kelembaban tanah, radiasi (matahari), dan curah hujan. "Data itu ditangkap lewat sensor dan dikirim ke pusat data di UGM. Berdasarkan analisis, petani akan tahu waktu tanam, menambah air, dan panen," ujarnya. (ISW)

Can SRI Change the Behaviour of Indonesian Farmers?

The System of Rice Intensification (SRI), as an alternative to conventional rice farming, was introduced to Indonesia in 2002. However, until recently very few farms applied SRI. Even in Java, SRI has only been implemented at a small number of sites, for example Tulungagung, Malang, Kediri, and Situbondo. Rice farmers in these areas were introduced to SRI by the Faculty of Agriculture, Gajah Mada University (FTP UGM). Specific advantages of SRI compared to conventional (paddy field) rice farming is that SRI does not require a lot of water, making it particularly suitable for regions such as Kupang, NTT with low levels of rainfall, and that is has a lower risk of harvest failure.

Source: sains.kompas.com
URL: http://sains.kompas.com/read/2017/10/24/214900123/bisakah-sri-menggantikan-cara-bertani-orang-indonesia-

Bountiful SRI Rice Harvest

Bayu Dwi Apri Nugroho, Program Manager of the Indonesia Climate Change Trust Fund (ICCTF) FTP UGM SRI Project, explained the Field Monitoring System (FMS) tool to farmers in Tarus, Kupang Tengah, NTT, as they celebrated the harvest of rice grown using the System of Rice Intensification (SRI) on Saturday 21 October 2017. The ICCT and UGM Faculty of Agricultural Technology have successfully applied the SRI system developed to improve the husbandry of rice seedlings, and which can increase yields by up to 100%.

Source: Koran Sindo page 19

PANEN RAYA PADI SRI
Program Manager Project SRI Indonesia Climate Change Trust Fund (ICCTF) FTP UGM Bayu Dwi Apri Nuggroho menjelaskan alat *Field Monitoring System* (FMS) kepada petani di sela Panen Raya Padi *System of Rice Intensification* (SRI) di Tarus, Kupang Tengah, NTT, Sabtu (21/10). ICCTF dan Fakultas Teknologi Pertanian UGM sukses menerapkan pengembangan budi daya bibit padi SRI yang mampu meningkatkan hasil panen hingga naik 100%.

Innovation from the East

Drought is a major problem facing farmers in Kupang, especially for wetlands-based farming such as rice farming in paddyfields. This means that farmlands extending over 214.000-260.000 ha can be reduced to just 60.000 ha of productive land during the dry season. Yanes Sain, who is both a farmer and a lecturer in agriculture at the Arta Wacana Christian University, Kupang, decided to try to solve this problem. Hearing about the SRI (System of Rice Intensification) rice farming system developed by scientists at Gadjah Mada University, and funded by the Indonesia Climate Change Trust Fund (ICCTF), Yanes made the decision to go ahead and try it. The initial results were extremely encouraging, as Yanes harvested 6 quintals of rice from a demonstration plot of just 10 acres. This success prompted Yanes to apply the SRI system over all of his 5 ha farm.

Source: Bisnis Indonesia page 31

Inovasi dari Timur

"Di Kupang, terutama di Pulau Timor ini atau Pulau Sumba, itu tanahnya keras sekali. Kalau musim kering, terantuk di tanah luka besar, kira-kira begitu."

Jul Etha Ramida Manalu
julaitha@bisnis.com

Demikian gambaran yang disampaikan Gubernur Nusa Tenggara Timur Frans Lebu Raya terkait dengan kondisi wilayahnya yang terkenal kering dan gersang. Bahkan alat pertanian biasa pun tak sanggup menghadapi tanah di Kupang apabila musim kemarau yang kering tiba.

Keheringan menjadi salah satu masalah bagi pertanian di Kupang, khususnya pertanian berbasis lahan basah, seperti padi. Akibatnya, dari lahan seluas 214.000 hektare hingga 260.000 hektare bisa surut menjadi hanya 60.000 hektare saat musim kering tiba.

Permasalahan inilah yang coba dipecahkan oleh Yanes Sain, petani yang juga Dosen Pertanian Universitas Kristen Arta Wacana, Kupang.

Melalui sistem tanam SRI (System of Rice Intensification) hasil penelitian sejumlah ilmuwan Universitas Gajah Mada yang didanai oleh Indonesia Climate Change Trust Fund (ICCTF), Yanes memutuskan untuk berani mencoba walaupun sistem ini terasa asing baginya juga hampir keseluruhan petani di Kupang.

Yanes bersama para mahasiswanya akhirnya melakukan percobaan pertama di lahan miliknya yang terletak di Kelurahan Tarus, Kecamatan Kupang Tengah, Kabupaten Kupang, Provinsi Nusa Tenggara Timur, pada Mei 2016. Pelibatan mahasiswa ini dilakukan agar mereka bisa menjadi agen penyebar sistem tanam SRI di NTT setelah program usai.

Dengan lahan seluas 10 are—dari 5 hektare yang ia miliki—Yanes membuat demplot. Lahan seluas 5 are diolahnya menggunakan pengairan konvensional sementara 5 are sisanya diolah menggunakan sistem SRI, di mana hanya mengalirkan air secukupnya dan tidak perlu menggenangi sawah.

Di luar pengairan, perlakuan terhadap kedua lahan tidak jauh berbeda, seperti jarak tanam antar bibit sebesar 30 centimeter juga penggunaan pupuk kompos yang berasal dari kotoran hewan. Pemberian pupuk kompos ini hanya sekali dilakukan sebelum bibit mulai ditanam.

"Kalau menggunakan pupuk buatan, pemupukan (bisa) lebih dari sekali selama satu siklus tanam hingga panen."

Perbedaan lain sistem tanam SRI dengan konvensional adalah penggunaan bibit tanaman padi. Apabila sebelumnya dia menggunakan 5-6 batang bibit padi di setiap lubang tanam, sistem SRI hanya membutuhkan bibit tunggal untuk setiap lubang dengan anakan mencapai puluhan hingga ratusan batang.

Hasilnya, Yanes berhasil memanen 6 kuintal gabah dari demplot seluas 10 are. Dia pun kemudian melakukan uji coba kedua dengan menanami seluruh demplot menggunakan sistem tanam SRI.

"Panen yang saya peroleh ketika itu totalnya jadi 1,2 ton gabah," katanya.

Yanes pun memutuskan untuk menggunakan sistem SRI pada seluruh areal lahannya yang mencapai 5 hektare.

TANTANGAN

Sistem tanam SRI ini sebenarnya bukanlah barang baru di Kupang karena sudah pernah diperkenalkan pada 2005. Sayangnya, sistem tak berkembang karena kurangnya pendampingan penerapan kepada petani.

Johan Boli, petani dari Desa Baumata, Kabupaten Kupang Tengah, Nusa Tenggara Timur, mengakui hasil panennya meningkat drastis. Namun, ada tantangan yang harus dihadapi, yakni pertumbuhan gulma yang masif.

Menghadapi permasalahan gulma, salah seorang lulusan dari Institut Pertanian Bogor (IPB) Chusnul Arif mengatakan, petani hanya perlu membalik tanah. Hal ini bisa dilakukan dengan alat sederhana berupa garu rotari yang dipasangi paku.

Gubernur Nusa Tenggara Timur Frans Lebu berharap sistem SRI ini dapat diadopsi oleh petani di wilayahnya secara keseluruhan agar provinsi ini biasa menjadi salah satu lumbung padi terbesar di Indonesia.

"Kalau kita bicara mandiri itu relatif, hari ini kita bisa mandiri, besok tidak mandiri lagi. Namun, satu hal yang penting adalah tidak ada lagi di NTT itu teriak rawan pangan, lapar, tidak lagi," tegasnya. ■

Governor asks NTT farmers to adopt the SRI method

The Governor of Nusa Tenggara Timur (NTT), Frans Leburaya, has asked rice farmers in NTT to adopt the System of Rice Intensification (SRI) farming method, because it can increase yields by up to100%. According to Frans, the SRI method can sustain plant growth using yound seeds, unlike conventional systems which used long-lived seeds. Meanwhile Tonny Wagey, Executive Director of ICCTF, explained that the SRI method is one sollution which ahs been developed to overcome the challenges faced by rice farmers, especially in dry and climate vulnerable areas, so that this program is part of developing climate resilience strategies, reducing the vulnerability of farmers and farmlands to drought.

Source: Realita.co
URL: http://news.realita.co/gubernur-ntt-minta-petani-ntt-tingkatkan-metode-sri

Climate Change Adapted, SRI Rice is Introduced to Regions with Low Rainfall

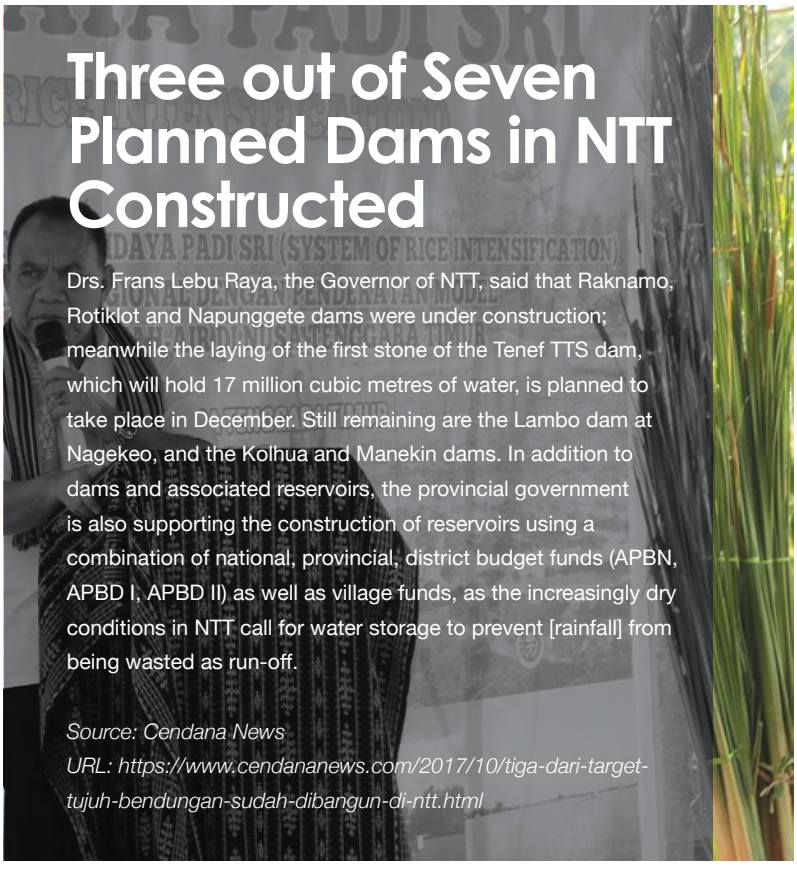
The main challenge to rice farmers in areas with low rainfall such as Nusa Tenggara Timur is the lack of water, keeping paddy field extent to a minimum. One system suitable for such conditions which is currently being trialled is the SRI (System of Rice Intensification) rice-farming system which can increase harvest volume while needing much less water. In other countries, SRI has significantly increased productivity, e.g. 100% in Madagascar, 65% in Afghanistan, 42% in Iraq, and 11.3% in China. The trials at demonstration plots in Baumata, Tabenu and Tarus, Kupang District, are the fruit of a partnership between the Indonesia Climate Change Trust Fund (ICCTF) and the Faculty of Agricultural Technology and Biosystems, Gadjah Mada University (UGM), and have proven that this system can be applied successfully here. Whereas on average traditional rice-farming methods yield 5-6 ton/ha, in Baumata the SRI method proved capable of increasing productivity, with rice yields 3 ton/ha higher than using conventional methods. In Tarus village, where the average rice yield has been 5.6 ton/ha, the SRI method produced 12 tons of rice in one planting season, during the wet season early in the year.

Source: Mongabay.co.id
URL: http://www.mongabay.co.id/2017/10/24/adaptif-perubahan-iklim-padi-sri-diperkenalkan-untuk-wilayah-bercurah-hujan-rendah/

SRI Rice is Right for NTT

Rice farming using the SRI (System of Rice Intensification) method is one intervention supported by the Indonesia Climate Change Trust Fund (ICCTF), the sole trust fund in the field of climate change in Indonesia, and the Department of Agricultural Engineering and Biosystems, Faculty of Agricultural Technology, Gadjah Mada University (UGM), which has proven extremely well-adapted to conditions in NTT Province. However this excellent technology which has been trialled on farms in Tarus Suburb, Kupang Tengah Sub-District and village Baumata, Tabenu Sub-District in Kupang District, can only be said to have truly succeeded when it has been adopted by all farmers in NTT. Frans Lebu Raya, Governor of NTT, said that the SRI technology was just right for NTT, as it is not only very sparing of water but can also double productivity.

Source: Cendana News
URL: https://www.cendananews.com/2017/10/penanaman-padi-sri-cocok-di-ntt.html



Three out of Seven Planned Dams in NTT Constructed

Drs. Frans Lebu Raya, the Governor of NTT, said that Raknamo, Rotiklot and Napunggete dams were under construction; meanwhile the laying of the first stone of the Tenef TTS dam, which will hold 17 million cubic metres of water, is planned to take place in December. Still remaining are the Lambo dam at Nagekeo, and the Kolhua and Manekin dams. In addition to dams and associated reservoirs, the provincial government is also supporting the construction of reservoirs using a combination of national, provincial, district budget funds (APBN, APBD I, APBD II) as well as village funds, as the increasingly dry conditions in NTT call for water storage to prevent [rainfall] from being wasted as run-off.

Source: Cendana News
URL: https://www.cendananews.com/2017/10/tiga-dari-target-tujuh-bendungan-sudah-dibangun-di-ntt.html

Technology and Dams Help Kupang Cope with Climate Change

The Indonesia Climate Change Trust Fund team led by Bayu Dwi Apri Nugroho, an expert in Agricultural and Environmental Climatology from Gadjah Mada University (UGM), predicts that over the period 2015-2040, changes in air temperature will be one of the climate change trends in Kupang, Nusa Tenggara Timur (NTT). In order to adapt to such changes, scientists are developing land monitoring tools, adopting Japanese technology for collating all kinds of climate-related data. In the near future, there will be an android-based application, so that farmers can directly access the results of analyses regarding their land. This will help them do estimate the best times to plant, provide irrigation, and carry out other processes both now, and climate change becomes more severe. In the meanwhile, Frans Lebu Raya, the Governor of NTT, hopes that the building of seven reservoirs in NTT will help to provide the water so desperately needed in the notoriously dry region of Nusa Tenggara Timur NTT.

Source & URL:

1. *Bisnis Indonesia*
   http://industri.bisnis.com/read/20171025/99/702695/teknologi-dan-bendungan-bantu-kupang-hadapi-perubahan-iklim-
2. *Kalimantan.bisnis.com*
   http://kalimantan.bisnis.com/read/20171025/99/702695/teknologi-dan-bendungan-bantu-kupang-hadapi-perubahan-iklim-

SRI Method Increases Rice Harvest in Kupang by 100%

Metro TV

URL: http://video.metrotvnews.com/metro-pagi-prime-time/9K5RGjyN-hasil-panen-padi-di-kupang-meningkat-100-persen-dengan-metode-sri

SRI Rice Cultivation Yields Significant Results in NTT

The Indonesian Climate Change Trust Fund (ICCTF) and Universitas Gadjah Mada School of Agriculture have joined hands to develop and implement a rice intensification (SRI) method to grow paddy in Kupang regency, East Nusa Tenggara (NTT). The SRI seedlings have yielded a more productive harvest; up to 100% higher than regular rice seedlings. ICCTF executive director Tonny Wagey said that SRI method was an innovative and sustainable way of cultivating rice that resulted in high productivity by using 7-day-old seedlings, greater plant spacing, organic fertilizer and more efficient irrigation.

Source: The Jakarta Post halaman 5

AGRICULTURE

SRI rice cultivation yields significant results in NTT

Djemi Amnifu

The Indonesia Climate Change Trust Fund (ICCTF) and Yogyakarta-based Gadjah Mada University's (UGM) School of Agriculture have joined hands to develop and implement a rice intensification (SRI) method to grow paddy in Kupang regency, East Nusa Tenggara's (NTT)

The project started in April 2016 as part of ICCTF's climate adaptation strategy, and the SRI method has already been implemented in Tarus and Baumata subdistricts, both of which continue to face limited water supply that hinders irrigation.

A significant increase in rice production was found in Tarus, from 5.6 tons per hectares using the conventional method, to 12 tons per hectare under the SRI project.

In Baumata, meanwhile, production rose by 3 tons of rice per ha from 5.6 tons.

"The SRI seedlings have yielded a more productive harvest; up to 100 percent higher than regular rice seedlings. They also need less water to grow," Murtiningrum, secretary of UGM's department of bio system and agricultural engineering, said during an SRI rice harvest fair in Tarus last Saturday.

"The method is an answer to the challenges farmers are currently facing, particularly those living in dry areas," he added.

ICCTF executive director Tonny Wagey said the SRI method was an innovative and sustainable way of cultivating rice that resulted in high productivity by using 7-day-old seedlings, greater plant spacing, organic fertilizer and more efficient irrigation.

In comparison, the conventional method involves 25-day-old seedlings with narrow plant spacing, chemical fertilizer and more water.

Citing data from the Central Statistics Agency (BPS), Tonny said that rice production in NTT stood only at 3.56 tons per ha, or about 67 percent below the national figure of 5.34 tons per ha in 2015. NTT also produces less rice than neighboring West Nusa Tenggara (NTB), with 5.17 tons per ha.

Farmers are among the groups that are most vulnerable to climate change, which can increase poverty in agricultural areas, said Rohmad Supriadi from the National Development Planning Agency (Bappenas), who also attended the event in Tarus.

"Farmers really need to adapt to climate change, particularly [as it brings immediate] changes in rainfall intensity, temperature and water supply, which affects planting times, the choice of plant variants and cropping patterns," he added.

Yanes Sain, a farmer from Tarus, said he initially doubted the SRI method because it used less seedlings than the conventional method he was used to.

But after using the method, his harvest yielded twice the amount of rice in the latest harvest season.

"It would be good if the program was adopted by other farmers across Kupang regency to improve their livelihoods," he said.

NTT Governor Frans Lebu Raya echoed Yanes's sentiments and express his hope that the method could be implemented the province's 22 regencies.

"We have seen the success stories in Tarus and Baumata," he pointed out.

After it was initiated in NTT as a pilot project, the method was implemented in Central Java and Yogyakarta.

Climate Change Project Boosts Local Economy

Efforts to mitigate climate change often provide dual benefits, not only reducing GHG emissions but also boosting the economic productivity of local communities. In future, development models must balance these two aspects. Mr Medrilzam, the Director for Living Resources, National Planning Agency, said that Indonesia is one of the developing nations most active in rallying commitments and implementing actions to bring climate change under control. However controlling emissions must be integrated with and cannot ignore upwards and downwards trends in economic growth. ICCTF Executive Director, Tonny Wagey presented a number of projects which have been developed with the expectation that they can be replicated by stakeholders (Kompas, 14)

(kompas.id, https://goo.gl/Q63WHp)
Kompas, 09 December 2017 page 14

Cilacap gets New Energy from Garbage

The Indonesian Government has paid serious attention to climate change since 2005, with a particular focus on integrating climate change issues into development planning. In 2007 we became the host nation for the Bali meeting, which imparted significant momentum to our Government. By 2016 we had managed to reduce our national emissions by 13.54%. This was not an easy task due to many factors. We were lucky in not having many rain storms, but if there is another El Nino as in 2015 and 1998, we will have to be very careful. The President is very concerned to avoid a repetition of the events of 2015. The Director for the Living Environment at the National Planning Agency (Bappenas), Dr. Ir. Medrilzam, MPE, said that the central government was pushing for a very high level of investment. Despite regional autonomy, the centre still retains its dominance in many areas. Local governments have high expectations [of assistance] from the centre. The nub of the matter is that central government needs to continue to provide support, but this must be for sustainable initiatives. One example can be seen in Cilacap, where garbage is now successfully transformed into a source of renewable (biomass) energy.

(http://www.suronews.com, https://goo.gl/4tHFCf)

Pembangunan Rendah Karbon Diutamakan

Pembangunan Rendah Karbon Diutamakan

SALAH satu bentuk komitmen pemerintah dalam penanggulangan perubahan iklim ialah penerapan kebijakan perencanaan pembangunan rendah karbon (PPRK). Kebijakan itu disusun untuk mewujudkan pertumbuhan ekonomi yang inklusif melalui upaya pemerataan pembangunan dan pengentasan rakyat dari kemiskinan, sekaligus menjaga kualitas lingkungan dan ketersediaan sumber daya alam.

"PPRK ini nantinya akan menjadi hal yang diutamakan ketika kita membuat perencanaan pembangunan jangka menengah yang berikutnya, yaitu untuk 2020-2024, sehingga ke depan saat pemerintah mendorong pertumbuhan ekonomi juga telah memperhatikan bagaimana menjaga kualitas lingkungannya sekaligus mengatasi masalah sosial," ujar Direktur Lingkugan Hidup Kementerian Perencanaan Pembangunan Nasional/Bappenas Medrilzam, dalam *media gathering* bertajuk Menyelaraskan Pertumbuhan Ekonomi dan Pelestarian Lingkungan, yang digelar Indonesia Climate Change Trust Fund (ICCTF) di Jakarta, Jumat (8/12).

Pada kesempatan sama, Direktur Eksekutif ICCTF Tonny Wagey mengatakan perlu ada kesadaran dan peran serta seluruh aspek, golongan, masyarakat dan tak lepas juga peran generasi muda untuk mengetahui dampak perubahan iklim. "Sikap acuh terhadap perubahan iklim bukan lagi menjadi pilihan untuk menyuarakan keadilan iklim," ujar Tony.

Ia menambahkan, ICCTF menyelaraskan antara pertumbuhan ekonomi dan pelestarian lingkungan, termasuk mendukung upaya penurunan emisi gas rumah kaca (GRK) serta upaya adaptasi perubahan iklim melalui proyek-proyek kerja sama dengan kementerian/lembaga, pemerintah daerah, lembaga swadaya masyarakat, perguruan tinggi, dan pihak swasta.

"Indonesia berkomitmen menurunkan emisi sampai 26% dari acuan target di 2020 dan pada 2030 sampai 29% dengan usaha sendiri dan mencapai 41% dengan dukungan internasional." (Yan/H-3)

Commitment to environmental quality and social issues is through the low carbon development planning (PPRK) policy. The Director for the Living Environment, National Planning Agency (Bappenas), said that this LCDP will be given priority in formulating the next medium term development plan, for the period 2020-2024, so that in future, when the Government efforts to achieve economic development will also aim to maintain the quality of the environment and social values. Meanwhile, Executive Director Tonny Wagey said that there was a need for greater awareness and for active participation from all ranks of society, not forgetting the importance of the role of the younger generation in understanding and addressing the impacts of climate change.

(www.mediaindonesia.com) (Media Indonesia, 20)

Media Indonesia. 11 December 2017, page 20

The UK Promises 3 million Pounds Sterling to Prevent Forest Fires in Indonesia

Jambi (ANTARA News) – The UK Government has promised 3 million pounds sterling in aid funds to five provinces in Indonesia, to support their efforts to prevent and control forest and peatland fires (karhutla).

"In actual fact, we could probably provide additional funds, I will talk about this with the Governor later on. The important thing is that we must see a strong commitment to the prevention of forest and peatland fires" said Moazzam Malik, the UK Ambassador to Indonesia, ASEAN, and Timor Leste, as he attended the launch of regulations on forest and land burning promulgated by the local government (*Perda*) and Governor (Pergub) of Jambi, last Monday [.....]

Source: Antaranews, 13 March 2017

Donation of Fire-Fighting Equipment

In a few months time, the dry season will be upon us again. In anticipation of the likely spate of forest and peatland fires, the Indonesia Climate Change Trust Fund (ICCTF) has helped 10 villages in the coastal region of Padang Tikar, Kubu Raua District, through the donation of much needed fire prevention and fire fighting equipment

Eko Putranto, ICCTF team leader, said that the pall of smoke from forest and peatland fires which smothered certain areas of Indonesia in 2015 constituted a national disaster, with grave consequences for the nation. Indeed, the loss of life due to this phenomenon was far from insignificant [.....]

Source: Pontianak Post (5 April 2017)

KARHUTLA

Beri Bantuan Alat Kebakaran

BEBERAPA bulan ke depan akan memasuki musim kemarau. Antisipasi kejadian kebakaran hutan dan lahan, Indonesia Climate Change Trust Fund (ICCTF) memberi bantuan peralatan kebakaran hutan dan lahan di 10 desa bentang pesisir Padang Tikar, Kabupaten Kubu Raya.

Tim leader ICCTF, Eko Putranto menuturkan, kejadian bencana kabut asap dibeberapa bagian wilayah Indonesia 2015, amat merugikan bangsa Indonesia

lah pelaku penjual kupon putih, yakni Rani dengan barang bukti, uang tunai sebesar Rp152 ribu, satu

alat bukti dan pengakuannya, kedua penjual yang telah diamankan itu pun ditetapkan sebagai tersangka," tegas

kepada masyarakat yang telah bekerjasama dengan polisi, memberi informasi terhadap kegiatan atau aktivitas yang melanggar hukum," ucapnya. *(adg)*

Beri Bantuan Alat Kebakaran

Sambungan dari halaman 16

Cegah karhutla tak terulang kembali, pihaknya melakukan antisipasi kebakaran lahan dengan memberikan bantuan alat pemadam kebakaran lengkap untuk 10 desa.

Dipilihnya Kabupaten Kubu Raya menerima bantuan alat pemadam kebakaran karena di wilayah ini ikut menyumbang asap. Selain Kabupaten Kubu Raya, ada beberapa Kabupaten Kapuas Hulu, Landak dan Sanggau.

Menurut dia, adanya tim peduli api tiap desa-desa yang rawan kebakaran hutan dan lahan dapat cegah kebakaran lahan lebih dini. Dalam pengoperasian alat ini, dilakukan oleh warga desa yang sudah terlatih. "Kita harap mulai tahun ini tak ada lagi kebakaran hutan. Selain kami (ICCTF) pemerintah juga sangat konsesn cegah karhutla ini," ujarnya

memberikan bantuan alat sumorbor untuk tiap desa Kecamatan Padang Tikar. Hanya saja bantuan alat tersebut kemampuannya hanya sampai 30 meter. Ke depan pihaknya akan memberikan peralatan sumorbor yang kedalamannya mencapai 80 meter. Selain itu, pihaknya juga berencana bangunkan 30 sumur dilokasi yang sudah ditentukan.

Untuk titik api saat ini belum terpantau. Namun berdasarkan

Perkumpulan Pancur Kasih and ICCTF Plant 65,400 Trees

Planting Local Forests to Restore Peatlands and Improve Farmer Welfare

Two years ago, at the Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate change (UNFCC) in Paris, France, President Joko Widodo stated the commitment of the Indonesian Government to reduce emissions by 29% (national efforts) or 41% (with international aid) by 2030.

In the fields of forest and land management, initiatives taken by the Indonesian Government include the implementation of a "one map" policy with a moratorium and review on exploitation permits in peatland areas, sustainable land and production forest management, and the establishment of a Peatland Restoration Agency (PEATLAND RESTORATION AGENCY).

Source: Pontianak Post, Wednesday, 31 May 2017 09:30


8 LIPUTAN KHUSUS

Perkumpulan Pancur Kasih dan ICCTF Tanam 65.400 Bibit

BURNING LANDS

Drive Communities to Restore Peatlands

BANGKINANG, KOMPAS – The Peatland Restoration Agency is calling for community participation to accelerate the restoration of peatland ecosystems. The aim is to prevent a repetition of peatland and forest fires in Indonesia. In addition to the construction of canal sluice-gates which can passively retain water, the role of local people is being strengthened, particularly at vital sites, to prevent and extinguish fires [….]

Source: Kompas (14 July 2017)


KEBAKARAN LAHAN

Dorong Peran Masyarakat dalam Restorasi Gambut

BANGKINANG, KOMPAS – Badan Restorasi Gambut menggalang partisipasi masyarakat untuk mempercepat restorasi ekosistem gambut. Itu bertujuan mencegah berulangnya kebakaran hutan dan lahan di Indonesia. Selain membangun sekat kanal yang menyimpan air secara pasif, peran warga diperkuat, terutama di lokasi vital, untuk mencegah dan memadamkan api.

Penguatan peran warga dilakukan melalui pembekalan kepada Masyarakat Peduli Api (MPA) di sejumlah provinsi dengan pemberian alat pembasahan lahan lewat pengoperasian sumur bor. Sejak 2016, BRG melatih kelompok MPA di Riau, Kalimantan Selatan, dan Kalimantan Tengah terkait cara membuat sumur bor dan memakai pompa air.

"Ini jadi bagian pencegahan dan respons cepat melalui pemulihan ekosistem hidrologi gambut. Sebab, sekat kanal menyimpan air secara pasif dan sumur bor bersifat aktif menambah air. Jadi, sekat kanal dan sumur saling memerkuat," kata Kepala BRG Nazir Foead saat meninjau sumur bor dan pompa air di Desa Rimbo Panjang, Kecamatan Tambang, Kabupaten Kampar, Riau, Kamis (13/7).

Nazir, didampingi Deputi IV Haris Gunawan dan Deputi II Alue Dohong, serta Kepala Dinas Lingkungan Hidup dan Kehutanan Pemerintah Provinsi Riau Yul Wiriati Moesa, meminta MPA Desa Rimbo Panjang mengoperasikan pompa air dan membasahi lahan gambut di sekitar sumur bor. Ada 150 titik sumur bor di lahan gambut di desa itu seluas 10.000 hektar.

Menurut Alue, sejak 2016, BRG melatih para relawan MPA untuk membuat sumur dan mengoperasikan pompa air. Selain 150 sumbur bor di Pekanbaru, MPA juga membangun 220 sumur bor di Pulang Pisau, Kalteng, dan 50 sumur bor di Banjarbaru, Kalsel. Setiap 10 sumur dilengkapi satu pompa dan selang.

"Karena kebakaran tahun 2015 amat parah di Pulang Pisau, pada 2017 terbangun 600 unit dengan dana Indonesia Climate Change Trust Fund (ICCTF), dengan dana APBN 2017 akan dibangun 6.400 unit," kata Alue.

Selain biayanya lebih murah, penggalian sumur bor oleh MPA bisa memakai tangan. Rahman (42), anggota MPA Rimbo Panjang, mengatakan, pihaknya butuh waktu 30 menit sampai 1 jam untuk menggali sumur.

Sebelum ada pompa air, warga memadamkan api memakai ranting dan kayu. "Kami potong kayu lalu gebuk api dengan kayu, tetapi apinya susah dipadamkan," kata Nopri, anggota MPA Rimbo Panjang. (SON)

DENAR/KALTENG POS

Aksi Kerja Bersama untuk Restorasi Gambut

PALANGKA RAYA-Rombongan dua Kedutaan Besar (Kedubes) Norwegia Mr Veegard Kaale dan Kedubes Inggris Ida Suriany serta Kepala Badan Restorasi Gambut Republik Indonesia (BRG RI) Nazir Foead beserta rombongan berkunjung ke Kalteng. Mereka disambut langsung oleh Gubernur Kalteng H Sugianto Sabran beserta jajarannya.

Kedatangan dua dubes ini untuk menghadiri launching aksi kerja bersama restorasi gambut menuju Kalteng Berkah di Kabupaten Pulang Pisau.

Setelah menjumpai Gubernur Kalteng H Sugianto Sabran di ruang VIP Bandara Tjilik Riwut, rombongan langsung bertolak ke Desa Tanjung Taruna, Kabupaten Pulang Pisau, guna mengikuti rangkaian kegiatan yang telah diagendakan oleh panitia pelaksana.

▶*Baca: **Aksi** ...Hlm 7*

Climate Change in Indonesia

By: Dr. Tonny Wagey,
ICCTF Executive Director

Waskito can now breathe a bit more freely, he no longer depends on cutting down trees, selling wood, or charcoal burning to make a living.. The chainsaw is no longer his close companion. He now passes his days beekeeping, earning much more and with better prospects ahead. Since beekeeping became an important source of income for local people, many have begun to realise the importance of flowers as food for their bees, in particular flowering trees. As a result, the people of Kedung Poh no longer fell trees, and Kedung Poh is now a Zero Logging village.

Economically, keeping honey bees like Waskito and his group, with 500 hives, is a profitable enterprise. One hive can produce 1.5 kg of raw honey with a selling price of Rp 200.000/kg. During one harvest, Waskito can collect 750 kg of honey with a value of Rp 150 million. With two harvests a year, his gross income can be as high as Rp.300 million, giving him an average monthly income of Rp 25 million. This is very different from the days when Waskito made a living from illegal logging and selling wood. In those days he only made a profit of around Rp 1,5 million per ton or Rp.1.500 per kg, and there was no guarantee of a regular income every month.

According to the Second National Communication study, it will cost Rp. 83.3 trillion to reduce emissions by 26% per year to 2020. This is the contribution required from Indonesia alone. However in the 2017 national budget (APBN), only around Rp 12 trillion were allocated for the protection of the living environment, around 14% of the total funds required to meet annual emission reduction targets. .

Given the limited funds available for climate change mitigation and adaptation, there is a clear need for contributions from external entities such as international development partners and the private sector. Based on data from the Climate Fund Update and 2016 Biennial Study, every year at least USD 42 billion (Rp 559 trillion) is available in the form of aid from developed countries to developing countries specifically to address climate change issues. It is anticipated that this sum will be increased to USD 67billion (Rp 891 trillion) per year by 2020. This illustrates that there are many potential sources of finance for climate change mitigation and adaptation.

ICCTF (Indonesia Climate Change Trust Fund), the only climate change trust fund in Indonesia, has received funds amounting to Rp 185.6 billion from 2015 to 2018..Of this, 30% came from the national budget (APBN) and the remainder from ICCTF partners such as the United Kingdom Climate Change Unit (UKCCU), the United States Agency for International Development (USAID), and the Government of the Kingdom of Denmark (DANIDA). Looking at the amount of funding, it is clear that finance

Strengthening Peatland Restoration through Joint Action

PULANG PISAU, KOMPAS — Peatland restoration and the prevention of forest and peatland fires in Central Kalimantan Tengah have been strengthened by the announcement of the Joint Action Program (Program Aksi Bersama). This program also aims to support sustainable community empowerment.

This was stated at the official opening of the Joint Action Program in Tanjung Taruna village, Pulang Pisau District, Kalimantan Tengah, on Friday (22/9). The program was initiated [.....]

Source: Kompas (22 September 2017)

Opportunities and Challenges

for climate change mitigation and adaptation is still minimal and that much larger sums are required to meet the targets set by the Indonesian Government with respect to GHG emissions.

ICCTF has three main focus areas for adaptation and mitigation. Firstly, land area based mitigation aimed at reducing emissions from land-based activities. Secondly, energy based mitigation, aiming to significantly reduce emissions associated with energy sources and energy needs. Finally, the adaptation and resilience focus aims to strengthen the capacity of local people and local institutions, as well as vulnerable sectors of the community, to adapt and to increase their resilience to the impacts of climate change. One climate change adaptation and mitigation strategy which has had positive results is the SRI (System of Rice Intensification) method of rice farming. This adaptation and resilience program was funded by ICCTF in partnership with the Faculty of Agricultural Technology, Gadjah Mada University. This method addresses the challenges faced by farmers in areas prone to drought and vulnerable to climate change impacts which are increasing the length of the dry season in NTT, making it longer than in other regions. Farmers in Baumata village, Nusa Tenggara Timur, experienced benefits from the SRI system, with an increase of 20& in their rice yields.

ICCTF plans to enter into partnership with banks to support its function as a National Trust Fund. At the global level, within the Climate Fund, financial transactions through banking organisations had already begun to be made in 2009 in the form of loans. In 2016, loans to the Climate Fund from banks and developed country governments reached USD 5.7 billion (Rp76 trillion). In addition, finance in the form of equity participation in Climate Fund Projects also became commonplace, reaching a total of USD56 million (Rp745 billion) in 2016 while in 2014 there had never been any equity financing. During this transition period, ICCTF hopes to engage the wider community to collaborate on many approaches to address climate change, including the incorporation of local traditions and local wisdom as well as the development of business networks engaged in financing climate change mitigation and adaptation, a development which we increasingly consider as one of the keys to the success of efforts to mitigate and adapt to climate change in Indonesia. We hope that ICCTF can become a centre of information on climate change, based on our experiences across a wide variety of climate change related programs.

Opinion Article (Koran TEMPO 7 November 2017)

Financing Mechanisms for Climate Change & Low Carbon Economy

"Climate change is not just an environmental issue, but must be linked to economic and social development, becoming a sustainable development principle"

The international climate change conference generally referred to as the United Nations Framework Convention on Climate Change – Conference of the Parties (UNFCCC – COP 23), held in Bonn, Germany from 6-17 November 2017, has just closed. This forum reiterated forcefully to all UNFCCC parties the need for continued commitment to addressing climate change issues. The meeting also aimed to promote [.....] To support the implementation of the LCDP (Low Carbon Development Plan) with respect to optimising finance to address climate change issues, the Indonesian Government established the Indonesia Climate Change Trust Fund (ICCTF) in 2009. ICCTF was set up both to support funding mechanisms and to harmonise available sources of finance both in-country and abroad. ICCTF has proven capable of operating as a climate change finance instrument which has provided significant support for national efforts to reduce GHG emissions as well as for climate change adaptation through projects implemented in partnership with ministries and national agencies, local governments, non-governmental and other civil society organisations, Universities and the private sector [.....]

Advertorial (Koran TEMPO 9 November 2017)

JEJAK HIJAU

Livestock Pellets from Peatland Weeds

Peatland weeds have generally been controlled through burning. This is still a common practice, which carries a high risk of causing potentially disastrous fires. Furthermore the carbon emissions contribute to the acceleration of global warming […]. After discovering an appropriate formula for making livestock feed from peatland weeds, researchers trained women's groups in peatland areas, in particular those supported by the Riau Women's Working Group. The training, which began in October, was implemented in partnership with the Indonesia Climate Change Trust Fund (ICCTF) […].

Source: Media Indonesia (16 December 2017)

JEJAK HIJAU

Pelet Ternak dari Gulma Lahan Gambut

HINGGA kini pembersihan gulma di lahan gambut dengan cara pembakaran masih banyak dilakukan warga. Akibatnya, potensi bencana kebakaran lahan pun tinggi, belum lagi efek laju pemanasan global akibat besarnya emisi karbon.

Meski begitu, kegiatan pembakaran juga bukan terlarang karena memang dimungkinkan Pasal 69 Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup. Pada ayat 1 pasal tersebut, kegiatan pembukaan lahan dengan cara pembakaran termasuk yang dilarang. Namun, ayat 2 pasal tersebut menyatakan ketentuan pada ayat 1 dilakukan dengan memperhatikan dengan sungguh-sungguh kearifan lokal di daerah masing-masing.

Saat ini cara ekonomis untuk mendorong warga meninggalkan kebiasaan membakar lahan ditawarkan peneliti dari Unit Pelaksana Teknis (UPT) Balai Penelitian dan Pengembangan Kementerian Lingkungan Hidup dan Kehutanan di Banjarbaru, Kalimantan Selatan. Dua peneliti balai tersebut, Marinus Kristiadi dan Santoso, menemukan pemanfaatan gulma lahan gambut sebagai pelet pakan ternak.

Inovasi tersebut dibuat karena gulma lahan gambut memiliki senyawa-senyawa organik yang terdapat pada pakan ternak (pelet) buatan pabrik.

Senyawa seperti protein, magnesium, hingga zat besi terkandung dalam berbagai tanaman gulma lahan gambut, seperti daun kelakai, pakis, ubi kayu, dan lamtoro.

"Setiap daerah itu memiliki ketersediaan bahan yang berbeda. Di Kecamatan Medang Kampai, Dumai, Riau saya diminta melatih kelompok wanita gambut. Yang tersedia di sana pakis, ya, kita gunakan itu. Tanaman itu juga menjadi salah satu indikator lahan gambut itu tergenang air. Tambahan lainnya daun ubi kayu, kedelai, hingga tanaman apu-apu," kata Marinus kepada *Media Indonesia*, Kamis(14/12).

Setelah menemukan komposisi pakan ternak yang tepat dari gulma lahan gambut, peneliti kemudian menggelar pelatihan kepada kelompok wanita gambut di daerah-daerah itu yang merupakan binaan Riau Women Working Group. Pelatihan yang dimulai Oktober tersebut juga dilaksanakan dengan kerja sama Indonesia Climate Change Trust Fund (ICCTF).

Tak hanya proses pembuatan, kedua peneliti juga mengajarkan pemanenan bahan baku dengan sistem papan catur. Pakis yang baik, kata Marinus, berumur 40 hari setelah ditebas. Karena itu, ia mengajarkan warga untuk memanen setiap minggu dengan tempat yang sudah ditetapkan terlebih dahulu.

Untuk tanaman apu-apu, ia menyarankan itu dibudidayakan dengan kolam terpal agar tidak tercemar oleh limbah rumah tangga ataupun oli kendaraan bermotor.

Kini, kelompok wanita gambut sudah mahir memproduksi pelet dan sedang menjajaki kerja sama dengan peternak ikan nila.

"Buatnya tidak sulit, hanya butuh waktu sekitar satu hingga dua hari. Pertama tunggu tanaman layu, lalu mulai digiling dengan alat seperti gilingan daging, kemudian dijemur," pungkas laki-laki yang juga sudah melatih warga Singkawang, Kalimantan Barat, serta Balai Pelatihan Kehutanan Pekanbaru.

Lebih irit

Pemimpin Tim ICCTF-United Kingdom Climate Change Unit (UKCCU) Eko Putranto mengaku menjadikan wilayah Dumai fokus pada perikanan karena lokasinya yang berada di pinggir laut. Selain itu, di wilayah ini terdapat lahan gambut dengan berbagai jenis tanaman gulma.

Saat ini kegiatan pembuatan pelet ikan ini masih dalam tahapan awal proyek dengan dana donor dari UKCCU dan akan berakhir pada Februari mendatang. Terkait dengan nilai ekonomis, Eko mengaku belum menghitung secara tepat, termasuk hasil dari pelet tersebut. Ia hanya memperkirakan, kalau membeli pelet, untuk seribu ikan dibutuhkan biaya pelet sebanyak Rp2 juta.

"Lele lokal jenis ikan di sana, tetapi saya belum merasakan apakah rasa dagingnya sama dengan ikan yang diberi pelet buatan pabrik karena memang belum panen. Untuk produksi pun masih bergantung pada ketersediaan alat dan bahan baku," ujar Eko.

Namun, ia akan tetap memperjuangkan agar masyarakat bisa kembali mendapatkan bantuan dana untuk membeli kebutuhan memproduksi pelet organik tersebut. Hal ini dilakukan supaya tidak ada lagi oknum yang membuka lahan gambut dengan metode bakar.

Sementara itu, Marinus mengatakan produksi pelet organik membutuhkan biaya yang lebih kecil. Hanya besar di awal untuk pembelian alat. Mesin penggiling, kata Marinus, berkisar pada harga Rp4 juta, lalu ditambah modal membeli kedelai, listrik, serta upah dan tenaga untuk membuat dan mencari bahan-bahan yang ada di sekitar. Mesin maksimal bisa menghasilkan produksi hingga 200 kilogram per hari.

"Kalau di pasaran harga pelet pabrik itu Rp7.000-Rp8.000 per kilogram. Nah saya taksir, biaya produksi untuk pelet organik sekitar Rp1.000 per kilogram dan bisa dijual dengan harga Rp4.000, harganya sudah bersaing," tukasnya. (Wnd/M-3)

FOTO-FOTO: DOK. RIAU WOMEN WORKING GROUP

PELATIHAN: Para perempuan dari kelompok binaan Riau Women Working Group mengikuti pelatihan pembuatan pakan ternak berbahan gulma yang ada di lahan gambut.

BERSAING: Pelet yang dibuat dari tanaman pakis itu diperkirakan bisa menyaingi harga pelet pabrikan.

Papayas harvested from trees planted in Lombok Utara District, NTB using a model drip irrigation system powered by energy from solar panels from a partnership program between ICCTF and Mataram University.

The forestry farmer group supported by YEU receiving first prize in a national competition

Farmers from the Keningar Hijau group harvesting chile peppers planted with bioslurry as fertiliser.

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