



INTERIM REPORT Indonesia Domestic Biogas Programme

January - June 2017



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January – June 2017
30 July 2017



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Abbreviations

ASS	After Sales Service (resulting in partner inspection reports)
BANK JATENG	Central Java Development Bank
BAPPEDA	Regional Planning Bureau
BIRU	Biogas Rumah (domestic biogas)
BSM	Bank Syariah Mandiri
BSNI	National Standardization Agency of Indonesia
CLP	Climate Leadership Programme
CPO	Construction Partner Organization
DAK	Specific Allocation Fund (<i>Dana Alokasi Khusus</i>)
DGNREEC	Directorate General of New Renewable Energy and Electricity Conservation
DOE	Designated Operational Entity
ENDEV	Energising Development
EUR	Euro
FACET	Finance for Access to Clean Energy Technologies in South and Southeast Asia
GADING	Gathering and dissemination of information and green knowledge for a sustainable integrated farming workforce in Indonesia
GIZ	Gesellschaft für Internationale Zusammenarbeit (Agency for International Cooperation)
Hivos	Humanistic Institute for Cooperation with Developing Countries
IDBP	Indonesia Domestic Biogas Programme
INOFICE	Indonesian Organic Farming Certification
INSTIPER	Institut Pertanian Instiper (Agricultural Institute)
Kiva	U.S.-based non-profit organization that allows people to lend money via the Internet to low-income / underserved communities
MDGs	Millennium Development Goals
MEMR	Ministry of Energy and Mineral Resources
MFI	Micro Finance Institutions
NBPSO	National Biogas Programme Support Office
NGO	Non Governmental Organization
NTB	Nusa Tenggara Barat (province)
NTT	Nusa Tenggara Timur (province)
OEW	Op Eigen Wieken
PBPO	Provincial Biogas Programme Office
PC	Provincial Coordinator
QI	Quality Inspector
RBF	Rabo Bank Foundation
RNE	Royal Netherlands Embassy
RNE	Royal Norwegian Embassy
R&D	Research and Development
SOG	Standard Operating Guidelines
SNV	Netherlands Development Organization
SME	Small-Medium Enterprise
TOT	Training of Trainers
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VER	Voluntary Emissions Reductions

Output Summary

Programme start : 01 January 2017

Programme finish : 31 December 2017

Programme duration at the end of reporting period 6 months

No.	Activities	Achievements	Remarks/target																																																																				
1	Number of IDBP /BIRU digesters	Total: 960 units ENDEV: 565 MCA-I: 397 units																																																																					
2	Functioning rate	99%																																																																					
3	No of promotion activities	<p>Community Meeting on biogas awareness and slurry use Total Activities: 73 Total Participants: 6,433</p> <p>Community Meetings</p> <table border="1"> <thead> <tr> <th>Province</th> <th>Number of meetings</th> <th>Number of male participants</th> <th>No of female participants</th> </tr> </thead> <tbody> <tr> <td>Lampung</td> <td>4</td> <td>219</td> <td>43</td> </tr> <tr> <td>West Java</td> <td>5</td> <td>462</td> <td>213</td> </tr> <tr> <td>Central Java & DIY</td> <td>45</td> <td>2,071</td> <td>2,484</td> </tr> <tr> <td>East Java</td> <td>1</td> <td>7</td> <td>-</td> </tr> <tr> <td>Bali</td> <td>3</td> <td>12</td> <td>1</td> </tr> <tr> <td>NTB</td> <td>2</td> <td>55</td> <td>11</td> </tr> <tr> <td>NTT</td> <td>8</td> <td>145</td> <td>69</td> </tr> <tr> <td>South Sulawesi</td> <td>8</td> <td>245</td> <td>32</td> </tr> <tr> <td>Total</td> <td>76</td> <td>3216</td> <td>3217</td> </tr> </tbody> </table> <p>Event & Participation</p> <table border="1"> <thead> <tr> <th>Province</th> <th>Number of events</th> </tr> </thead> <tbody> <tr> <td>National</td> <td></td> </tr> <tr> <td>West Java</td> <td>6</td> </tr> <tr> <td>Central Java & DIY</td> <td>10</td> </tr> <tr> <td>Bali</td> <td>-</td> </tr> <tr> <td>Lampung</td> <td>9</td> </tr> <tr> <td>East Java</td> <td>1</td> </tr> <tr> <td>NTB</td> <td>1</td> </tr> <tr> <td>NTT</td> <td>10</td> </tr> <tr> <td>South Sulawesi</td> <td>8</td> </tr> <tr> <td>Total</td> <td>45</td> </tr> </tbody> </table> <p>Production of promotion and other materials</p> <table border="1"> <tbody> <tr> <td>Printing materials</td> <td>40,076 pcs (brochure, newsletter, roll-up banner, back wall, shirt, kit, calendar, dummy book, etc)</td> </tr> <tr> <td>Internet and mobile based</td> <td> <ul style="list-style-type: none"> Website: biru.or.id: 27,006 visitors Twitter account 770 followers Facebook account 6,236 likes; 2,441 friends SMS Hotline 10 SMS senders Whatsapp: 12 info@rumahenergi.org: 51 emails </td> </tr> <tr> <td>Media publication</td> <td> <ul style="list-style-type: none"> Radio promo Local newspaper Online National TV Channel National Magazine </td> </tr> </tbody> </table>	Province	Number of meetings	Number of male participants	No of female participants	Lampung	4	219	43	West Java	5	462	213	Central Java & DIY	45	2,071	2,484	East Java	1	7	-	Bali	3	12	1	NTB	2	55	11	NTT	8	145	69	South Sulawesi	8	245	32	Total	76	3216	3217	Province	Number of events	National		West Java	6	Central Java & DIY	10	Bali	-	Lampung	9	East Java	1	NTB	1	NTT	10	South Sulawesi	8	Total	45	Printing materials	40,076 pcs (brochure, newsletter, roll-up banner, back wall, shirt, kit, calendar, dummy book, etc)	Internet and mobile based	<ul style="list-style-type: none"> Website: biru.or.id: 27,006 visitors Twitter account 770 followers Facebook account 6,236 likes; 2,441 friends SMS Hotline 10 SMS senders Whatsapp: 12 info@rumahenergi.org: 51 emails 	Media publication	<ul style="list-style-type: none"> Radio promo Local newspaper Online National TV Channel National Magazine 	
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No.	Activities	Achievements	Remarks/target
3	No and % of households using credit	EUR 79,670 for 256 farmers	
4	No of credit providers (including cooperatives)	Total 33 Credit Providers in 7 provinces 6 in West Java, 7 in Central Java, 3 in Jogjakarta, 8 in East Java, 6 in Lampung, 1 in Bali and 2 in NTB Provinces	See details in Annex 6
5	MFI development	In 1 st semester of 2017, there are 6 new Credit Providers for bio-digester construction and 26 % of total 950 farmers have obtained bio digesters from credit facilities: 11 farmers in West Java, 1 farmers in Central Java, 29 farmers in Jogjakarta, 176 farmers in East Java, 33 farmers in Lampung and 6 farmers in Bali with total loan disbursement EUR 74,201	
6	Subsidy disbursed	EUR 128,726	
7	No of construction partners	Cooperatives: 11 NGOs: 21 SMEs: 28 Total : 60 CPOs	
8	No of provinces, districts and sub-districts	10 provinces 130 districts 885 sub-districts	
9	No of masons & supervisors trained	Total: 20 masons and 5 supervisors	
10	No of users trained	Total: 773 users (566 male, 207 female)	
11	No of plants inspected by CPOs (ASS = maintenance reports)	Overall: 23,738 inspections	
12	No of plants inspected by BIRU staff (during construction and after construction & after ASS/ After Sales Service)	Jan – Jun 2017: 387 inspections a. 124 inspections during construction b. 263 inspection after construction	
13	Bio-slurry activities	<ul style="list-style-type: none"> • 743 men and 715 women provided with bioslurry based product development. • 48 bioslurry business provided with technical assistance • 1 bioslurry fertilizer produced by user in West Java certified by Indonesian Organic Farming Certification 	
14	Biogas appliances R&D	<ol style="list-style-type: none"> 1. Manual for LPG stove modification for biogas (on-going) 2. Manufacturing of carburetor manifold for biogas generator set (on-going) 3. Research for the use of water hyacinth (<i>Eichhornia crassipes</i>) as primary feedings for biodigester has further been put into test with the construction of a 12m3 biodigester in Rawa Pening, Central Java under the cooperation with Hochschule für Forstwirtschaft Rottenburg. 4. 1 ATEC polyethylene-based biodigester test unit is now installed in Central Java for durability test 	
15	Contribution from Gol	<ol style="list-style-type: none"> 1. <i>Dinas Pertambangan dan Energi</i> (Agency of Mining and Energy) of NTB Province: EUR 148,857 2. <i>Dinas Pertambangan dan Energi</i> (Agency of Mining and Energy) of South Sulawesi Province: EUR 78,791 3. Special Allocation Fund of District of Wajo; South Sulawesi: EUR 3,945 4. <i>Badan Pemberdayaan Masyarakat Desa Kabupaten Bantaeng</i> (Agency of Village and Community Empowerment of District of Bantaeng); South Sulawesi: EUR 1,571 5. <i>Kantor Lingkungan Hidup Kabupaten Luwu Utara</i> (Agency of Environment Protection of District of Luwu Utara; South Sulawesi: EUR 6,706 6. <i>Kantor Lingkungan Hidup Kabupaten Sinjai</i> (Agency of Environment Protection of District of Sinjai); South Sulawesi: EUR 11,142 	
16	Biogas Expertise Centre activity	NA	

No.	Activities	Achievements		Remarks/target
17	External training and workshop participation	Province	Number of activities	
		Bali	1	
		Total	1	
18	External workshops organized	Province	Number of activities	
		NTB	1	
		NTT (Sumba)	2	
		South Sulawesi	1	
		Total	4	
19	Internal workshops/meetings organized	<i>National:</i> 1. Annual Meeting Quality Inspector, Jakarta 15 – 16 Mar 2017 2. Annual Meeting Coordinator, Bogor 26 – 27 Apr 2017		
20	No of coordination meeting with GoI	Province	Number of Coordination Meeting	
		Bali	-	
		West Java	6	
		Central Java and Yogyakarta	10	
		East Java	-	
		Lampung	9	
		West Nusa Tenggara	1	
		East Nusa Tenggara	10	
		South Sulawesi	9	
		National	-	
Total	45			

1. Introduction

This is the Interim Report of the Indonesia Domestic Biogas Programme (IDBP) for the period of January – June 2017. The first of semester of 2016 saw a considerably low rate of completion of number of biodigester as many as 949 units with support from EnDev and MCA-I fundings. This completion adds to the total 21,316 systems installed in ten provinces. Detail of program implementation is explained in detail below, based on the agreed framework



IDBP installation in Kediri, East Java (photo by Rumah Energi)

2. Programme objectives

Overall Objective

The IDBP proposal presents its overall objective as follows: “to contribute to economic prosperity, and support the development of a green economy and mitigation of climate change in Indonesia through the scale up of a national domestic biogas sector development programme to improve waste management and emissions reduction in the livestock and dairy sector.”

With reference to the IDBP up scaling proposal for 2017 – 2018 the program is committed that 61,750 people (36,750 for year 2017-2018) will benefit from gaining access to affordable clean energy through dissemination and application of biogas technologies. This is to be achieved particularly through the installation of good quality system of 7,350 biodigesters (including 750 non-IDBP digesters and 1,600 MCA-I funded digesters) in rural Indonesian households.

Through the management of biogas activities in the field it is expected that the program will contribute to the realization of 235 job creation during the upscaling (2017-2018) with total expected total 2,970 jobs creation in biogas sector (1,800 by the year of 2018). The job creation will include the realization of maximum use of the bioslurry for organic farming based increased crop yields as well as bioslurry business (composting, trade, vermin-culture, duckweed culture, mushroom culture, etc.).



Organic fertilizer process from liquid bio-slurry in West Java (photo by Redi Saputra)

Specific objective and output indicators

To promote the development of a market-oriented domestic biogas sector that provides access to affordable clean energy for livestock and dairy farmers through the dissemination and application of biogas technologies, with support for access to finance and enabling policy environment

Output indicators:

1. 7,350 households gain access to biogas technology through the installation of biogas system
2. >50% users pay more than EUR 350 for their digester
3. >50% user getting lower investment incentive
4. 80% user gaining income from bioslurry
5. 40% women actively involved in biogas decision and maximization of its benefit
6. 15 new construction partners actively involved in biogas dissemination
7. At least 3.25 tonnes average annual reduction of greenhouse gas emissions per HH (projected 135,242 tCO₂e by 2020)

3. Institutional setting

By 19 November 2012, as an effort to ensure a local ownership, Hivos established Yayasan Rumah Energi (YRE) and since then has become the only direct implementing partner. YRE has a mandate to provide new renewable energy access to households in both rural and urban areas, as well as to support food sovereignty. The establishment of YRE as local programme implementer has to ensure institutional sustainability.

For most part YRE seek to institutionalise the programme functions by building the capacity of public and private sector organisations, supporting the development of construction partners, linking microcredit providers to customers, and developing skilled human resources and training services for both men and women. In addition the YRE is expected to be able to establish itself as the key partner to the Government in maintaining the relevance and the high quality standard for the expansion of biogas technology throughout Indonesia. While relevant with the IDBP framework, YRE will seek opportunities toward institutional financial self reliance through maximizing its resources in biogas programming with other partners.



Biogas construction plant in Yogyakarta (photo by Rumah Energi)

4. Overview January – June 2017

4.1. Promotion, marketing and construction of 7,350 biodigesters

4.1.1 Number of biodigester constructed

Province	Target 2017	Actual Jan-June 2017)		Total
		MCAI	ENDEV	
Bali	540		99	99
West Java	557		16	36
Central Java and Yogyakarta	600		106	106
East Java	600		250	248
Lampung	514		42	42
Ntb	689	100		100
Sumba	300	128		128
South Sulawesi	700	169	32	201
Grand Total	4,500	397	565	960

Tabel 1. Plan vs Actual Bio-digester construction per province, Jan-Jun 2017

The IDBP completed the full installation of 960 systems in 10 provinces, with the average size of the digester is 6.11 m³ and the average contribution of user being at EUR 234.73. With the average size of the biogas family is 4.7 person, the IDBP secure that 4,512 person gain benefit access from the completion of those system in the first semester of 2017.

Comparing with the first semester of 2016, the current completion rate is considerably low. The decrease of completion rate can be attributed on heavy reliance on the co-financing programmes with the provincial and district governments. The slow progress of the first semester of 2017 is even evident in the provinces with high rate of government biodigester procurement such as NTB and South Sulawesi as the disbursement of government funding for the realization of the biodigester procurement usually comes in August. As such, it is expected that that NTB and South Sulawesi will demonstrate improved performances during the second semester due to the commencement of the co-financing programmes with the provincial government in April 2014.

The progress for biogas loan had not move in an expedite way. In this regard the IDBP recorded that there are 256 units constructed under loan support by existing credit partners (26% out of 960 units). Yet, the increase in Nestlé's contribution of around EUR 214 (previously EUR 142) for investment incentive is continued this semester to maintain the demand in East Java.

The performance rate of West Java with only one active construction partner is particularly alarming. Fortunately, the IDBP is able to secure the satisfactory performance with the current cooperation with the West Java water company (PJT II) for the construction of the 20 biodigesters under the company's Cisangkuy watershed rehabilitation programme. The cooperation with PJT II will continue until December 2016 for

the maximization of bioslurry business development for farmers that received the biodigesters under this cooperation. Preliminary discussion with PJT II is underway for the expansion of the cooperation scheme in other areas.



One of biogas installations under IDBP and PJT II cooperation in Pangalengan, West Java (photo by Redi Saputra)

4.1.2. Community participation in awareness meetings and promotion

By June the IDBP recorded that 37 community meetings and other promotion activities were organized by construction partners and IDBP field staff. Of those meetings the IDBP reached 4,839 people in which 2,848 (58%) is women.

As the IDBP is becoming more well-known by the regional government, there has been a rise in the participation of provincial teams in government exhibition and development campaign. Of particular interest, the IDBP in South Sulawesi is participating in launching of energy campaign by the Ministry of Energy and Mineral Resources in Makassar #EnergiBerkeadilan #Potong10% (the primary message being to use your energy sensibly and try to cut your energy consumption by 10%)

4.1.3. Functioning rate

The overall the digester functioning rate stands at above 96 percent as per the last Biogas User Survey in December 2016. Only about 1 percent of digesters are not in operation due to technical reason while the reasons for not using the biodigesters is mainly non-technical, i.e. household migration, sale or death of cattle¹.

4.1.4. Access to finance

There are 6 new loan provider partners registered in the IDBP for this semester, adding together 33 loan providers in the system. In particular IDBP managed to promote two local cooperatives; the KSU "Karya Nadhi" in Bali and KSPPS/Sharia-Based cooperative "Laa Roiba" in Lampung as RF Partners for biogas financing. By the end of June 2017, KSU "Karya Nadhi" has disbursed EUR 3,757 to 6 farmer for their biodigesters while, and KSPPS "Laa Roiba" has disbursed EUR 19,774 to 33 farmers for their biodigesters with permanent bio-slurry pits in one credit package. In total, this semester saw the disbursement of EUR 74,201 loan for biodigester to 256 farmers (26% of total 960 biodigester).

IDBP through YRE has started partnership process with the sharia unit of Central Java Provincial-Owned Development Bank (Bank Jateng). With PINBUK—one CPO in Yogyakarta, the IDBP proposed an integrated financing concept of cattle procurement and integrated farming via bio digester investment under the name

¹ The survey found 13.6% drop-off rate. This rate indicates that 13.6% of 287 sample households could not be interviewed because their biogas digesters are no longer used. From 13.6% drop-off rate, only 1% because of technical problems (leakage, broken water drain), meanwhile for other 12.5% because of non-technical problems. The highest drop-off rate is found among year-6 and year-7 users (19% and 24%, respectively).

of *Desa Bestari* with the total funds prepared at around EUR 700,000 (including for the management and monitoring cost for PINBUK and YRE). The kick-off of this partnership is expected to commence on August 2017.

IDBP through YRE working continuously with member-based financial institutions (i.e. credit union network) to overcome challenges faced in the conventional collateral system for credit provision. In addition, IDBP is promoting local cooperatives to become KIVA Field Partner or Rabobank Foundation partners to disburse Green Loan schemes for biogas.



IDBP Socialization Meeting for CU networks in NTT Province (photo by A. Wiratsongko)

Discussion with CU network provides further opportunity to reach the IDBP intervention to Flores and Timor Islands of NTT Province. Preliminary scheme to be finalized between the CU regional network (INKOPDIT) and the IDBP is to pilot a full biogas loan scheme without the provision of investment incentive in selected areas in Flores and Timor. The IDBP contribution to the pilot scheme will be accounted for the provision of construction training to masons under the CU in the areas and monitoring on quality of work. As such, CUs will have to devise a comprehensive productive loan package for biogas for the member. This scheme is expected to be running on October 2017.

No.	Credit Provider	No of borrowers (person)			Credit Disbursed (IDR)		
		2016	2017	2010-2017	2016	2017	2010-2017
1	KIVA	26	16	195	137,000,000	83,000,000	1,049,000,000
2	Credit Union	5	6	11	40,000,000	40,600,000	96,600,000
3	Rabobank Foundation	36	49	1,199	304,416,500	382,791,000	5,811,748,000
4	Nestle	258	126	5,737	1,342,076,323	619,081,000	26,567,829,848
5	KAN Jabung – East Java	12	39	471	57,563,000	121,503,000	1,904,986,538
6	BSM (KUD Setia Kawan) – East Java	3	-	856	20,250,000	-	4,589,523,000
7	Others	41	15	365	185,473,600	67,376,000	1,481,213,225
8	Total	381	251	8,834	2,086,781,439	1,314,351,000	41,500,900,611

Tabel 2. Loan disbursement for biodigester, 2016- 2017

4.2. Capacity development, quality assurance and monitoring

4.2.1 Partnership with Construction Partners

IDBP aims to establish strong, professional and business-oriented partners for biogas construction and maintenance services. Two new partners were recruited by the name of CV Rizky Utama (South Sulawesi) and Mitra Sarana Energi (Yogyakarta) which set the total of 61 construction partners registered under the IDBP.

4.2.2. Investment incentive administration

From January until June 2017, IDBP disbursed EUR 128,726 for investment incentive (EUR 113,854 from carbon sales and EUR 14,872 from MCA-I).

4.2.3 Capacity building

4.2.3.1. Masons and supervisors training

In the first semester of 2017, a total of 20 masons and 5 supervisors were trained. The number add to the total of 1,192 masons and 300 supervisors that have been trained by the IDBP since 2009

Province	New Mason	New Supervisor
South Sulawesi	11	1
Yogyakarta	5	-
NTT (Sumba)	4	4
Total	20	5

Tabel 3. Number of masons and supervisors trained, Jan-Jun 2017

4.2.3.2. Business management coaching for CPO

One important part for establishing a healthy biogas sector is by having sound management and financial capacity of construction partners. While IDBP has developed a comprehensive management and financial training modules, a more direct on the field coaching is necessary to regularly improve the capacity of the CPO in managing their business through effective marketing and investment strategy.

Against this backdrop and in line with the establishment of a new competitive price for IDBP biodigesters, a series of working session with construction partners were organized to establish improved business planning process for biogas marketing. The sessions were implemented in Central Java, East Java, South Sulawesi, NTB and Sumba throughout February to March 2017.

4.2.3.3. Users training

Besides training for the staff of partner organizations, IDBP also organizes user training on the proper operation and maintenance of biogas digesters. As recorded in the Biogas User Survey of 2016, the percentage of women involved biogas usage stands on 26% while the involvement of women for the maintenance training is 46%. The figure is confirmed by the data that by June 2017 the IDBP provided training to 733 user (26% are women) in the ten provinces. This sets the total number of users that have received training since 2009 to 15,261 people.

4.2.4 Quality control of digesters

In ensuring the full functioning of the biogas system the IDBP maintain high standard for quality work by its partners. In the first semester of 2017 the provincial quality staff completed the inspection to 387 units (124 units during construction and 263 after construction). This add to the total inspection by provincial staff of 9,472 units. Meanwhile the number of after sales service performed by construction partners has reached 23,738 visits.

Quality Inspection During Construction in 2017		Quality Inspection After Construction in 2017	
Target:	Achieved:	Target:	Achieved:
96	124	144	263

Table 4. Number of biogas inspection by quality inspector, Jan-Jun 2017

Year	Completed Reactor	ASS 1		ASS 2	
		Completed	Not Completed	Completed	Not Completed
2009	62	58	4	49	13
2010	1,586	1,575	11	1,507	79
2011	2,995	2,955	40	2,703	292
2012	3,339	3,198	141	2,593	746
2013	3,269	3,027	242	1,814	1455
2014	2,973	2,381	592	1,188	1785
2015	2,378	1,303	1,075	283	2,095
2016	3,543	642	2,901	0	3,543
2017	960	960	0	960	0

Table 5. Accumulative ASS carried out by CPO, 2009-2017

4.2.5 Bioslurry utilization

The national highly subsidized LPG programme had created less incentive for household to go for biogas as the main source of energy for cooking. Meanwhile, the Biogas User Survey (BUS) of 2016 found that 83% of the biogas users are already using bio-slurry as fertilizer. While the percentage of user getting the benefit from the selling of the bioslurry based product is still below 10%, it is interesting that the survey affirmed that 66% female manage extra income from the biogas plant.

In taking this development into account the IDBP moves towards making the best of bioslurry potential as a key for biogas promotion, especially through increased participation of women. Within the framework of the '**Gathering and dissemination of information and green knowledge for a sustainable integrated farming workforce in Indonesia**' (**GADING**) project which is built upon the IDBP approach, the promotion and capacity building activities for improved households' livelihood contributes positively for increasing the demands for biogas.



GADING Demplot (Rumah Organik) as a learning center of bio-slurry utilization in agriculture located in Yogyakarta (photo by Agus Setia Budi)

Intensive gender inclusive training on management of bioslurry and integrated farming were moving exponentially in West Java, Yogyakarta, NTB and Sumba. From January to June the programme has completed the trainings for 560 people (with 78 women or 13%) on gender and bioslurry management. Moreover, technical support is provided for the expansion of bioslurry business for 48 farmers in West Java, NTB and Sumba. Of particular interest, at the time of the writing of this report, the Indonesian Organic Farming Certification (INOFICE) approved the organic certification YRE or solid and liquid bioslurry fertilizer under the brand *Pupuk Organik Super Slurry*.

Training	Male	Female
Organic stock fodder	203	294
Aquaculture	89	80
Bioslurry and lemna	365	277
Small business	86	64
Total	743	715

Tabel 6. Number of bioslurry related training, Jan-Jun 2017

Province	Number of individual	Type of business
West Java	9	Worm farming, aquaculture, bio-slurry fertilizer
NTB	33	Fish farming, worm farming, bio-slurry fertilizer
Sumba	6	Bio-slurry fertilizer
Total	48	

Tabel 7. Number of bioslurry business received support, Jan-Jun 2017

4.2.6. Biogas appliances research and design

There has been steady increased in the demands for the double burner stove from the potential user. In responding to the demand, IDBP has approved the double burner stove under the brand **Butterfly 868 S-Bg** manufactured by PT Solihin Jaya (BTFLY T 01) with average efficiency result of 52.7%.

The YRE office of Central Java-Yogyakarta has been the center of excellence for further biogas appliances research and development. A number of Indonesian and overseas students are now taking the opportunity to learn about the biogas technology while volunteering at the Central Java office for biogas promotion with the IDBP. A number of researches is currently being carried out in Central Java/Yogyakarta:

1. In close cooperation with Institut Teknologi Pertanian (Instiper) of Yogyakarta on developing a module for the modification of LPG stove for biogas. The final module is expected to be ready by December 2017 upon efficiency test on the modified LPG stove carried out by Instiper.
2. The IDBP had worked also with Instiper in developing test unit for biogas generator set in Yogyakarta. In taking the result of the testing further, the IDBP is now in the discussion process with CV Karsa Tekad Mandiri (one construction partners in East Java) for manufacturing a complete unit of biogas generator set carburetor manifold which is expected to be ready in December 2017.
3. A research for the use of water hyacinth (*Eichhornia crassipes*) as primary feedings for biodigester has further been put into test with the construction of a 12m³ biodigester in Rawa Pening, Central Java under the cooperation with Hochschule für Forstwirtschaft Rottenburg. The results of the research have been shared with IDBP and should be able to serve as advocacy tools for biogas technology promotion for environment management in Central Java.
4. 1 ATEC portable biodigester test unit is now installed in Central Java as follow up of the visit of IDBP technical persons to Cambodia in September 2016. The portable unit which is made by polyethylene is now being tested for its durability.

4.3. Establishment of enabling policy environment for a sustainable biogas sector development

4.3.1. Standardization of biogas appliances by the Gol

The national government is pushing the national agenda on biogas through the allocation of special funds (*Dana Alokasi Khusus-DAK*) for regional governments for biodigester construction which is only accessible through submission of appropriate technical proposal from the head of provinces and districts. The IDBP, through YRE has established itself as key partner of the DGNREEC is establishing and updating the national guideline for the fixed dome digester which serves as the main reference for the development of proposal for accessing the DAK by the head of regional government. By playing active part in the formulation of guidelines the IDBP can ensure that the development of the national biodigester system will not deviate from the appropriate standard that has been set forth by the programme.

4.3.2. Financial contribution from Gol to support market-based biogas dissemination

The Gol has welcomed IDBP's co-financing scheme as an approach to sector development with the first scheme of construction material contribution made by the, DGNREEC to East Java in 2013 (IDBP and the Gol each contributed EUR 107/biodigester while the farmers cover for remaining cost). The construction material contribution in East Java is now still on going and being administered by the Energy and Mineral Agency of East Java Province.

The co-financing scheme has been further adopted and developed by the regional government (provinces and districts) in NTB and South Sulawesi. Cooperation plans with provincial and district governments for 2017 are detailed in the table below:

Contribution from Gol	Province	IDR	EUR	No of biodigesters
<i>Dinas Pertambangan dan Energi (Agency of Mining and Energy)</i>	NTB	2,084,000,000	148,857	160
<i>Dinas Pertambangan dan Energi (Agency of Mining and Energy)</i>	South Sulawesi	1,103,085,450	78,791	163
<i>Special Allocation Fund of District of Wajo</i>	South Sulawesi	55.236.756	3,945	6
<i>Badan Pemberdayaan Masyarakat Desa Kabupaten Bantaeng (Agency of Village and Community Empowerment of District of Bantaeng)</i>	South Sulawesi	22,000,000	1,571	2
<i>Kantor Lingkungan Hidup Kabupaten Luwu Utara (Agency of Environment Protection of District of Luwu Utara)</i>	South Sulawesi	93,891,280	6,706	8
<i>Kantor Lingkungan Hidup Kabupaten Sinjai (Agency of Environment Protection of District of Sinjai)</i>	South Sulawesi	156,000,000	11,142	12
Total		3,514,213,486	251,012	351

Tabel 8. Government Agencies Financial Contribution for Bio-digester Construction in 2017

4.3.2. Expanding biogas advocacy to other government institutions

The Ministry of Energy and Mineral Resources c.q. DGNREEC had been the primary national government counterpart of the IDBP. Through years of implementation the IDBP has expanded biogas advocacy towards other sector, primarily at the regional level. As of now the agency of environment protection in some districts have followed suit in contributing efforts for biogas dissemination. Efforts are also underway to convince other relevant agencies such as Livestock and Farming Agency to take part in bioslurry dissemination.

The endorsement of the village special allocation funds for infrastructure by the Gol also creates more opportunity to disseminate biogas technology further. As of now, series of consultation with districts and villages officials are taking place within community meetings and workshops to assess the possibility of accessing the village infrastructure fund for biogas programming.



A family in East Java utilizing biogas from quails manure to support gas for daily cooking (photo by Rumah Energi)

5. Other Relevant Activities

Challenges and lessons learned

Promo and marketing: The IDBP takes note that the low rate of completion for the first semester of 2017 is primarily attributed to the reduced contribution of government in biodigester procurement. That is, the acknowledgment of the government regarding the good quality work of the IDBP construction partners resulted in the high rate of completion (particularly in South Sulawesi and NTB). Unfortunately, this is followed by the lessening of the implementation of promotion by construction partners to direct user as many of those with already focus on chasing government biodigester procurement. Biogas promotion from the improved livelihood as result of bioslurry application has long been overlooked. The provinces will need to build up their promotion strategies on the improved ways of bioslurry management by successful farmers.

Channeling government support for biogas dissemination: Provision of government funds for biogas programme is beneficial as to maintain the steady rate of biodigester construction. However, since government contribution is channelled as direct subsidy for the construction of biodigesters, it gets more difficult it is to realize market-based sector development. The IDBP, particularly within the current discussion with Bank Jateng working on establishing the scheme for which the subsidy for biodigester is channelled through productive credit for integrated farming.



The benefit of bio-slurry application for crops as a promotion strategy to increase the demands for biodigesters (photo by Rumah Energi)

Annex

Annex 1: IDBP Office addresses

BIRU OFFICE ADDRESSES			
No	Province	Address	Phone and Fax
1	Jakarta	Jl. Pejaten Barat No. 30 A Jakarta 12550	Ph : +62 21 7821090 , +62 21 7821086 Fax : +62 21 7804443
2	West Java	Jl. Reog IV No.1 Turangga, Bandung, Jawa Barat	Ph/Fax : +62 812 18120545
3	Central Java	Jl. Diponegoro no 17 RT 005 RW 009 Karang Anom Klaten Utara, Jawa Tengah 57437	Ph/Fax : +62 272325968
4	East Java	Jl. Terusan Wijaya Kusuma Atas No. 51 Kelurahan Jatimulyo, Kecamatan Lowokwaru, Malang, 65119	Ph : +62 271 486737 Fax : +62 271 471053
6	West Nusa Tenggara & Bali	Jl. Kebyar Nomor No.7 Mataram, Nusa Tenggara Barat	Ph/Fax : +62 370 630580
7	South Sulawesi	Jl. Todopuli Raya Timur Kompleks Villa Surya Mas Blok E/03 Kelurahan Borong, Kecamatan Manggala Kota Makassar, Sulawesi Selatan	Ph/Fax : +62 411 831044
8	Lampung	Perumahan Bumi Puspa Kencana 3 Estate, Blok A No. 2 Rajabasa, Bandar Lampung	Ph : +62 721 801 2903
9	Sumba	Jl. Palapa No. 31 Matawai Kota Waingapu, Nusa Tenggara Timur	Tlp/Fax : +62 387 61865

Roll-up Banner Bio-slurry



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 Hotline: +62-81280302020
 E-mail: info@rumahenergi.org



www.rumahenergi.org

www.bru.or.id

@brudbp / @rumahenergi @rumahenergi Biogas Rumah / Rumah Energi
 Rumah Energi Rumah Energi

Photo Booth



Folded Brochure BIRU



Brochure BIRU Profile (bahasa)



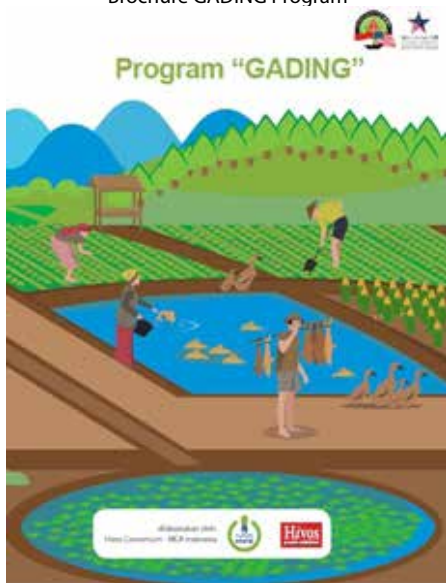
Brochure BIRU Profile (english)



Brochure Bio-slurry Benefit



Brochure GADING Program



Brochure Bio-slurry Profile



Flipchart Bio-slurry



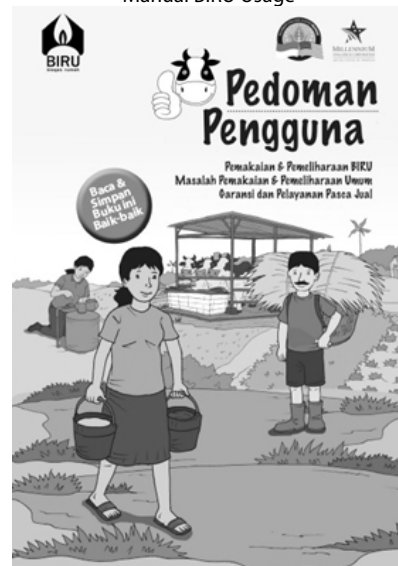
Newsletter



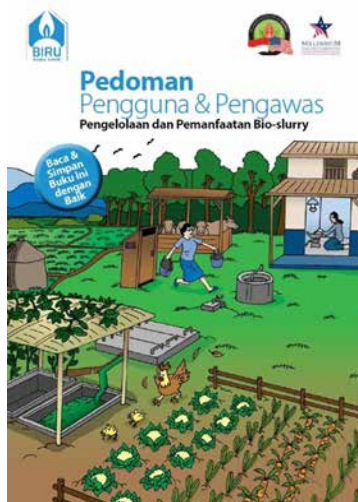
Sticker Biogas Usage



Manual BIRU Usage



Manual Bio-slurry Usage



BIRU Book



Roll-up Banner Rumah Energi



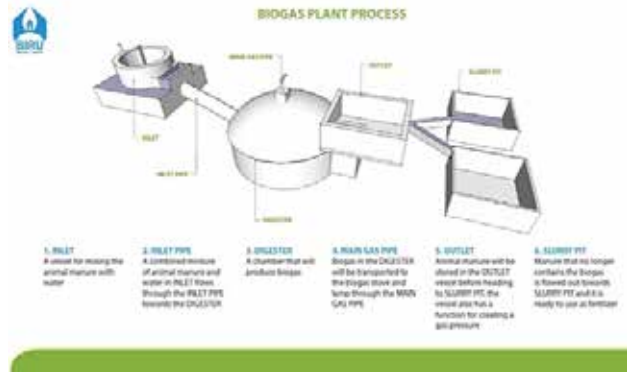
Yayasan Rumah Energi

"Building our dream for a green future"



www.rumahenergi.org
www.bti.or.id

Backdrop Biogas Process Plant



Backdrop Integrated Farming



Poster Lemna (Duckweed)

FOOD & BUSINESS APPLIED RESEARCH FUND

The qualification of Lemna as a sustainable and high productivity of biomass required for biogas production.

CONTRIBUTION RESEARCHER

PROJECT GOALS/OUTPUT

OPPORTUNITIES AND CHALLENGES

IMPACT ACTIVITIES AND PRELIMINARY RESULTS

The poster includes a flowchart of the research process and several photographs showing Lemna cultivation and biogas production.

Mug



Tumbler



T-shirt



Roll-up Banner Biogas Appliances



Annex 3: List of Construction Partners

No.	Name of Construction Partners	Province
SME		
1.	CV Karsa Tekad Mandiri	East Java
2.	CV Qaryah Thayyibah	Central Java
3.	CV Sarana Sejahtera	Central Java
4.	UD Bontomarannu	South Sulawesi
5.	CV Fitria Jaya Abadi	Lampung
6.	Sumber Makmur Mason Group	East Java
7.	Mandiri Mason Group	South Sulawesi
8.	Regol Mason Group	Lampung
9.	Dewata mason Group	Bali
10.	Langit Biru Mason Group	East Java
11.	Mitra Sarana Kuba Mason Group	South Sulawesi
12.	Sangkareang Mason Group	NTB
13.	CV. Bina Energi Mandiri Persada	Central Java
14.	CV. Ritma Green Sinergy	South Sulawesi
15.	Paroso Mason Group	NTB
16.	Persada Mason Group	East Java
17.	Harapan Bersama Mason Group	Lampung
18.	Mabarakka Mason Group	South Sulawesi
19.	LKM Rukun Makmur	Central Java
20.	Pusat Inkubasi Bisnis Usaha Kecil (Pinbuk)	Central Java
21.	CV. H&B Putra Mandiri	Central Java
22.	CV. Nur Indah Karya	South Sulawesi
23.	CV. Rezki Abadi	South Sulawesi
24.	CV. Mega Muliya	South Sulawesi
25.	CV. Mitra Bumi Abadi	East Java
26.	CV. Palapa Abadi	NTB
27.	Rumah Hijau Organik Mason Group	Sumba (NTT)
28.	Mitra Sarana Energi	Central Java
29.	PT. Bhumi Asri Lumigar	West Java
30.	CV. Rehan Putra Palbon	South Sulawesi
31.	CV. Rezky Utama Masagena	South Sulawesi
NGO		
32.	Yayasan Sumberdaya dan Lingkungan untuk Pelestarian Pembangunan (YSLPP)	NTB
33.	Yayasan Sion	Central Java
34.	Yayasan Trukajaya	Central Java
35.	Lembaga Pengkajian Kemasyarakatan dan Pembangunan (LPKP)	East Java
36.	Lembaga Pengembangan Pertanian Nahdatul Ulama (LPP-NU)	Lampung
37.	Yayasan Suara Bhakti	Central Java
38.	LPTP	Central Java
39.	Lembaga Pendidikan dan Pemberdayaan Anak Bangsa (LPPAB)	East Java
40.	Yayasan Lembaga Pembinaan Masyarakat Desa (YLPMD)	Lampung
41.	Yayasan Manikaya Kauci	Bali

No.	Name of Construction Partners	Province
42.	Lembaga Sosial Waimaringi	Sumba (NTT)
43.	Yayasan Harapan Sumba	Sumba (NTT)
44.	Yayasan Kontak Indonesia	West Java
45.	LSPI At-Tayseer	Central Java
46.	Yayasan Prakarsa Swadaya Masyarakat (YPSM)	East Java
47.	Yayasan Sastra Loka Samgraha	Bali
48.	Yayasan Kontak Indonesia	West Java
49.	MPM Muhammadiyah Luwu Timur	South Sulawesi
50.	Yayasan Petta Haji Hasbullah	South Sulawesi
Cooperative		
51.	KAN Jabung	East Java
52.	KUD Semen	East Java
53.	KUD Sumber Makmur Ngantang	East Java
54.	KUD Tani Wilis	East Java
55.	Koperasi SAE Pujon	East Java
56.	KUD Tani Makmur	East Java
57.	KSU Bulu Saukang	South Sulawesi
58.	Koperasi Andini Luhur	Central Java
59.	Koperasi Jasa Peduli Kasih	Sumba (NTT)
60.	KPGS	West Java

Annex 4: List of IDBP Area (Subdistrict and District)

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
East Java	Kabupaten Malang	2010	Pujon, Ngantang, Jabung, Kasembon, Dau, Karangploso, Wagir, Singosari	1	8
		2011	Poncokusumo, Bantur, Gondonglegi, Pakis, Medowo, Lawang, Wonoagung	0	7
		2012	Bayem, Pait, Pondok Agung, Blimbing, Tumpang, Sukosari, Turen	0	7
		2013	Pagelaran, Kedung Kandang, Wajak	0	3
		2014	Sumber Manjing Wetan, Sumber Puncung, Gedangan	0	3
		2015	Ngajum	0	1
		2016	Wonosari	0	1
	Kediri	2010	Kandangan, Kepung, Puncu, Pagu, Wates, Ngancar	1	6
		2011	Plosoklaten, Gurah, Kandat	0	3
		2012	Medowo, Mlancu, Segaran	0	3
		2014	Kras, Ringinrejo	0	2
		2015	Mojoroto, Ngadilurih, Nganjuk	0	3
	Jombang	2011	Wonosalam, wulung, Bareng	1	3
		2012	Galengdowo	0	1
	Blitar	2010	Gandusari	1	1
		2011	Semen, Wlingi	0	2
		2012	Sanan Kulon	0	1
		2013	Kanigoro, Talun, Srengat, Garum, Doko, Ponggok	0	5
		2014	Wonodadi, Sukorejo, Udanawu	0	3
		2015	Kademangan, Udanawu	0	2
		2016	Selopuro	0	1
	Pasuruan	2010	Tutur, Purwodadi, Puspo	1	3
		2011	Grati, Blarang, Lumbang, Nongkojajar, Tlogosari, Wonosari, Nguling, Lekok	0	8

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2012	Ngembal	0	1
		2013	Pasrepan	0	1
	Mojokerto	2011	Pacet	1	1
		2013	Trawas	0	1
	Tulungagung	2011	Ngunut, Sendang, Pagerwojo, Kedung waru, Rejotangan, Sumber Gempol	1	6
		2014	Karangrejo, Pucang Laban	0	2
	Kota Batu	2011	Junrejo	1	1
		2014	Bumiaji, Batuaji	0	2
	Probolinggo	2011	Krucil	1	1
		2014	Maron, Bantaran, Tiris	0	3
	Trenggalek	2011	Bendungan, Pule, Kelutan	1	3
		2015	Gandusari, Suruh	0	2
	Lumajang	2010	Senduro	1	1
		2011	Tempeh , Kunir, Kandang tepus, Kedung jajang	0	4
		2013	Sukodono, Padangan, Rowokangkung	0	3
		2014	Tekung, Pasirian, Pasirjambe	0	3
		2015	Randuagung	0	1
	Jember	2011	Ambulu	1	1
		2015	Wuluhan, Tanggul, Tempurejo, Tempursari, Gumuk Mas, Puger	0	6
		2016	Kaliwates, Sukorambi	0	2
	Ngawi	2011	Bringin, Geneng, Pitu, Ngawi, Ngrambe	1	5
		2014	Sine, Mantingan	0	2
	Ponorogo	2011	Pudakwetan, Sooko	1	2

Province	District/city	Year	Sub-district	Tot D	Tot SD	
				2009-2017		
East Java		2012	Kauman, Krisik, Pulung, Ponorogo, Siman, Jambon	0	6	
		2013	Ngrayun, Balong, Sukorejo, Slahung	0	4	
		2014	Badegan, Mlarak, Bungkal, Babatan	0	4	
		2016	Sampung	0	1	
	Magetan	2011	Bulugunung, Panean	1	2	
		2014	Maospati	0	1	
	Madiun	2013	Dolopo	1	1	
	Gresik	2014	Sidayu, Dukun, Menganti	1	3	
		2015	Ujung Pangkah	0	1	
	Banyuwangi	2013	Bangurejo, Siliragung	1	2	
	Sumenep	2013	Ganding	1	1	
	Total East Java				19	157
	Central Java	Sragen	2010	Kedawung, Plupuh	1	2
2011			Gemolong, Sambirejo, Sragen	0	3	
2012			Ngrampal, Miri	0	2	
2013			Sambung Macan, Karang Malang	0	2	
2014			Masaran, Gondang, Sidoharjo	0	3	
2015			Gesi	0	1	
Tegal		2014	Margasari	1	1	
Wonogiri		2010	Wonogiri, Ngadirojo	1	2	
		2011	Giriwolyo	0	1	
		2012	Nguntoronadi, Tirtomoyo	0	2	
		2013	Baturetno, Batuwarno, Jatipurno, Puhpelem	0	4	
		2014	Wuryantoro, Sumberejo	0	1	

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
	Banjar negara	2011	Bawang, Pejaweran, Manadadi	1	3
		2013	Mandiraja	0	1
	Karanganyar	2011	Jumantono, Jatipuro, Jatiyoso, Tawangmangu, Matesi, Sambat	1	6
		2012	Mojogedang, Lempong, Jaten, Jenawi, Ngargoyoso, Jumapolo	0	6
		2013	Kerjo, Bolong	0	2
		2014	Tasikmadu, Gondangrejo, Karangpandan	0	3
		2015	Kebakkramat	0	1
	Sukoharjo	2010	Nguter	1	1
		2011	Gatak, Bendosari, Palokarto, Tawang Sari	0	4
	Grobogan	2011	Purwodadi, Wirosari	1	2
		2012	Krajan	0	1
		2014	Geyer	0	1
		2015	Pulokulon	0	1
		2016	Kradenan	0	1
	Wonosobo	2010	Selomerto	1	1
		2011	Kepil	0	1
		2012	Wadaslintang	0	1
		2015	Mojotengah	0	1
	Klaten	2011	Cawas, Kemalangan, Bayat, Jagonayan, Karangnom	1	5
		2012	Jogonalan, Kalikotes, kebon arum, Kebon dalem, Kemalang, Manisrenggo, Polanharjo, Prambanan, Trucuk, Tulung, Balerejo, Delanggu	0	12
		2013	Karangdowo	0	1
		2014	Karangnongko	0	1
		2015	Besaran, Gantiwarno, Pedan	0	3

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2016	Jatinom	0	1
	Boyolali	2010	Mojosongo, Teras, Selo	1	3
		2011	Karanggede, Sambu, Simo, Musuk, Ampel, Klego	0	6
		2012	Andong, Bendungan, Cepogo, Angsuk, Kemusu, Lencohkelo	0	6
		2013	Banyudono	0	1
		2014	Sidomulyo, Nogosari	0	2
		2015	Nogosari	0	1
	Magelang	2011	Dukun	0	2
		2012	Salam, Srumbung, Ngablak, Sawangan	0	4
		2013	Borobudur, Grabak	0	2
		2015	Magelang Selatan, Mertoyudan, Muntilan, Pakis	0	4
		2016	Bandongan	0	1
	Temanggung	2010	Temanggung, Kaloran	1	2
		2013	Tlogomulyo, Kranggan, Parakan	0	3
		2014	Bulu, Bansari	0	2
		2015	Gemawang, Pringsurat	0	2
	Kabupaten Semarang	2010	Tengaran, Suruh, Ungaran, Sumowono, Gunung pati, Getasan, Pabelan, Bergas, Tembalang, Susukan	1	10
		2011	Plupuh, Ungaran Barat, Banyubiru, Kaliwungu	0	4
		2012	Bancak	0	1
		2013	Kedung Mungdu, Tuntang, Bandungan, Bawen	0	4
		2014	Ambarawa	0	1
		2015	Kebumen	0	1
	Salatiga	2010	Argomulyo	1	1
2011		Sidorejo	0	1	

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2012	Tingkir	0	1
		2014	Sidomukti	0	1
	Blora	2011	Japah	1	1
		2012	Sambong	0	1
		2013	Ngawen	0	1
		2015	Jepon, Jiken	0	2
	Banyumas	2011	Sokaraja	1	1
	Jepara	2011	Keling	1	1
		2012	Mlonggo, Pakisaji, Pecangaan, Tahunan, Mantingan	0	5
		2013	Mayong	0	1
	Batang	2011	Subah, Tersono	1	2
	Rembang	2012	Rembang	1	1
		2013	Lasem, Pamotan, Sedan, Gunem	0	4
		2014	Pancur	0	1
		2015	Krangan, Sulung	0	2
	Kendal	2011	Bojo	1	1
		2013	Singorojo	0	10
	Pati	2012	Gabus, Jakenan	1	1
		2013	Tayu	0	1
		2014	Wedarijaksa, Sukolilo, Pati	0	3
		2015	Donorojo, Juwana, Margoyoso, Tambakromo	0	4
		2016	Dukuhseti	0	1
	Pemalang	2012	Pemalang	1	1
		2014	Randudongkal	0	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
	Kebumen	2014	Mirit	1	1
	Kudus	2015	Gebog	1	1
		2016	Dawe	0	1
	Tuban	2015	Bancar	1	1
	Brebes	2012	Paguyangan	1	1
	Purworejo	2016	Ngombol	1	1
Yogyakarta	Bantul	2010	Pundong, Bambanglipuro, Jetis, Srandakan,	1	4
		2011	Pleret	1	1
		2012	Kretek, Piyungan, Banguntapan, Pandak, Pundong, Sedayu, Sewon	0	7
		2013	Dlingo, Sanden, Imogiri	0	3
		2014	Pajangan, Srandakan	0	2
		2016	Kasihani	0	1
	Gunung Kidul	2011	Nglipar	1	1
		2012	Panggung, Sapto Sari	0	1
		2013	Ponjong, Wonosari	0	2
		2014	Playen, Patuk, Semanu, Semin, Tanjung Sari	0	5
		2015	Gedang Sari, Karang Mojo, Ponjong	0	3
		2016	Ngawen, Playen	0	2
	Sleman	2010	Cangkringan	1	1
		2011	Sawangan, Ngluwar, Candi Mulyo	0	3
		2013	Turi, Ngemplak, Berbah, Tempel, Moyudan, Ngaglik	0	6
		2014	Pakem, Gamping	0	1
		2015	Minggir, Mlati	0	2
		2016	Depok, Prambanan	0	2

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
	Kota Yogyakarta	2014	Gondomanan, Mantrijeron	1	2
	Kulon Progo	2012	Galur, Kokap	1	2
		2013	Kalibawang, Lendah	0	2
		2014	Nanggulan	0	1
		2015	Sentolo	0	1
		2016	Jatirejo	0	1
Total Centra Java/Yogya				32	258
West Java	Kabupaten Bandung	2010	Pangalengan	1	1
		2011	Kertasari, Pacet, Arjasari, Ciwidey, Pasirjambu, Majalaya	0	6
		2012	Soreang	0	1
		2014	Cileunyi, Cilengkrang, Cimeunyan, Rancaekek, Cikancung	0	5
		2016	Ibun, Selokan Jeruk	0	2
	Banjar	2016	Pataruman	1	1
	Cianjur	2011	Gekbrong, Cipanas	0	3
		2015	Sukaresmi, Pacet	0	2
	Sukabumi	2011	Cicurug, Sukaraja, Cibodas	1	3
		2012	Purabaya	0	1
		2013	Sukalarang, Cikembar	0	2
		2014	Nyalindung, Surade	0	2
		2015	Kalapanunggal, Kabandungan	0	2
	Bandung Barat	2010	Lembang, Cisarua	1	2
		2012	Parongpong	0	1
		2014	Ngamprah	0	1
	Depok	2015	Sawangan, Tapos, Cipayung	1	3

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2016	Limo	0	1
	Garut	2010	Bayongbong, Cigedug, Bluburlimbangan, Cisurupan	1	4
		2011	Cikajang	0	1
		2012	Tarogong kaler, Selawi, Pamengpeuk, Karangpawitan	0	4
		2013	Cihurip, Banjarwangi	0	2
		2014	Cikancung	0	2
		2016	Karang Tengah	0	1
	Subang	2011	Ciater, Sagalaherang, Jalancagak	1	4
		2013	Ciasem	0	1
		2016	Cisalak, Tanjungsiang	0	2
	Sumedang	2010	Tanjungsari	1	1
		2011	Pamulihan, Sukasari, Tandangsari, Jatinangor, Darmaraja, Parakamuncang, Cimanggung	0	7
	Purwakarta	2011	Bungursari	1	1
		2014	Cibatu, Wanayasa, Manis, Cempaka	0	4
	Bogor	2011	Nanggung, Cisarua, Megamendung	1	3
		2012	Bojong Gede	0	1
		2014	Cariu	0	1
		2015	Kemang, Jasinga	0	2
		2016	Cibungbulang, Pamijahan	0	2
	Kota Bandung	2011	Dago, Puncrut	1	2
	Indramayu	2011	Sliyeg	1	1
		2012	Sindeng	0	1
		2014	Arjasari	0	1
	Kuningan	2011	Cigugur	1	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2014	Maleber	0	1
		2016	Kramat Mulya	0	1
	Cirebon	2011	Talun	1	1
		2012	Gempol	0	1
	Tasikmalaya	2012	Karangnunggal	1	1
	Bekasi	2013	BojongManggu, Tambun Selatan	1	2
		2014	Jati Sampurna, Cikarang Utara, Cikarang Pusat, Pondok Melati, Cibarusah	0	5
		2015	Babelan, Pondok Melati, Serang Baru, Sukakarya, Sukawangi, Tambun Utara	0	6
	Ciamis	2014	Lumbung	1	1
		2015	Baregbeg	0	1
Pangandaran	2015	Padaherang	1	1	
Banten	Pandeglang	2011	Citeureup	1	1
		2012	Bojong, Koroncong, Carita, Panimbang	0	4
	Serang	2013	Waringin kurung	1	1
	Tangerang	2012	Jambe	1	1
	Lebak	2015	Cibadak, Warunggunung	1	2
DKI Jakarta	Jakarta Selatan	2012	Pancoran, Mampang Prapatan, Cikoko	1	3
West Java (and Banten)				23	121
South Sulawesi	Enrekang	2011	Cendana, Maiwa, Enrekang, Anggeraja, Baraka, Buntu batu, Malua, Alla, Curio, Baroko, Masalle	1	11
	Barru	2015	Barru, Tanete Rilau, Balusu, Tanete Riaja, Barru	1	5
		2016	Mallusetasi, Soppeng Riaja	0	2
	Bantaeng	2015	Bissappu, Eremerasa, Gantara, Gantarang, Pajukukang, Tompobulu	1	6
		2016	Sinoa	0	1
	Sinjai	2011	Sinjai Selatan	1	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2012	Sinjai Timur, Tellu Limpoe, Sinjai Barat, Sinjai Tengah	0	4
		2015	Sinjai Utara	0	1
		2016	Sangiasseri	0	1
	Bone	2011	Bengo, Sua Baccoe	1	2
		2012	Kahu, Patimpeng	0	1
		2013	Amali, Tonra, Lamuru, Lappariaja	0	4
		2014	Barebbo, Awangpone, Cenrana	0	3
		2015	Mare	0	1
		2016	Libureng, Ponre, Tellu Siattinge	0	3
	Maros	2012	Simbang	1	1
		2013	Tompobulu	0	1
		2014	Tanralili	0	1
		2015	Camba, Bantimurung	0	2
		2016	Cenrana, Turikale	0	2
	Takalar	2012	Galesong Selatan	1	1
		2013	Polobangkeng Selatan, Polobangkeng Utara, Mappakasunggu	0	3
		2015	Mangara Bombang, Pattallassang, Polobangkeng Utara	0	3
		2016	Sonrobone	0	1
	Tana Toraja	2013	Makale Utara, Saogalla Selatan	1	2
		2014	Makale, Sangalla	0	2
	Toraja Utara	2014	Tallunglipu	1	1
		2015	Pemmana, Penrang Takkalla	0	2
	Bulukumba	2013	Bulukumpa, Gantarang, Kajang	1	3
		2015	Bontotiro	0	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
	Gowa	2013	Bontonompo	1	1
		2015	Bontorampa	0	1
		2016	Bontonompo Selatan, Bontomarannu, Manuju	0	3
	Jeneponto	2013	Bangkala	1	1
		2016	Rumbia	0	1
	Wajo	2013	Gilireng	1	1
		2014	Pammana	0	1
		2016	Majauleng, Penrang, Sajoanging, Sakkoli	0	4
	Soppeng	2013	Mario Riawa, Donri-donri, Lalabata	1	3
		2016	Lili Riaja	0	1
	Luwu	2015	Kamanre	1	1
	Luwu Timur	2015	Burau	1	1
	Luwu Utara	2015	Bone-bone, Mappadeceng, Sukamaju	1	3
		2016	Seko	0	1
	Sidenreng Rappang	2015	Baranti, Duapitue, Kulo, Maritengngae, Panca Rijang, Pitu Riawa, Watang Pulu, Watang Sidenreng	1	8
	Pangkajene Kepulauan	2014	Ma'Rang, Labakkang	1	2
		2015	Balocci, Mandalle, Minasatene, Tondong tallasa	0	4
	Selayar	2016	Bonto Haru, Bonto Sikayu	1	2
	Pinrang	2016	Mattiro Bulu, Mattiro Sompe, Patampanua	1	3
	Pare-pare	2016	Bacukiki	1	1
Palopo	2016	Wara Selatan, Wara Barat, Bara, Tellu Wanua, Mungkajang	1	5	
Total South Sulawesi				23	120
Nusa Tenggara Barat	Lombok Tengah	2010	Pujut	1	1
		2012	Batukliang, Jonggat, Kopang, Praya Barat, Pringgarata, Janapria, Praya Timur	0	7

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2014	Batukliang Utara	0	1
		2015	Praya, Praya Tengah	0	2
		2016	Praya Barat Daya	0	1
	Lombok Barat	2010	Gerung, Narmada	1	2
		2011	Sekotong, Lembar, Gunungsari, Lingsar, Batulayar	0	5
		2012	Labu api, Gunungsari, Lingsar, Sekotong, Senteluk	0	5
		2014	Kediri	0	1
		2015	Kuripan	0	1
	Lombok Utara	2011	Tanjung, Pemenang, Gondang	1	3
		2012	Bayan, Gangga, Kayangan	0	3
		2016	Tanjung Karang Barat	0	1
	Lombok Timur	2010	Suralaga, Labuhan Haji	1	3
		2011	Aikmel, Wanasaba, Sikur, Montong Gading	0	5
		2012	Pringgabaya, Pringgasela, Keruak, Jeruklegi, Selong, Wanasaba, Kota Raja	0	7
		2013	Masbagik, Terara	0	2
		2014	Kelayu	0	1
		2016	Sembalun, Suela	0	2
	Mataram	2012	Mataram	1	1
		2013	Sanubaya	0	1
		2015	Selaparang, Jempong Baru	0	2
	Sumbawa	2012	Moyohilir, Moyo Utara, Tarano	1	3
		2013	Labuhan Badas, Maronge, Lopok, Smapuin	0	4
		2015	Lunyuk, Margakarya, Moyohulu, Pungkit, Underwis	0	5
Sumbawa Barat	2012	Seteluk	1	1	

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2013	Pototano	0	1
		2014	Brang Ene, Brang Rea, Jereweh, Maluk, Taliwang, Rempe	0	5
	Kota Bima	2013	Bima, Soromandi, Rasanae	1	3
		2014	Palibelo, Bolo	0	2
		2015	Rasanae, Rasanae Timur, Soromandi	0	3
		2016	Asakota	0	1
	Sumbawa Barat	2016	Moyo Hulu, Utan	1	2
	Dompu	2013	Dompu, Kramat Mulya	1	2
		2016	Kempo	0	1
	Total NTB				10
Bali	Gianyar	2010	Payangan	1	1
		2011	Ubud, Tegalalang	0	2
		2012	Blahbatuh, Tegal Kolong	0	2
		2013	Tampak Siring, Sukawati	0	2
		2016	Bitera	0	1
	Kab.Bangli	2010	Tembuku	1	1
		2011	Susut, Bangli, Kintamani	0	3
		2012	Sawan	0	1
		2015	Sidemen, Susut, Tragah, Mengwi	0	4
	Badung	2011	Abiansemal, Petang, Mengwi, Kertabuana	1	1
		2012	Kuta Utara, Abiansemal	0	2
		2013	Kuta Selatan	0	1
	Tabanan	2011	Selemadeg, Kerambitan, Baturiti	1	3
		2012	Penebel	0	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2013	Kediri, Slemadeg Timur	0	2
		2014	Marga	0	1
		2015	Pupuan	0	1
	Klungkung	2011	Klungkung, Banjarangkan, Dawan, Tagak	1	4
		2013	Banjaranekan	0	1
	Buleleng	2010	Tejakula, Gerokgak	1	2
		2012	Sukasadaya, Banjar	0	2
		2013	Kubu Tambahan, Seririt	0	2
		2016	Sawan	0	1
	Denpasar	2011	Denpasar Selatan	1	1
		2012	Denpasar Utara	0	1
	Jembrana	2011	Melaya	1	1
		2012	Negara	0	1
		2013	Mendoyo	0	1
	Karang Asem	2011	Kubu, Bebandem	1	2
		2012	Manggis, Karang asem, Rendang, Sidemen, Selat, Seraya	0	5
		2014	Pempatan, Abang	0	2
		2015	Bhuanagiri	0	1
	Selayar	2011	Payangan	1	1
	Total Bali				10
Sumba (NTT)	Sumba Barat Daya	2011	Wewewa Timur, Kodi	1	2
		2012	Weetabula, Loura, Wewewa Barat	0	3
		2013	Tambolaka	0	1
		2015	Kodi Utara, Wewewa Tengah, Kalaki Kambe	0	3

Province	District/city	Year	Sub-district	Tot D	Tot SD	
				2009-2017		
	Sumba Timur	2016	Wewewa Selatan	0	1	
		2011	Kambera, Waingapu, Pandawai	1	3	
		2012	Kanatang, Lewa	0	2	
		2013	Nggaha Ori Angu, Wulu Waijelu	0	2	
		2014	Pinu Pahar, Kahangu Eti	0	2	
		2015	Kambata, Melolo, Haharu, Wanga	0	4	
		2016	Umalulu	0	1	
	Sumba Tengah	2012	Katikutana	1	1	
		2014	U Ratu Nggai Barat	0	1	
		2015	Katikutana Selatan	0	1	
	Sumba Barat	2012	Kota Waikabubak	1	1	
		2014	Tana Riu	0	1	
		2015	Loli	0	1	
	Total Sumba (NTT)				4	30
	Lampung	Pesawaran	2012	Padang Cermin	1	1
2013			Gedong Tataan	0	1	
Tulang Bawang		2013	Tulang Bawang Tengah	1	1	
Lampung Tengah		2013	Pubian, Selagai Lingga, Sendang Agung, Seputih Banyak, Trimurjo, Kota Gajah, Seputih Raman	1	7	
		2014	Seputih Agung, Terusan Nunyai	0	1	
		2015	Bandar Mataram, Bekri, Gunung Sugih, Kaliroja, Sekampung Udik, Seputih Mataram, Terusan Nunyai, Way Seputih, Way Pengubuan	0	9	
		2016	Anaktuha, Punggur, Sendang Agung	0	3	
Kota Metro		2013	Metro Utara, Metro Timur, Metro Selatan	1	3	
Lampung Timur		2013	Batang Hari, Way Jepara, Pasir Sakti, Braja Selehah, Raman Utara	1	5	

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2009-2017	
		2014	Sekampung, Pekalongan	0	2
		2015	Bumi Agung, Kalipasisir, Labuhan Ratu, Marga Tiga, Metro Kibang, Way Bungur	0	6
		2016	Purbolinggo, Marga Sekampung	0	2
	Lampung Selatan	2013	Natar, Jati Agung	1	2
		2014	Sukabumi, Sidomulyo, Merbau Mataram	0	3
		2016	Penengahan	0	1
	Bandar Lampung	2014	Kemiling	1	1
		2016	Rajabasa, Tanjung Karang Barat	0	2
	Pringsewu	2014	Adi Luwih, Gading Rejo	1	1
	Pesisir Barat	2014	Bengkunat	1	1
Total Lampung				9	52
Total number of districts and sub-districts 2009-2017				130	885

Annex 5: List of Credit Providers

1. Nestle Soft Loan

No.	Name of Credit Providers	Province
1	Koperasi SAE Pujon	East Java
2	KUD Sumber Makmur	East Java
3	KUB Sami Mandiri	East Java
4	KUD Jaya Abadi	East Java
5	KUD Tani Wilis	East Java
6	KUD Sri Wigati	East Java
7	LPKP	East Java

2. Rabobank Foundation (RBF) Soft Loan

No.	Name of Credit Providers	Province
8	KUD Puspa Mekar	West Java
9	KPGS	West Java
10	KPSCU	West Java
11	KPS Karya Nugraha	West Java
12	KPS Saluyu	West Java
13	KSU Andini Luhur	Central Java
14	KSP Tekun	Central Java
15	KUD Ngudi Luhur	Central Java
16	KSU Karya Nadhi	Bali
17	KSPPS Laa Roiba	Lampung

3. Kiva Biogas Loan

No.	Name of Credit Providers	Province
18	LKM Rukun Makmur	Central Java
19	LPSI At Tayseer	Central Java
20	LPPNU	Lampung
21	MG Harapan Bersama	Lampung
22	YM3S	Nusa Tenggara Barat
23	MG Paroso	Nusa Tenggara Barat
24	CV. BEM Persada	Jogjakarta

4. Credit Union

No.	Name of Credit Providers	Province
	Puskopdit Caraka Utama	
25	CU Setia Bakti	Lampung
26	CU Santa Clara	Lampung
27	CU Mekar Sai	Lampung
	Puskopdit Jatra Miguna	
28	CU Dharma Bhakti	Jogjakarta
29	CU Dharma Prima	Jogjakarta

5. Others

No.	Name of Credit Providers	Province
30	Yayasan Trukajaya	Central Java
31	Yayasan Sion	Central Java
32	Koperasi Agro Niaga	East Java
33	KPSBU	West Java

Annex 6. List of joint cooperation Hivos and Government of Indonesia for biogas digesters construction

No	Name of MoU
	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Lombok Utara 2015
	MoU Hivos with District Government Kabupaten Bantaeng Sulawesi Selatan 2015
	MoU Hivos with District Government Kabupaten Maros Sulawesi Selatan 2015
	MoU Hivos with District Government for Energy and Mineral Resources Kabupaten Pangkajene 2015
	MoU Hivos with District Government for Energy and Mineral Resources Kabupaten Wajo 2015
	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Kabupaten Barru Sulawesi Selatan 2015
	MoU Hivos with Department Agriculture & Fisheries Provincial Government of Depok West Java 2015
No	Name of MoU
	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Lombok Utara 2015
	MoU Hivos with District Government Kabupaten Bantaeng Sulawesi Selatan 2015
	MoU Hivos with District Government Kabupaten Maros Sulawesi Selatan 2015
	MoU Hivos with District Government for Energy and Mineral Resources Kabupaten Pangkajene 2015
	MoU Hivos with District Government for Energy and Mineral Resources Kabupaten Wajo 2015
	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Kabupaten Barru Sulawesi Selatan 2015
	MoU Hivos with Department Agriculture & Fisheries Provincial Government of Depok West Java 2015

Annex 7: List of meeting and workshop

National

23 January 2017	Micro Credit Meeting with INKOPDIT
15-16 March 2017	Annual QI Meeting
26-27 April 2017	Annual Meeting Coordinator
4 May 2017	Meeting with CV KTM through Development of development of appliances workshop in Malang, East Java

South Sulawesi

12 January 2017	CPO Management and Financial Training
12 January 2017	Meeting with government staff from Energy and Mineral Resources Agency of South Sulawesi
16 January 2017	Meeting with BPMD Kabupaten Pangkajene Kepulauan
16 January 2017	Meeting with District Planning Agency of Luwu Timur
18 January 2017	Micro Credit Meeting with CU Sauan Sibarrung
11 May 2017	Government Liason Meeting with CPO and Energy and Mineral Resources Agency of South Sulawesi
15 May 2017	CPO Meeting
16 May 2017	Micro Credit Meeting with KSU Bulu Saukang

NTB

19 January 2017	CPO Management and Financial Training
28 February-1 March 2017	Refresh ToT Gender Training
28 February 2017	Micro credit meeting with CU Karya Mandiri Pesanggrahan
30 March 2017	Meeting with Bappeda of Sumbawa
18 April 2016	CPO Meeting
9 June 2017	Regional Consultation Meeting with CPO in Lombok

Sumba, NTT

16 January 2017	Meeting with BPMD of Kabupaten Sumba Barat
7 February 2017	Micro Credit Meeting with CU Pintu Air
7 February 2017	Meeting with Coordinator for Village Assistance and Support Team of District Sumba Timur
21-22 February 2017	CPO Management and Financial Training
30 March 2017	Meeting with BPMD of District Sumba Tengah
21 April 2017	Meeting with Government Timor Tengah Utara
16 May 2017	Meeting with Head of Kataka Village
14 June 2017	Meeting with the commitment maker official of Sumba Barat

Lampung

January 2017	Meeting with KSP Laa Roiba and LPPNU
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Central Java and D.I. Yogyakarta

9 January 2017	Meeting with RBF and KSU Jaya Mandiri
10 January 2017	Meeting with PINBUK
31 January 2017	Micro Credit Meeting with CU Jatra Miguna
1 February 2017	Meeting with PINBUK
2 February 2017	Meeting With Bank Jateng and PINBUK
19 -21 February 2017	Meeting with Instiper through Research and Development plan

East Java

9 January 2017

CPO Meeting

Bali

21-22 May 2017

2nd International Workshop on Sustainability and resilience of
Bioenergy for Climate Change (as invitee)



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