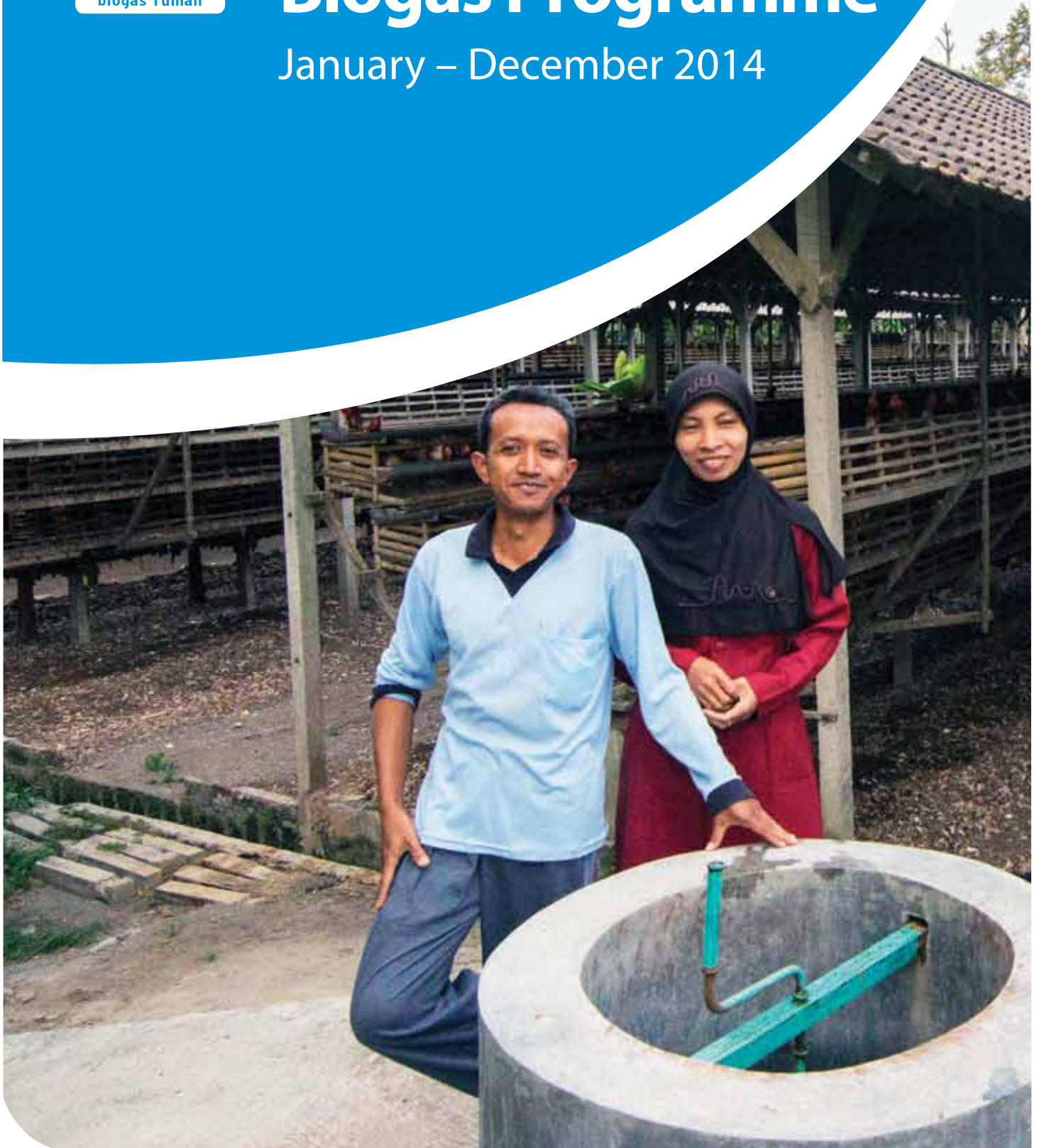




ANNUAL REPORT Indonesia Domestic Biogas Programme

January – December 2014



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January – December 2014
6 March 2015



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Abbreviations

ASS	After Sales Service (resulting in partner inspection reports)
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	Energizing Development
EUR	Euro
FACET	Finance for Access to Clean Energy Technologies in South and Southeast Asia
GIZ	Gesellschaft für Internationale Zusammenarbeit (Agency for International Cooperation)
Hivos	Humanistic Institute for Cooperation with Developing Countries
IDBP	Indonesia Domestic Biogas Programme
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	Millenium 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 2014

Programme finish : 31 December 2014

Programme duration at the end of reporting period (31 December 2014): 12 (of 12) months (100%)

The data include activities in East Java, which are funded through EnDev programme.

No.	Activities	Achievements	Remarks/target																																																												
1	Number of digesters produced	Total: 14,107 units Jan-Dec 2014: 2,861 units Under Norway Embassy: 1,076 units Under EnDev 2014: 1,785 units	The BIRU programme receives funds from two donors																																																												
2	Functioning rate	99,09%																																																													
3	No of promotion activities	<p>Community Meeting on biogas awareness and slurry use Total Activities: 99 community meetings, 17 promotion events</p> <p>Total Participants: 3,907 (3,235 men: 83%, 672 women: 17%)</p> <p>Community Meetings</p> <table><thead><tr><th>Province</th><th>Number of meeting</th><th>Number of male participant</th><th>No of female participant</th></tr></thead><tbody><tr><td>Lampung</td><td>9</td><td>105</td><td>19</td></tr><tr><td>West Java</td><td>25</td><td>325</td><td>181</td></tr><tr><td>Central Java & DIY</td><td>12</td><td>1,723</td><td>314</td></tr><tr><td>East Java</td><td>8</td><td>65</td><td>15</td></tr><tr><td>Bali</td><td>5</td><td>24</td><td>7</td></tr><tr><td>NTB</td><td>10</td><td>228</td><td>29</td></tr><tr><td>NTT</td><td>2</td><td>65</td><td>15</td></tr><tr><td>South Sulawesi</td><td>34</td><td>700</td><td>92</td></tr><tr><td>Total</td><td>99</td><td>3,235</td><td>672</td></tr></tbody></table> <p>Event & Participation</p> <table><thead><tr><th>Province</th><th>Number of events</th></tr></thead><tbody><tr><td>National</td><td>1</td></tr><tr><td>West Java</td><td>4</td></tr><tr><td>Central Java & DIY</td><td>2</td></tr><tr><td>NTB</td><td>3</td></tr><tr><td>South Sulawesi</td><td>7</td></tr><tr><td>Total</td><td>17</td></tr></tbody></table> <p>Production of promotion and other materials</p> <table><tbody><tr><td>Printing materials</td><td>22,520 pcs (brochure, roll-up banner, factsheet, etc)</td></tr><tr><td>Internet and mobile based</td><td><ul style="list-style-type: none">Website: biru.or.id 12,565 visitorsTwitter account 549 followersFacebook account 1,650 likes; 1,190 friendsSMS Hotline 74 SMS senders</td></tr><tr><td>Media publication</td><td><ul style="list-style-type: none">Radio promoTV promoLocal newspaperOnline</td></tr></tbody></table>	Province	Number of meeting	Number of male participant	No of female participant	Lampung	9	105	19	West Java	25	325	181	Central Java & DIY	12	1,723	314	East Java	8	65	15	Bali	5	24	7	NTB	10	228	29	NTT	2	65	15	South Sulawesi	34	700	92	Total	99	3,235	672	Province	Number of events	National	1	West Java	4	Central Java & DIY	2	NTB	3	South Sulawesi	7	Total	17	Printing materials	22,520 pcs (brochure, roll-up banner, factsheet, etc)	Internet and mobile based	<ul style="list-style-type: none">Website: biru.or.id 12,565 visitorsTwitter account 549 followersFacebook account 1,650 likes; 1,190 friendsSMS Hotline 74 SMS senders	Media publication	<ul style="list-style-type: none">Radio promoTV promoLocal newspaperOnline	
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4	No and % of households using credit	7,844 of 14,107 (55%) households total EUR 2.595.852 Jan – Dec 2014: 1,089 households, total EUR 368,529.3																																																													

No.	Activities	Achievements	Remarks/target
5	No of credit providers (including cooperatives)	24 providers	
6	MFI development	<ol style="list-style-type: none"> 1. Development of co-operation with CSR program Nestle, PT in East Java. 2. Cooperation in biogas credit financing with FACET will be continued through Induk Koperasi Syariah (INKOPSYAH). 3. "Andini" dairy cooperative, Central Java, became new lending partner by distributing loans from RBF. 4. YRE was approved as KIVA partner to disburse loan in biogas credit financing. 5. Potential biogas credit financing with Credit Union. 6. Potential biogas credit financing with UMKM Bank, BPR and BRI 	
7	Subsidy disbursed	2014: EUR 71,109 (Norway Embassy) EUR 147,170 (EnDev)	
8	No of construction partners	Cooperatives: 13 NGOs: 17 SMEs: 29 Total: 59 CPOs	
9	No of provinces, districts and sub-districts	9 provinces 106 districts 624 sub districts	
10	No of masons & supervisors trained	Total: 970 masons and 172 supervisors Jan – Dec 2014: 99 masons and 8 supervisors	
11	No of users trained	Total: 10,294 users Jan – Dec 2014: 1,239 users (875 male, 364 female)	
12	No of plants inspected by CPOs (ASS = maintenance reports)	Overall: 13,111 inspections Jan-Dec 2014: 4,390 maintenance inspections	
13	No of plants inspected by BIRU staff (during construction and after construction & after ASS/After Sales Service)	Overall: 5,947 inspections a. 531 inspections during construction b. 5,416 inspection after construction (4,200 plants already received ASS) Jan-Dec 2014: 882 inspections	
14	Bio-slurry activities	<ol style="list-style-type: none"> 1. Bio-slurry training during 2014 attended by 972 users (male = 758; female = 214). 2. ToT of bio-slurry 1 times attended 17 mason. 3. Bio-slurry management refresher training 2 times attended by 20 supervisors and 16 promoters. 4. Feasibility study to develop methodology to account for carbon reductions and soil carbon sequestration of bio-slurry usage. 	
15	Biogas appliances R&D	<ol style="list-style-type: none"> 1. Research on H₂S and CO₂ filter (purification), April-September 2014 2. Research on efficiency of single burner biogas stove (4 brands), in cooperation with ITS, September-November 2014 	
16	Contribution from Gol	DGNREEC program in East Java: EUR 97,986 South Sulawesi Province Program: EUR 43,640	

No.	Activities	Achievements		Remarks/target																						
17	Biogas Expertise Centre activity																									
18	External training and workshop participation	<table><tr><th>Province</th><th>Number of activities</th></tr><tr><td>West Java</td><td>5</td></tr><tr><td>Central Java & DIY</td><td>2</td></tr><tr><td>South Sulawesi</td><td>1</td></tr><tr><td>Total</td><td>7</td></tr></table>		Province	Number of activities	West Java	5	Central Java & DIY	2	South Sulawesi	1	Total	7													
Province	Number of activities																									
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South Sulawesi	1																									
Total	7																									
19	External workshops organized	<table><tr><th>Province</th><th>Number of activities</th></tr><tr><td>Lampung</td><td>2</td></tr><tr><td>West Java</td><td>6</td></tr><tr><td>Central Java & DIY</td><td>6</td></tr><tr><td>NTT</td><td>1</td></tr><tr><td>South Sulawesi</td><td>5</td></tr><tr><td>Total</td><td>20</td></tr></table>		Province	Number of activities	Lampung	2	West Java	6	Central Java & DIY	6	NTT	1	South Sulawesi	5	Total	20									
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West Java	6																									
Central Java & DIY	6																									
NTT	1																									
South Sulawesi	5																									
Total	20																									
20	Internal workshops/ meetings organized	<p><i>National:</i></p> <ol style="list-style-type: none">1. Quality Inspectors meeting, Jakarta, 3-4 March 20142. Quality Inspector meeting, Yogyakarta, 16-17 October 20143. Provincial Coordinator meeting, Jakarta, 14-15 November 2014 <p><i>CPO Meeting in Provincial level:</i></p> <ol style="list-style-type: none">1. West Java (5): 17 April 2014, 25 May 2014, 29 November 2014, 3 December 2014.2. Central Java & DIY (5): 24 Feb 2014, 25 Feb 2014, 27 Feb 2014, 10 June 2014, 12 June 2014. <i>Refresher Admin Training of YRE and CPOs of Central Java</i>, 17 July 2014.3. East Java (2): April 2014, July 20144. South Sulawesi (10): 15 April 2014, 12 August 2014, 6 November 2014, 1 October 2014, 7 October 2014, 12 October 2014, 23 October 2014, 22 November 2014, 25 November 2014, 29 December 20145. Sumba (1): 26 June 2014																								
21	No of coordination meetings with Gol	<table><tr><th>Province</th><th>Number of activities</th></tr><tr><td>National</td><td>6</td></tr><tr><td>Lampung</td><td>9</td></tr><tr><td>West Java</td><td>2</td></tr><tr><td>Central Java & DIY</td><td>33</td></tr><tr><td>East Java</td><td>1</td></tr><tr><td>Bali</td><td>1</td></tr><tr><td>NTB</td><td>3</td></tr><tr><td>NTT</td><td>1</td></tr><tr><td>South Sulawesi</td><td>55</td></tr><tr><td>Total</td><td>111</td></tr></table>		Province	Number of activities	National	6	Lampung	9	West Java	2	Central Java & DIY	33	East Java	1	Bali	1	NTB	3	NTT	1	South Sulawesi	55	Total	111	
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Total	111																									

1. Introduction

This is the Annual Report of the Indonesia Domestic Biogas Programme (IDBP) submitted to the Royal Norwegian Embassy, for the period of January – December 2014. This report highlights the achieved results from 2014 activities in accordance with the project agreement between Hivos and the Embassy. The total number of digesters constructed in 2014 is 2,861 units for 9 provinces in Indonesia; 1,076 units under the financing from the Norwegian Embassy and 1,785 units under EnDev Programme. The implementation is explained in detail below.



A happy biogas user with biogas lamp in East Java

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.”*

This means that the programme aims to expand the use of bio-digester technology by farmers in order to improve the waste management leading to reduction of greenhouse gas emission. The emission reduction calculation is done through a methodology approved by the Gold Standard Foundation. Proper and effective biogas sector development implies the close cooperation of relevant stakeholders (government, non-government and private sector) at all levels and that those stakeholders are sufficiently equipped to fulfill the necessary respective functions.

The expansion of the biogas adoption by more farmers will create job opportunities in the biogas sector (contractors, masons, input suppliers, training institutions and the users themselves) and in the long run will help to support the protection of ecosystems and biodiversity as well as public health through reduction of indoor air pollution.

Specific objective

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.



Biodigester construction in Bali

3. Institutional Setting

The Indonesia Domestic Biogas Programme is working on the second phase. This second phase is partially funded by The Royal Norwegian Embassy under a Grant Agreement d.d. 4 December 2013 and an Implementation Agreement d.d. 10 July 2014 with the Directorate of Bio-energy at the Directorate General New Renewable Energy and Energy Conservation under the Ministry of Energy and Mineral Resources of the Republic of Indonesia. In implementing IDBP, Hivos receives technical support from SNV and works directly with a national non-government organization Yayasan Rumah Energi (YRE). Apart from funding from the Norwegian Embassy, IDBP also receives funds from EnDev Programme. The official Indonesia government counterpart of Hivos is the Ministry of Social Affairs.

A National Biogas Advisory Committee was established in July 2011 and the membership officially ended at the end of 2013. The membership is currently being re-considered by both DGNREEC and the programme. The mandate of the Committee is to monitor programme progress and endorse initiatives, including representatives of relevant government agencies, DGNREEC, civil society and the supporting donors. The Committee meets bi-annually and the first meeting in 2014 is scheduled to take place in September 2014. Prior to that, a meeting is scheduled in August 2014 to obtain interest and commitment from the previous committee members as well as potential members from different provinces.

In 2009 the programme established a National Biogas Programme Support Office (NBPSO) to support the Provincial Biogas Programme Offices (PBPO). The Provincial offices are responsible for local implementation, and are tasked to synchronize and liaise with provincial and district Energy agencies and cooperate with BAPPEDA (local development planning branches) and other relevant government agencies at province and district levels. Other tasks of the PBPO include: biogas promotion, capacity building and development of the biogas sector, quality control, slurry extension and gender mainstreaming.

Through its mandate to develop a market-based and sustainable biogas sector, IDBP has entered into participation agreements with over 50 construction partner organizations (CPOs) which are groomed to provide high-quality biogas digesters to cattle farmers interested in investing in biogas. The PBPOs provide assistance and have an inspection role in order to ensure quality and continuity in the development of the biogas services in each target region.

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. YRE is gradually taking over the key responsibilities of IDBP. With this change, Hivos and SNV take on a more focused role in managing and supervising the programme and strengthening YRE as an institution. YRE branches in the provinces also serve as PBPOs for IDBP.

4. Overview January-December 2014

4.1. Expected Result 1

3,600 livestock farming households have invested in their own quality assured biodigester from certified providers, and implement improved waste management practice that reduce the environment and social impacts of production and consumption.

4.1.1. Indicator: 3,600 digesters installed in 6 provinces in line with IDBP standards for construction, appliances, user training, aftersales services and inclusion of women.

During 2014 the total of digester constructed was 2,861 units. The funding resources for IDBP comes from two main donors: the Norway Embassy and the Energizing Development (EnDev). The EnDev Programme is only financing 4 out of nine provinces and the remaining provinces are covered by the Norway Embassy. Out of the 2,861 units, 1,076 units were paid under the Norway funding. The output target in 2014 was 1,025 units (including targets in Sumba Iconic Island) under the Norwegian Embassy and 3,000 units under the EnDev Programme. Therefore, IDBP total achieved output for 2014 under the Norwegian Embassy funding is 104.9% and 59.5% under the EnDev Programme. The output was lower than in 2013, when 3,266 units were produced. Low performance of CPOs had two main reasons. The first one was the late start of the cooperation with the GoI in South Sulawesi. The committed target by the South Sulawesi government was 468 units. Due to the delay, until end of 2014, only 100 units were constructed. The remaining digesters will still be built in 2015. The other main reason was that five partners in two provinces (West Java and Nusa Tenggara Timur) had problems in managing their biogas businesses. These partners were given various kinds of support to improve their outputs but the results remain to be seen in 2015.

The table below gives the production result during the period 2014 (construction in West Java, Central Java, D.I. Yogyakarta and East Java were funded under the EnDev Programme.)

Provinces	Output per Province	Norway-funded	EnDev-funded
Bali	172	172	
West Java	270		270
Central Java and DIY	590		590
East Java	925		925
Lampung	77	77	
South Sulawesi	113	113	
NTB	677	677	
Sumba NTT	37	37	
Total	2,861	1,076	1,785
Target		1,000	3,000
Output %		104.9%	59.5%

Table 1: Target and Actual output per province in 2014

4.1.2. Indicator: At least 30% of participants in community awareness meetings for the promotion of biogas are women

To support the dissemination of the BIRU programme, BIRU has conducted a large number of promotional activities. These include the dissemination of information via print and electronic media, printing material (brochure), as well as through seminars or other presentations designed for specific audiences and existing forums.

During 2014, 105 awareness meetings were conducted in 9 provinces where BIRU is already established, and in one province BIRU has just started to implement the programme: Banten. BIRU reached 3,907 people but only 17% (672) of them were women. The lack of women's participation is caused by cultural norms that still consider meetings and other similar activities as a male domain. Also, most of the meetings were conducted in cooperative meeting or farmer group fora of which members are mostly men. A number of partners neglected to report on their promotion activities.



Focus Group Discussion with biogas users in NTB

4.1.3. Indicator: 100% HH at least one person receives user training; at least 50% of HH a woman receives user training

IDBP ensures continued biogas operation and maximize the benefits from biogas digesters by providing a one day intensive training to the biogas users, usually by trained staff of the CPOs and supported and monitored by IDBP staff. Hereto, the IDBP has developed special user training modules. Each user receives a digester operation manual which is well illustrated and explains about operation techniques, repair and maintenance and safety precautions. User training is a continuously ongoing activity. In 2014 in total 1,239 users were trained and 30% of the participants were female. Often both male and female from the same household participated. Targeting of female user training will be intensified.

4.1.4. Indicator: 150 masons and supervisors trained and certified in digester construction and maintenance

Ensuring high quality standards of the BIRU digesters is primarily done by training the masons well. In 2014, 99 masons and 8 supervisors were trained (71% of the total target). Since the beginning of the programme in May 2009, the total number of trained biogas constructors is: 970 masons and 168 supervisors. The BIRU database shows that about 31.13% of the trained masons are still actively producing biogas installations under the BIRU programme during 2014. The number of active masons fluctuates, as a result of the biogas demand at the locations where the masons live and how active the CPOs are in marketing their biogas services.



Mason training conducted in Lampung

4.1.5. Indicator: At least 65% of HH sell or apply bio-slurry for agriculture or fish rearing in a proper manner; at least 30% of bio-slurry processing/trade is conducted by women

Based on the result BUS 2014, 82% of the biogas users are already using bio-slurry as fertilizer 82% (84% use it as dried form and 27% in liquid form.) In the bio-slurry users training, 28% of the participants are female.

The bio-slurry training activities progress from January - December 2014 has been low (33%). In the provinces where construction progress is strong, the bio-slurry training rate is low because the partners are concentrating on the building activities.

To empower new CPOs and existing CPOs regarding how to inform users on bio-slurry as good organic fertilizer, IDBP also conducted one ToT of bio-slurry training in Lampung, and bio-slurry refresher training for supervisors in Yogyakarta and Central Java and another in NTB.

No	Province	Participants of Bio-slurry Training	
		Male	Female
1.	West Java	77	31
2.	Central Java and DIY	256	38
3.	East Java	209	87
4.	Lampung	19	2
5.	NTB	197	56
Total		758	214
		972	

Table 2. Participants of Bio-slurry Training in 5 Provinces

In the provinces where construction output is low, the partners are not pro-actively following up the training for users. In this case, NBPSO and PBPO offices will select several active masons and conduct a remedial training so that they can give the trainings to the users.



User Training conducted in DI Yogyakarta

4.1.6. Indicator: 100% of targeted Quality Inspection visits completed (10% during construction; 15% after construction; 5% after ASS visits) and logged on program MIS

The BIRU program has to ensure that all digesters built are in operation continuously. Therefore, a maintenance phase after installation is required. The responsibility to maintain the digesters fall to the users and IDBP Construction Partner Organizations/CPOs. The users are given operation and maintenance training by the CPOs, and the CPOs must conduct After Sales Service (ASS) visits which aim to ensure that all of the digesters installed are in good condition and functioning properly. The ASS visits are conducted twice; first visit between the 9th and 12th months after the digester is installed, and the second visit between the 18th and 24th months after installation. The data from these visits is submitted by the partners to IDBP and then recorded in the IDBP database.

Quality Inspection during construction in 2014		Quality Inspection after construction in 2014		Quality Inspection after ASS visits in 2014	
Target: 10%	Achieved (%)	Target: 15%	Achieved (%)	Target: 5%	Achieved (%)
286	54 (18%)	429	827 (192%)	220	90 (40.9%)

Table 3. IDBP Quality Inspection (Quality Check) Target 2014

In 2014, the target to conduct Quality Inspection activities during construction period was not achieved, because the inspection was mostly performed once the digester are completed. That is why, the Quality Inspection done after the construction is finished is high (827 visits out of the targeted 429, or 192%).

The ASS reports of 2014 indicate that 99.09% of the digesters installed are functioning properly. There are some digesters (112 units or 0.79%) that are not functioning because the users stopped using the digesters. Technical issues mostly involved leaking piping, broken stoves and expiring stove lifetime, which happened to 16 digesters, or 0.11% of all digesters installed. To ensure that technical issues can be improved, the CPOs have been requested by IDBP to remind the users about the importance of the biogas utilization and maintenance, and also to make better use of the information materials that are already provided to the users.

As the biogas technology itself and associated quality control system was new to Indonesia at the beginning of the programme, average construction defaults at the beginning were observed a bit high but the average defaults decreased over the years and in 2014 the quality of the digesters is found to be the best over the six years period.

Until now no major problems have occurred, indicating that the quality of the digesters is indeed high with incidental problems which, in almost all cases, could be solved fairly quickly. A quality standard developed and used by BIRU (using 58 different quality indicators) indicates that an average default less than 3.00 is indeed a very high quality digester. BIRU staff visited in total 807 digesters in 2014 taking random samples of constructed digesters from all provinces. Based on the quality control visits carried out by BIRU staff in 2014, the average default of newly constructed digesters is 2.95.



A Biogas Quality Control checking mixer in South Sulawesi

4.2 Expected Result 2

The biogas sector is moved from demonstration to replication through increased capacity of existing and new providers to service the sector, with the adoption of product and service standards, quality assurance and monitoring, linkage to finance, and engagement of business intermediaries and partners in sector development.

4.2.1. 20 BSPs have established Participation Agreements and adopt IDBP Standard Operating Guidelines

In 2014, total 59 partners were registered as IDBP Construction Partner Organizations (BSPs), 10 of them were new partners.

To ensure that IDBP can provide the best support and guidance to the partners and to monitor the progress, a monthly meeting is conducted between the Provincial Offices and the partners to discuss what has been achieved, what kind of challenges they are facing and which measures need to be taken to address them.

4.2.2. 20 BSPs have received technical support and capacity building for business and institutional development

A well-organized subsidy request from partners as a main part in IDBP subsidy administration requires proper administrative processing, which will make it for the partners easier to control and manage their biogas business and also will make it easier for IDBP to disburse the subsidy. However, in reality most of partners are often not disciplined in executing the administrative procedures. Due to that reason, on July and August 2014 the IDBP conducted a Refresher Admin Training for partners and staff in 4 provinces: West Java, Sumba (NTT), Central Java and South Sulawesi. 24 partners joined the training.

The training allowed IDBP to address the constraints faced by the CPOs in subsidy administration, mostly caused by insufficient human resources used for the administration. In the training the IDBP explained in more detail about the subsidy administrative procedures the CPOs have to adhere to as stated in the participation agreement they have with the BIRU programme.

After three months the training conducted some improvements showed by IDBP partners. They are not only focus on construction but also do the training for the household and do the after sales service. But for some partners who receive project from the government, some procedures are momentarily ignored.

In addition to that, in the last quarter of 2014, IDBP has started preparations to conduct biogas business and management training for new partners in 2014 and 2015. The module to be used for the training is made by IDBP. The training is planned to be done in the first quarter of 2015.

4.2.3. 20 local Lending Partner Organizations (cooperatives, BRP, MFI) are linked to credit providers to channel loans for smallholder livestock enterprises.

In total, 38 lending partners of IDBP are linked to credit providers such as Nestle, Rabobank Foundation, Kiva and other institutions. Since 2010, Hivos has a partnership with Nestle's CSR Program in biogas credit financing for milk suppliers in East Java. Under this partnership Nestle provides interest-free loans to dairy farmer members of Nestle dairy cooperatives partners, which are BIRU construction partners (CPOs) and lending partner organizations (LPOs). By the end of 2014, this partnership has disbursed loans at a total value of IDR 23,634,767,181 (equals to EUR 1,575,651).

With the RABO Bank Foundation, in 2014, 1,064 farmers managed to access biogas credit, with total loans amounting to EUR 342,658.59. The loans are channeled from RABO Bank International Indonesia to IDBP partners directly. Most of the Lending Partners are dairy farmer cooperatives.

One example is "Andini Luhur", a dairy cooperative from Central Java, which has become a new lending partner of the RABO Bank Foundation (RBF) in 2014. RBF disbursed EUR 906,909 (1 billion rupiah) to Andini Luhur for biogas loans. These loans have a 3-year repayment period with an interest rate of 8% per annum. In this agreement, Andini Luhur is allowed to charge a maximum additional 4% interest rate to the biogas users, making the total interest 12% p.a. As an example, a farmer household which takes a biogas loan of EUR 400 will pay a monthly instalment of around EUR 11 for 36 months. Such loans from RBF have proved to provide good access to biogas financing at a reasonable interest rate.

IDBP cooperation with Kiva (www.kiva.org) was kick-started in January 2014. IDBP linked Kiva with YRE which became KIVA official partner to disburse biogas loans in Indonesia in June 2014. Kiva is a U.S. based non-profit organization that allows people to lend money via internet to low-income/ underserved entrepreneurs in over 70 countries. As of November 2013, the Kiva platform has attracted a community of more than 1 million lenders from around the world. The intention of a partnership with Kiva is that it will enable IDBP (through YRE) to reach potential farmer groups who live in remote areas and/or cannot be served by the usual commercial banking schemes.

To begin the Kiva partnership, YRE entered into an experimental phase with a funding limit of USD 50,000. The mechanism of this partnership is: YRE will submit loan applications for groups of up to 10 potential biogas users to Kiva, based on submissions from the relevant CPOs. If a loan is approved, it can be posted on the Kiva website to attract KIVA lenders. Once the loan limit is reached after a period of maximally 30 days, the funds will be transferred to a specific YRE account, and can then be disbursed to the selected CPO to purchase the needed construction materials to build biogas digesters. The fact that biogas users will not receive cash funds helps to avoid unnecessary risks.

For the first phase of KIVA loan disbursement, IDBP has chosen to 2 CPOs, LKM "Rukun Makmur" in Central Java

and “YLPMD” in Lampung, to execute this loan scheme. And then IDBP must conduct Kiva loan socialization(s) and training. The awareness raising and training to CPOs are needed because KIVA has different mechanism from loans issued by local Indonesian MFIs. During October to December 2014, IDBP also conducted Kiva socialization to some CPOs in South Sulawesi and Nusa Tenggara Barat provinces. Kiva biogas loans have received positive feedback from the users, due to the simple submission process and appropriate loan terms. Loan achievement during September to December 2014 are detailed in the table below:

IDBP Work Area	Kiva Borrower	Loan Issued	
		IDR	EUR
Central Java	15 persons	90,000,000	6,000
South Sulawesi	5 persons	15,000,000	1,000
Total	20 persons	105,000,000	7,000

Table 4: Kiva loan achievement, September to December 2014

IDBP also proposed to increase its Kiva funding limit based on potential demand for biogas credit financing in 2015. The proposal has been approved by KIVA. Therefore, YRE’s ceiling to raise loans at Kiva has been increased up to EUR 175,254.12 (USD 200,000) for 2015, which will also enable IDBP to expand the loan facility to wider underserved areas in Indonesia.

Apart from the three institutions, in 2014 IDBP also kept exploring the cooperation potential with FACET and INKOPSYAH, Credit Union and local banks. IDBP also approached banking institutions such as BRI at Jakarta and West Java, BPR in West Java and Bank UMKM in East Java Province.

Some of the banks gave a positive response, but need continuous support to create awareness among bank officers about the benefits for the banks in rolling out biogas loans. Most of them still think that biogas is only a consumptive, not a productive good. IDBP has repeatedly explained about the benefits of bio-slurry which will create savings and even extra income for biogas households, how the quality standard of the digesters has been adopted as the national standard for fixed domestic biogas by the Indonesian government, and that the Programme provides a 3-year guarantee. Still, most of the conventional banking institutions have not yet given tangible indication to take real steps for this kind of credit facility.

4.2.4. 100 entrepreneurial operations established and active in the processing and sale of bio-slurry; at least 30% of bio-slurry operations are run by women

Based on the information from the provinces, there are less than 30% women that have activities regarding bio-slurry utilization and business. The reasons are: (1) In most provinces, the bio-slurry business were mainly undertaken by male users, and (2) Women participation in bio-slurry training is low, only 28%. The concentration of business activity are in West Java. There are 10 women that active engaging the vermin-compost business. They were developing vermin and compost production. They produce vermin in order to sale as “motherstock” and compost to be sold as organic fertilizer. The simple bio-slurry business is chosen because (1) The composting place is located near their houses and therefore making it easy for them to take care of their children, (2) the technology needed to do the composting is easy and simple, and (3) the production cost is low.

4.2.5. Local foundation YRE is recognized by government as a core actor in biogas sector development in Indonesia

By 2014, YRE has been gradually recognized by the Indonesian Government as a prominent biogas organization in Indonesia. At least three provincial government agencies explored the possibilities of working with YRE to provide capacity building in biogas construction. At the National Biogas Advisory Committee meeting in September 2014, attended by both national and provincial government branches, the Hivos/YRE works in the domestic biogas sector have also been acknowledged. Along with that, the expectations for YRE to be able to

play a more prominent role in the domestic biogas sector development also increased. Hivos together with YRE and DGNREEC started to explore the potential role of YRE in 2014 and the discussion will be continued in 2015, including the issue of which financing mechanism can be applied by the government in applying the BIRU concept in the development of the biogas sector.

4.2.6. 5 new biogas appliance designs are developed, tested and certified for use

Biogas digesters need high quality appliances. From the start of the programme BIRU supported local manufacturers to produce these appliances. The locally manufactured appliances used by BIRU such as single burner stove, gas tap and water drain need to be made specifically in accordance with appropriate quality standards, therefore in the production phase it needs to be ensured that the quality standard is in accordance with BIRU Program.

For instance to produce a single burner stove for biogas the manufacturer needs to apply a precise measure for the nozzle hole of 1.8 to 2 mm for stove efficiency. Not all suppliers were able to meet the standard. In the 2nd semester of 2014 BIRU, in cooperation with ITS (Institut Teknologi Sepuluh November Surabaya), did a stove efficiency test for single burner stoves, taking four different brands of the single burner stove made by manufacturers from East Java and West Java.

The result of the stove test showed that the stoves' efficiency was less than 50%, while according to the Indonesian National Standardization (SNI) requirement, the stove efficiency must be at least 50%. Another important factor is that the stove efficiency rate is included in the carbon credit monitoring and verification at IDBP. Adjustments were made to improve the stove efficiency and the end result showed that now all the single-burner stoves efficiency is at least 50%.

The other appliances of biogas are gas tap and water drain. Those appliances are still being produced by one supplier with considerable price and good quality. To ensure that there is good supply and access towards the appliances, BIRU is trying to find another supplier for those appliances.

Another research to improve the biogas appliances was gas purification to reduce H₂S and CO₂ that exists in biogas. The impact of this H₂S and CO₂ is making the metal appliances get rusty quickly. Lowering the level of H₂S and CO₂ will increase the level of methane produced and therefore improving the value of the energy produced. The product is ready to go on the market by the end of 2014.

The H₂S filter is an optional, because the users are not familiar with this appliance. By the end of May 2015, BIRU will issue a manual book for purification process that explains how to produce and how to use this appliance, and the advantages to use this appliance for a biogas system. The main idea is, all users will be able to make it by themselves. We expect that the H₂S filter would be ready to enter the appliances market in mid of 2015.

4.3. Expected Result 3

Establishment of enabling policy environment for a sustainable biogas sector, through the development of new funding models for government interventions, standardisation of biogas appliances, and establishment of a Domestic Biogas Expertise Centre

4.3.1. 2 biogas appliance designs (e.g. stove, lamp) are standardized and registered by the Indonesian government

There are no standard for biogas appliances in Indonesia. So in this phase, IDBP is not involved in the standardization process. The GoI is in the process of preparing a biogas standardization project, but so far there has been no new progress.

4.3.2. National and/or local governments allocate funds to support market-based domestic biogas dissemination

The BIRU programme is experiencing increasing acknowledgement from local governments towards the quality of the digesters, the interest to have joint projects also increased, such as can be seen from the number of projects undertaken by IDBP partners in South Sulawesi, East Java, D.I. Yogyakarta, Central Java and Nusa Tenggara Barat.

While the joint cooperation in biogas digesters construction is a positive development, the programme is concerned about the use of different financing sources and schemes, initiated both by the central and provincial government. Government subsidy arrangement sometimes are violating the market-based approach BIRU is trying to realize. Provincial Energy Departments (the extension of Ministry of Energy and Mineral Resources) are the most active agencies that are leading the joint implementation this year. This also showed that the BIRU programme approach that has been adopted by DGNREEC for the domestic biogas programme is beginning to take off, and there is growing space for cooperation in the coming years. Out of the total 2,861 units built this year, 1,284 units were co-financed by the government.

4.3.3. Establishment and functioning of a Domestic Biogas Expertise Centre

A Biogas Expertise Center was initiated in 2010 at ESDM including the staff of Ministry of Energy. BIRU's Senior Biogas Advisor of SNV has provided training to ESDM staff on various aspects of biogas including technology, quality management, project management, monitoring, standardization and best examples of successful projects around the region. As a result, biogas design and biogas stoves standards are developed and approved as Indonesian national standards. In 2014, however, only a few meetings were held due to other assignments of ESDM staff. Support to the Biogas Expertise Center by IDBP will be continued as and when necessary or possible.

4.3.4. National and local government, private sector and civil society engage actively in coordination of domestic biogas sector development, attending at least one regional or national coordination meeting annually

At the provincial level, stakeholders meetings were routinely held twice a year. At the national level, due to the time constraints of the different stakeholders, the National Biogas Advisory Committee meeting was only held once in September in Serpong, West Java. Usually during these meetings the potential for cooperation between the BIRU programme and local government is discussed. In the National Biogas Advisory meeting, the BIRU programme was advised to match its planning cycle with that of the GOI. Therefore, the BIRU programme will be able to follow the biogas implementation plans from the GOI and tap into opportunities for cooperation. This way, IDBP can ensure that the biogas digesters that are built under the local government projects have the same quality standard as is applied in the Programme widely. The BIRU Programme often receives requests to go to new areas during the national level meeting. For that, discussions with DGNREEC to expand the BIRU Programme to new areas in 2015 has started.

5. Other Relevant Activities

5.1. IDBP Carbon Credit Mechanism

The carbon credit mechanism is progressing. In 2013 the carbon project was registered by the Gold Standard under its Voluntary Track. In 2014, a first batch of 33,046 carbon credits was issued, based on emission reductions realized from 1 June 2011 until 31 May 2013. On average each digester reduced the emission 2,6 tCO₂e per year (24 months, average of 6,330 units). As the emission reductions are verified by a certified auditor (DOE) the BIRU programme is able to monetize and sell these as carbon credits and use the revenues for further development of the biogas sector in Indonesia. So far, the carbon credit funds that have been committed to be pumped back to the BIRU implementation has been used for activities such as users and partners trainings.

5.2. Supporting Climate Smart Agriculture (CSA)

Bio-slurry is the biogas effluent which has many benefits, environmentally and economically. With the construction of more than 14,000 units of biogas under IDBP, there is a high supply of bioslurry in 9 provinces in Indonesia. One of the biggest benefits can be obtained in the agricultural field.

'Climate Smart Agriculture (CSA)' has become something of a catch phrase in recent years to describe and group all kinds of practices, interventions and mechanisms that either help farmers mitigate or adapt to Climate Change. In 2014 Hivos started a collaboration between IDBP and consultant Soil and More International B.V from The Netherlands, and started to conduct a feasibility study. The feasibility study started in late January 2014 and was finished in October 2014. The feasibility study was aimed to find out about whether bio-slurry utilization in farmland can reduce GHG emission. The study found out that (1) Using bio-slurry on the farmland has the potential to reduce N₂O emissions more compared to undigested manure and (2) based on a "Cool Farm Tool" calculation, there is a potential of 2 metric tonnes CO₂e/per Ha/year when a farmer is using bio-slurry in the farmland regularly. In the near future, Hivos will be advocating bio-slurry utilization as carbon reductions and soil carbon sequestration methods.

6. Challenges and Lesson Learned

- 6.1. Further partnership development with Kiva.** IDBP needs biogas credit financing partners who have the same vision in community development. A partnership between Yayasan Rumah Energi through IDBP and Kiva shows that kind of common vision. IDBP must develop the Kiva loan scheme not only for biogas construction, but also in bio-slurry utilization as home industry for biogas users in remote areas.
- 6.2. Value added aspect of the Kiva loan.** The Kiva biogas loan has given some positive feedbacks for CPOs and users. The users are likely to choose the Kiva scheme due to the simple submission process and appropriate loan terms. But IDBP should continue to guide and train the users to be responsible for the loan. This loan scheme is also expected to give stimulants for the CPOs in potential users finding and to increase their bio-digester construction targets.
- 6.3. Reversing the MFIs paradigm.** Most MFIs in Indonesia, especially the banking institutions, are still assuming that biogas is only a consumptive, not a productive good. It makes that biogas credit is difficult to develop in some IDBP target areas. IDBP expects that the cooperation with Credit Unions and BMT cooperatives, and also Kiva would become an example to other MFIs for biogas credit financing in remote areas.
- 6.4. Bio-slurry: the new promo entry point.** Promoting BIRU is not merely promoting the gas. In fact, the bio-slurry has attracted more people, especially farmers. Therefore, it is important to design and develop a comprehensive promotion and marketing strategy that highlights more the use and benefits of bio-slurry. The strategy also has to be able to tackle the biggest obstacle on promoting bio-slurry, which is the usage of subsidized chemical fertilizer.
- 6.5. Co-financing cooperation with GoI.** Despite the success of the co-financing cooperation between IDBP, the GoI and the farmers, most governments at the provincial and district levels are still reluctant to apply the three-party co-finance scheme. The main reason being they do not trust that this kind of financing scheme is allowed by the financial regulations and policies. What BIRU did in 2014 were mostly working with “champion” districts who dare to apply the financing scheme, while at the same time other districts were applying the fully-subsidized system IDBP will also have to work to linking the programme planning and approach with the planning cycle of the Go’s. The, the BIRU programme can be formally mainstreamed within the Indonesian Government policy framework.

Annex

Annex 1: IDBP Workplan 2015

No	Activity	Output	Semester 1 (current contract)	Semester 2 (new contract)
1	Digester construction	Norway: 850 units EnDev: 1,150 units MCC: 600	N: 350 E: 550	N: 500 E: 600 M: 600
2	Community awareness meetings	160 meetings, more than 30% female participants	N: 20 E: 40	N: 20 E: 40 M: 40
3	User training	2,000 participants, at least 50% women	N: 300 E: 500	N: 400 E: 500 M: 300
4	Mason and supervisor training	100 masons and supervisors trained	N: 20 E: 20	N: 20 E: 20 M: 20
5	Bio-slurry management training	2,000 participants, 65% of households applies or sells bio-slurry (30% by women)	N: 300 E: 500	N: 400 E: 500 M: 300
6	Quality inspection	At least 30% of digesters inspected = 780 visits	N: 100 E: 200	N: 100 E: 200 M: 180
7	BSPs have Participation Agreements with BIRU	10 new and 50 existing BSPs	N: 25 E: 25	N: 5 E: 5 M: 0
8	Business support and capacity development	Training sessions for at least 10 partners/ monthly meetings	N: 3 E: 3	N: 2 E: 2
9	Active Lending Partner Organizations (LPOs)	20 active members	N: 10 E: 10	
10	Entrepreneurship development	10 new businesses in operation (30% by women)	N: 5 E: 5	
11	Biogas appliances development	5 new items tested and/or certified and/or standardized	E: 3	E: 2
12	Domestic Biogas Expertise Center	Training sessions at Ministry	N: 2	N: 2
13	Local governments make funds available	10 districts allocate for 1,000 units	EN: 2 with 250 N: 2 with 250	EN: 2 with 250 N: 2 with 250

Annex 2: BIRU Office Addresses

No	Province	Address	Phone and Fax
1	Jakarta	Jl. Ampera IV Gg. H. Rais no. 1, Jakarta 12550	Ph : +62 21 7821090 +62 21 7821086 Fax : +62 21 7808115
2	West Java	Jalan Tanjidor No 19 Turangga, Bandung Jawa Barat	Ph/Fax : +62 22 7308287
3	Central Java	Jl. Diponegoro no 17 RT 005 RW 009 Karang Anom Klaten Utara 57437, Jawa Tengah	Ph Fax : +62272-325968
4	East Java	Jl. Bunga Monstera 21, Kelurahan Tulusrejo, Kec Lowokwaru, Malang, 65119	Ph : +62 271 -486737 Fax : +62 271 471053
5	Bali	Jl. Jata No.4 Gianyar. Gianyar Bali	0817 356 028
6	NTB	Jl. Kebyar Nomor 7 Mataram, Mataram - Nusa Tenggara Barat	Ph/Fax : +62 370 630580
7	South Sulawesi	Jl. Todopuli Raya Timur Kompleks Villa Surya Mas Blok E/03 Kel. Borong Kec. Manggala Kota Makassar - SULAWESI SELATAN	Tlp/Fax : +62 411 831044
8	Lampung	Perumahan Bumi Puspa Kencana 3 Estate, Blok A No. 2, Rajabasa, Bandar Lampung	Ph : +62721-801 2903
9	Sumba NTT	Jl. Ikan Hiu Samping TK Mutiara Perumnas, RT 41 RW 07 Kelurahan Kambajawa, Kecamatan Kota Waingapu, Nusa Tenggara Timur	Tlp/Fax : +62387-2564534

Annex 3: Promotion and Marketing Materials



Newsletter 'Warta BIRU', 3rd edition (1,500 pcs) Distributed in 9 provinces



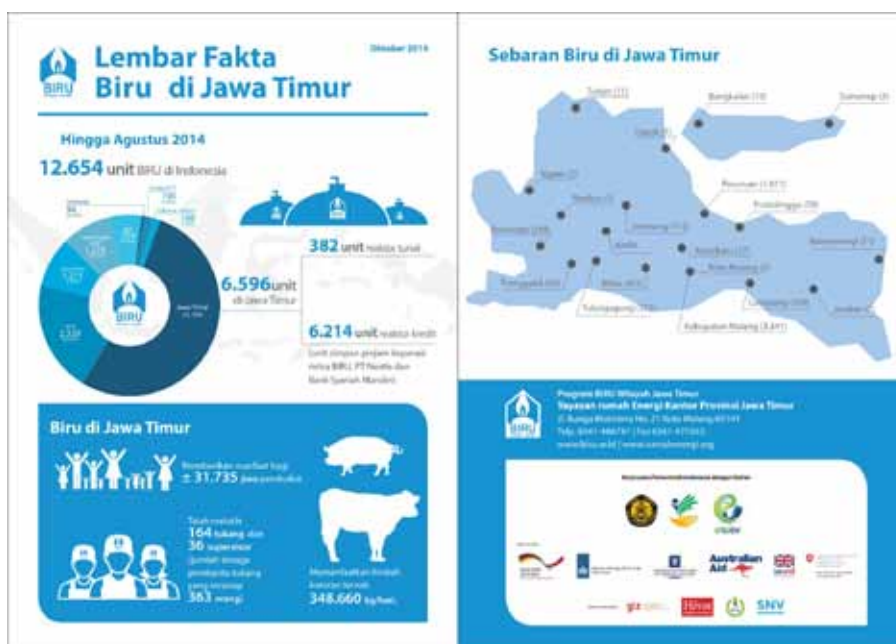
Promotion brochure of Kiva loan (500 pcs) Distributed in Central Java, DIY, NTB, South Sulawesi



Bio-slurry brochure (5,000 pcs) Distributed in 9 provinces



Advertisement in MEMR book "Directory, Profile and Procedure of Investment in Renewable and Conservation Energy Sector"
1 design (distributed to 10,000 partners of MEMR)



Factsheet of BIRU achievement in East Java (print on demand)
Distributed in East Java



Apa itu Biogas?

Biogas adalah gas alami hasil fermentasi antara campuran air dan kotoran hewan ternak sapi, kerbau, babi, unggas ayam dan ayam di dalam reaktor biogas.

Memakai biogas terbukti:

- **Lebih ekonomis** Pabrik gas dan pupuk pribadi bisa didapatkan dengan biaya murah. Pupuk dari bio-slurry (campuran biogas) bisa menjadi sumber pemupukan baru.
- Bio-slurry membuat lahan lebih subur, tanaman sehat dan panen melimpah.
- **Lebih bersih, sehat dan modern** Dapur dan kandang ternak lebih bersih dan sehat, serta bebas asap yang mengganggu kesehatan.
- **Menjaga kelestarian lingkungan.**

Program BIRU

Program Biogas Rumah (BIRU) telah dimulai sejak 2009 dan saat ini program BIRU bekerja di Jawa Barat, Jawa Tengah, DI Yogyakarta, Jawa Timur, Bali, NTB (Lombok dan Sumbawa), NTT (Sumba), Sulawesi Selatan dan Lampung.

Program ini dikelola oleh HIVOS dengan dukungan teknis dari SNV dan didanai oleh Pemerintah Norwegia dan program ENCKEY. HIVOS bermitra dengan Yayasan Rumah Energi dalam melaksanakan program BIRU.



Keunggulan Program BIRU

- Subsidi 2 juta rupiah per unit reaktor
- Reaktor bertanda SNV 7826/2012
- Garansi dan perawatan purna jual BIRU memberikan garansi alat 1 tahun dan garansi bangunan reaktor 3 tahun
- Reaktor tahan lama dan mudah dipelihara Reaktor dengan konstruksi beton yang dibangun oleh BIRU dapat bertahan hingga 15 tahun bila digunakan dan dirawat dengan baik
- Profesional Para pekerja konstruksi terlatih dan bersertifikasi BIRU
- Tersedia dalam berbagai ukuran (4m³, 6m³, 8m³, 10m³ dan 12m³)



BIRU folded brochure (9,000 pcs)
Distributed in 9 provinces

THE ensures involvement of women in the decision making process by having biogas household agreements signed by both spouses, providing equal access for them and women to participate in the certified consultation, biogas application, and gas operation and maintenance training sessions to meet at least 50% of biogas training, having access to biogas financing, and opportunities to generate additional income within biogas business.

"If we use biogas for business, we can make double benefit. Besides not having to spend anything for cooking fuel, we also gain additional income." *Mugiyati, Sukoharjo, Jawa Tengah*

Mugiyati started her biogas business seven years ago but only in the last few years - after she obtained biogas - she started to make a good profit. Before she had biogas, she only made chips during the dry season when she did not want to buy gas for drying the chips. Now she is using biogas, the business can go on throughout the year. According to Mugiyati, having biogas opens up a lot of business-income opportunities.

More Finance

BIRU and Hivos joins forces with the private sector like dairy sector, such as Herta and dairy cooperatives and the banking sector (Bank Syariah Mandiri and Tabungas Foundation) to provide and improve access to credit to the farmers in need. The loan is channelled mainly through cooperatives and micro-financing institutions.

"I hope our economy will get better and better. Someday, I want to buy a pick-up truck to support the business." *Fatchiyah, Karanganyar, Jawa Tengah*

Fatchiyah is a farmer in Karanganyar, Purusari, Sukoharjo and a member of KPPS Setia Kawan, a Korpri award-winning dairy cooperative. The Korpri is an environmental conservation award and was presented by the Indonesian President, Mr. Susilo Bambang Yudhoyono in May 2012.

For a first biogas, Fatchiyah had to pay IDR 4.5 million in addition to the IDR 2 million subsidy received from the investment loan from the cooperative, the cost of installation of IDR 1.5 thousand per month or around IDR 1.5 per 10 days for her years - much less than what she used to pay for cooking fuel. With these savings, she can now apply for a bigger loan from the cooperative to expand the family's business and start a small garden to grow flowers and chili.

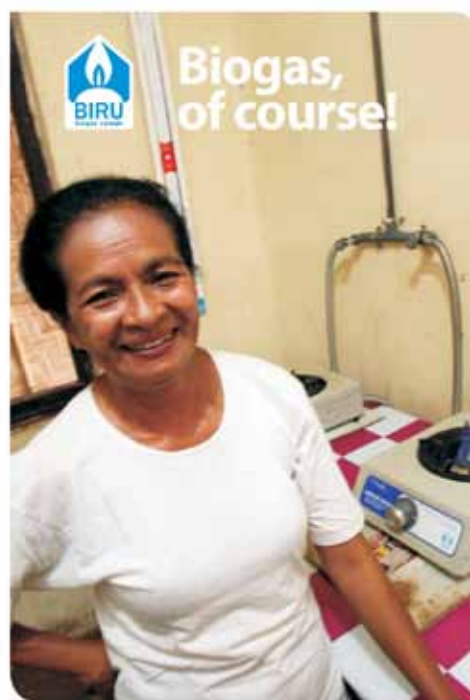
Implementers

Hivos Hivos is a Dutch development organization supported by the Dutch government. Established in 1986, Hivos works to contribute to a free, fair, and sustainable world. A goal is to help all citizens have equal access to the resources and opportunities for their development, and where they can actively and equally participate in decision-making processes that determine their lives, their societies and their future. Hivos works together with more than 800 partner organizations in over 20 countries across the globe with 150 staff members and 17 offices worldwide.

Yayasan Rumah Energi Yayasan Rumah Energi is a local entity that was established in 2012 with the aim to facilitate the supply of clean and renewable energy to Indonesia in rural areas and encourage the concept of Indonesia to be food and energy security. Through the BIRU-RE becomes one of the driving forces of the development of commercial, medium-sized biogas sector.

SNV SNV is a Netherlands development organization that delivers capacity development services to over 2,000 clients in 50 countries in Africa, Asia, Latin America and the Balkans. In the energy sector, SNV uses Biogas as Domestic Biogas a practice in which the organization has proven its expertise since its inception operations in the late 1980s. Supporting the development of a truly commercially viable biogas sector in Nepal, SNV gained extensive experience and international recognition.

National Biogas Programme Support Unit (NBSU) NBSU is a local entity that was established in 2012 with the aim to facilitate the supply of clean and renewable energy to Indonesia in rural areas and encourage the concept of Indonesia to be food and energy security. Through the BIRU-RE becomes one of the driving forces of the development of commercial, medium-sized biogas sector.



BIRU programme brochure, Bahasa Indonesia (5,000 pcs) and English (1,500 pcs)
Distributed in 9 provinces

BIRU Bio-Slurry

Bio-slurry atau ampas biogas merupakan pupuk organik berkualitas tinggi hasil fermentasi anaerobik (tanpa oksigen). Mempunyai bentuk cair dan padat.

Keunggulan bio-slurry:

1. Pembenhah lahan (soil conditioner) karena mengandung 10 - 20% asam humat
2. Bernutrisi lengkap dan berkualitas tinggi
3. Bio-aktivator mikroba pro-biotik dan sumber pakan cacing tanah
4. Pengatur pertumbuhan (hormon) tanaman
5. Dapat bersifat sebagai insektisida dan fungisida organik
6. Bahan campuran yang baik untuk:
 - Pupuk vermikompos dan pupuk bokashi
 - Media jamur
 - Pupuk kolam ikan dan belut
 - Pakan ikan dan belut

Lahan Subur Panen Melimpah Peternak & Petani Lebih Berdaya!

Hemat pengapakan pestisida atau fungisida organik/ kimia 50 - 75%

Hemat pengapakan pupuk kimia/ kimia 50 - 75%

Peningkatan panen pertanian 10 - 20%

Sebagai sumber pendapatan baru

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Lahan Subur Panen Melimpah Peternak & Petani Lebih Berdaya!

Hemat pengapakan pestisida atau fungisida organik/ kimia 50 - 75%

Hemat pengapakan pupuk kimia/ kimia 50 - 75%

Peningkatan panen pertanian 10 - 20%

Sebagai sumber pendapatan baru

Roll-up banner of BIRU Achievement 2009 – 2013 & Roll-up banner of Bio-slurry
Distributed in 9 provinces



Gas dan pupuk gratis setiap hari?

Bangun reaktor BIRU!

Hubungi: **0813 3567 3415**
0815 1354 9418

www.biru.or.id | www.rumahenergi.org

Bersubsidi
SNI
Perawatan prima jual serta garansi alat 1 tahun dan garansi bangunan reaktor 3 tahun
Reaktor mudah dipelihara dan dapat bertahan hingga 15 tahun bila digunakan dan dirawat dengan baik
Dikerjakan secara profesional oleh pekerja konstruksi terlatih dan bersertifikasi BIRU
Tersedia dalam berbagai ukuran (4m³, 6m³, 8m³, 10m³ dan 12m³)

Logos of supporting organizations: BIRU, SNV, Hives, and others.

Car Sticker
Used in West Java and Central Java



Pakai Biogas: Lebih Hemat Banyak Manfaat!

Memakai biogas terbukti:

- Lebih bersih, sehat dan modern.** Dapur dan kandang ternak lebih bersih dan sehat, serta bebas asap yang mengganggu kesehatan.
- Memjaga kelestarian lingkungan.** Di kebun saya ini tidak ada sama sekali cemaran bahan kimia, baik itu pupuk anorganik maupun pestisida kimia. — Agustina Doko, Leno
- Lebih hemat.** Pupuk pribadi bisa didapatkan dengan biaya murah, BBM bisa hemat sampai 75%! — Rafau Dulu satu bulan kami bisa hemat 100 ribu 200 ribu untuk minyak tanah, sekarang paling banyak 30 ribu saja. — I Made Napita, Leno
- Pupuk dari bio-slurry (ampas labu) lebih membuat subur, tanaman sehat dan panen meningkat 40-60%.** Biasanya panen satu hektar 3,5 ton padi, namun sekarang di tempat yang menggunakan pupuk organik kami, satu hektar bisa 10 ton. — Heinrich Dengi, Ilingsari
- Bio-slurry juga adalah campuran yang bagus untuk pakan ikan dan belut.**
- Dengan memanfaatkan bio-slurry sebagai sumber pendapatan, modal yang dipakai untuk membangun reaktor biogas bisa kembali dalam 1-2 tahun!** Kita bisa beli kambing, biaya anak-anak untuk beli makan dan bisa untuk anak-anak kirim di tempat kuliah. — Nurhasanah, Wika Organik

Keunggulan BIRU

- Bersubsidi
- Reaktor berstandar SNI 7826:2012
- Perawatan prima jual serta garansi alat 1 tahun dan garansi bangunan reaktor 3 tahun
- Reaktor mudah dipelihara dan dapat bertahan hingga 15 tahun bila digunakan dan dirawat dengan baik
- Dikerjakan secara profesional oleh pekerja konstruksi terlatih dan bersertifikasi BIRU
- Tersedia dalam berbagai ukuran (4m³, 6m³, 8m³, 10m³ dan 12m³)

Tertarik untuk membangun BIRU? Hubungi kami!

Mitra BIRU

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Logos of supporting organizations: BIRU, SNV, Hives, and others.

BIRU Sumba Promotion Poster
Distributed in Sumba, NTT

Annex 4: List of Construction Partners

No.	Name of Construction Partners	Province
SME		
1.	CV Mitra Artha Utama	West Java
2.	CV Karsa Tekad Mandiri	East Java
3.	CV Qibar Alami	Central Java
4.	CV Qaryah Thayyibah	Central Java
5.	CV Sarana Sejahtera	Central Java
6.	UD Bontomarannu	South Sulawesi
7.	CV Energi Persada	West Java
8.	CV Fitria Jaya Abadi	Lampung
9.	Mandiri Energi Mason Group	East Java
10.	Sumber Makmur Mason Group	East Java
11.	Mandiri Mason Group	South Sulawesi
12.	Regol Mason Group	Lampung
13.	Jawa Barat Mason Group	West Java
14.	Abadi Mason Group	Bali
15.	Dewata mason Group	Bali
16.	Langit Biru Mason Group	East Java
17.	Mitra Sarana Kuba Mason Group	South Sulawesi
18.	Sangkareang Mason Group	NTB
19.	Boyolali Mason Group	Central Java
20.	CV. Bina Energi Mandiri	Central Java
21.	CV. Jaya Perkasa Utama	West Java
22.	CV. Ritma Green Sinergy	South Sulawesi
23.	Paroso Mason Group	NTB
24.	Persada Mason Group	East Java
25.	Harapan Bersama Mason Group	Lampung
26.	Mabarakka Mason Group	South Sulawesi
27.	LKM Rukun Makmur	Central Java
28.	BMT Bina Ihsanul Fikri	Central Java
29.	Pusat Inkubasi Bisnis Usaha Kecil (Pinbuk)	Central Java
NGO		
30.	Yayasan Pemerhati Lingkungan Hidup (PiLaH)	NTB
31.	Pusat Studi Pembangunan NTB	NTB
32.	Yayasan Mitra Membangun Masyarakat Sejahtera (YM3S)	NTB
33.	Yayasan Sumberdaya dan Lingkungan untuk Pelestarian Pembangunan (YSLPP)	NTB
34.	Yayasan Sion	Central Java
35.	Yayasan Trukajaya	Central Java
36.	Lembaga Pengkajian Kemasyarakatan dan Pembangunan (LPKP)	East Java
37.	Lembaga Pengembangan Pertanian Nahdatul Ulama (LPP-NU)	Lampung
38.	Yayasan Suara Bhakti	Central Java
39.	LPTP	Central Java
40.	Lembaga Pendidikan dan Pemberdayaan Anak Bangsa (LPPAB)	East Java
41.	Yayasan Lembaga Pembinaan Masyarakat Desa (YLPMD)	Lampung

No.	Name of Construction Partners	Province
42.	Yayasan Manikaya Kauci	Bali
43.	Yayasan Alam Lestari	Sumba (NTT)
44.	Yayasan Sosial Donders	Sumba (NTT)
45.	Yayasan Sumba Sejahtera	Sumba (NTT)
46.	Idep Selaras Alam	Bali
Cooperative		
47.	KPRI Prisma	NTB
48.	KAN Jabung	East Java
49.	KSU Jaya Abadi	East Java
50.	KUD Semen	East Java
51.	KPSP Setia Kawan	East Java
52.	KUD Sumber Makmur Ngantang	East Java
53.	KUD Tani Wilis	East Java
54.	Koperasi SAE Pujon	East Java
55.	KUD Sri Wigati	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)

Annex 5: List of Credit Provider

No	Name of Cooperative	Area	Status	Credit Source
1	Kop SAE Pujon	East Java	Construction Partner	Nestle
2	KUD Sumber Makmur	East Java	Construction Partner	Nestle
3	KUD Karangploso	East Java	Lending Partner	Nestle
4	KUD DAU	East Java	Lending Partner	Nestle
5	KUD Gondanglegi	East Java	Lending Partner	Nestle
6	Kop Agro Niaga	East Java	Construction Partner	Saving and Loans Unit
7	KPSP Sidodadi	East Java	Lending Partner	Nestle
8	KUD Ngajum	East Java	Lending Partner	NA
9	KUB Sami Mandiri	East Java	Lending Partner	Saving Unit
10	KPSP Setia Kawan	East Java	Construction Partner	BSM
11	KUD Kertajaya	East Java	Lending Partner	Saving Unit and Nestle
12	KUD Karya Bhakti	East Java	Lending Partner	Nestle
13	KUD Sri Wigati	East Java	Construction Partner	Nestle
14	KUD Tani Wilis	East Java	Construction Partner	Saving and Loans Unit and Nestle
15	KUD Sumber Makmur	East Java	Lending Partner	Nestle
16	KUD Semen	East Java	Construction Partner	Nestle
17	KUD Argopuro	East Java	Lending Partner	Nestle
18	KUD Tani Makmur	East Java	Construction Partner	Nestle
19	KUD Batu	East Java	Lending Partner	Nestle
20	KUD Karyo Ngremboko	East Java	Lending Partner	Nestle
21	KSP Balota	South Sulawesi	Lending Partner	RBF
22	KPGS	West Java	Lending Partner	RBF
23	KPSBU	West Java	Lending Partner	RBF
24	Koperasi Andini Luhur	D.I. Yogyakarta	Construction Partner	RBF

Annex 6: List of IDBP Area (Subdistrict and District)

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
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	0	2
	Kediri	2010	Kandangan, Kepung, Puncu, Pagu, Wates, Ngancar	1	6
		2011	Plosoklaten, Gurah, Kandat	0	3
		2012	Medowo, Mlancu, Segaran	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	0	2
	Pasuruan	2010	Tutur, Purwodadi, Puspo	1	3
		2011	Grati, Blarang, Lumbang, Nongkojajar, Tlogosari, Wonosari, Nguling, Lekok	0	8
		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	0	1
	Probolinggo	2011	Krucil	1	1
	Trenggalek	2011	Bendungan, Pule, Kelutan	1	3
	Lumajang	2010	Senduro	1	1
		2011	Tempeh , Kunir, Kandang tepus, Kedung jajang	0	4
		2013	Sukodono, Padangan, Rowokangkung	0	3
		2014	Tekung	0	1
	Jember	2011	Ambulu	1	1
	Ngawi	2011	Bringin, Geneng, Pitu, Ngawi, Ngrambe	1	5
		2014	Sine	0	1
	Ponorogo	2011	Pudakwetan, Sooko	1	2

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
		2012	Kauman, Krisik, Pulung, Ponorogo, Siman, Jambon	0	6
		2013	Ngrayun, Balong, Sukorejo, Slahung	0	4
		2014	Badegan, Mlarak	0	2
	Magetan	2011	Bulugunung, Panean	1	2
	Madiun	2013	Dolopo	1	1
	Banyuwangi	2013	Bangurejo, Siliragung	1	2
	Sumenep	2013	Ganding	1	1
Total East Java				18	119
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	0	2
	Wonogiri	2010	Wonogiri, Ngadirojo	1	2
		2011	Giriwolyo	0	1
		2012	Nguntoronadi, Tirtomoyo	0	2
		2013	Baturetno, Batuwarno, Jatipurno, Puhpelem	0	4
	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	0	2
	Sukoharjo	2010	Nguter	1	1
		2011	Gatak, Bendosari, Palokarto, Tawang Sari	0	4
	Grobogan	2011	Purwodadi, Wirosari	1	2
		2012	Krajan	0	1
	Wonosobo	2010	Selomerto	1	1
		2011	Kepil	0	1
		2012	Wadaslintang	0	1
	Klaten	2011	Cawas, Kemalangan, Bayat, Jogonayan, Karanganom	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
	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

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
		2013	Banyudono	0	1
		2014	Sidomulyo	0	1
	Magelang	2011	Dukun	0	2
		2012	Salam, Srumbung, Ngablak, Sawangan	0	4
		2013	Borobudur, Grabak	0	2
	Temanggung	2010	Temanggung, Kaloran	1	2
		2013	Tlogomulyo, Kranggan, Parakan	0	3
		2014	Bulu	0	1
	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
	Salatiga	2010	Argomulyo	1	1
		2011	Sidorejo	0	1
		2012	Tingkir	0	1
		2014	Sidomukti	0	1
	Blora	2011	Japah	1	1
		2012	Sambong	0	1
		2013	Ngawen	0	1
	Banyumas	2011	Sokaraja	1	1
	Gunung Kidul	2011	Nglipar	1	1
		2012	Panggang, Sapto Sari	0	1
		2013	Ponjong, Wonosari	0	2
	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
	Kendal	2011	Bojo	1	1
		2013	Singorojo	0	10
	Pati	2012	Gabus, Jakenan	1	1
		2013	Tayu	0	1
		2014	Wedarijaksa	0	1
	Pemalang	2012	Pemalang	1	1
	Brebes	2012	Paguyangan	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

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
	Sleman	2010	Cangkringan	1	1
		2011	Sawangan, Ngluwar, Candi Mulyo	0	3
		2013	Turi, Ngemplak, Berbah, Tempel, Moyudan, Ngaglik	0	6
		2014	Pakem	0	1
	Kulon Progo	2012	Galur, Kokap	1	2
		2013	Kalibawang, Lendah	0	2
Total Central Java and DIY				26	213
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	0	3
	Cianjur	2011	Gekbrong, Cipanas	0	3
	Sukabumi	2011	Cicurug, Sukaraja, Cibodas	1	3
		2012	Purabaya	0	1
		2013	Sukalarang, Cikembar	0	2
		2014	Nyalindung, Surade	0	2
	Bandung Barat	2010	Lembang, Cisarua	1	2
		2012	Parongpong	0	1
		2014	Ngamprah		
	Garut	2010	Bayongbong, Cigedug, Bluburlimbangan, Cisarupan	1	4
		2011	Cikajang	0	1
		2012	Tarogong kaler, Selawi, Pamengpeuk, Karangpawitan	0	4
		2013	Cihurip, Banjarwangi	0	2
		2014	Cikancung	0	2
	Subang	2011	Ciater, Sagalaherang, Jalancagak	1	4
		2013	Ciasem	0	1
	Sumedang	2010	Tanjungsari	1	1
		2011	Pamulihan, Sukasari, Tandangsari, Jatinangor, Darmaraja, Parakamuncang, Cimanggung	0	7
	Purwakarta	2011	Bungursari	1	1
		2014	Cibatu, Wanayasa, Manis	0	3
	Bogor	2011	Nanggung, Cisarua, Megamendung	1	3
		2012	Bojong Gede	0	1
	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
		2014	Maleber	0	1
	Cirebon	2011	Talun	1	1
		2012	Gempol	0	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
	Tasikmalaya	2012	Karangnunggal	1	1
	Bekasi	2013	BojongManggu, Tambun Selatan	1	2
		2014	Jati Sampurna	0	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
DKI Jakarta	Jakarta Selatan	2012	Pancoran, Mampang Prapatan, Cikoko	1	3
Total West Java (and Banten)				18	82
South Sulawesi	Enrekang	2011	Cendana, Maiwa, Enrekang, Anggeraja, Baraka, Buntu batu, Malua, Alla, Curio, Baroko, Masalle	1	11
	Sinjai	2011	Sinjai Selatan	1	1
		2012	Sinjai Timur, Tellu Limpoe, Sinjai Barat, Sinjai Tengah	0	4
	Bone	2011	Bengo, Sua Baccoc	1	2
		2012	Kahu, Patimpeng	0	1
		2013	Amali, Tonra, Lamuru, Lappariaja	0	4
		2014	Barebbo, Awangpone	0	2
	Maros	2012	Simbang	1	1
		2013	Tompobulu	0	1
		2014	Tanralli	0	1
	Takalar	2012	Galesong Selatan	1	1
		2013	Polombangkeng Selatan, Polombangkeng Utara, Mappakasunggu	0	3
	Tana Toraja	2013	Makale Utara, Saogalla Selatan	1	2
	Bulukumba	2013	Bulukumpa, Gantarang, Kajang	1	3
	Gowa	2013	Bontonompo	1	1
	Jeneponto	2013	Bangkala	1	1
	Wajo	2013	Gilireng	1	1
	Soppeng	2013	Mario Riawa, Donri-donri, Lalabata	1	3
	Barru	2013	Barru	1	1
Total South Sulawesi				12	44
Nusa Tenggara Barat	Lombok Tengah	2010	Pujut	1	1
		2012	Batukliang, Jonggat, Kopang, Praya Barat, Pringgarata, Janapria, Praya Timur	0	7
		2014	Batukliang Utara	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
	Lombok Utara	2011	Tanjung, Pemenang, Gondang	1	3
		2012	Bayan, Gangga, Kayangan	0	3

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
	Lombok Timur	2010	Suralaga, Labuhan Haji	1	3
		2011	Aikmel, Wanasaba, Sikur, Montong Gading	0	5
		2012	Pringgabaya, Pringgasela, Keruank, Jeruklegi, Selong, Wanasaba, Kota Raja	0	7
		2013	Masbagik, Terara	0	2
		2014	Kelayu	0	1
	Mataram	2012	Mataram	1	1
		2013	Sanubaya	0	1
	Sumbawa	2012	Moyohilir, Moyo Utara, Tarano	1	3
		2013	Labuhan Badas, Maronge, Lopok, Smapuin	0	4
	Sumbawa Barat	2012	Seteluk	1	1
		2013	Pototano	0	1
		2014	Brang Ene, Brang Rea, Jereweh, Maluku, Taliwang, Rempe	0	5
	Kota Bima	2013	Bima, Soromandi, Rasanae	1	3
		2014	Palibelo, Bolo	0	2
	Dompu	2013	Dompu, Kramat Mulya	1	2
Bali	Gianyar	2010	Payangan	1	1
		2011	Ubud, Tegalalang	0	2
		2012	Blahbatuh, Tegal Kolong	0	2
		2013	Tampak Siring, Sukawati	0	2
	Kab.Bangli	2010	Tembuku	1	1
		2011	Susut, Bangli, Kintamani	0	3
		2012	Sawan	0	1
	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
		2013	Kediri, Slemadeg Timur	0	2
		2014	Marga	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
	Denpasar	2011	Denpasar Selatan	1	1
		2012	Denpasar Utara	0	1
	Jembrana	2011	Melaya	1	1
		2012	Negara	0	1
		2013	Mendoyo	0	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
	Karang Asem	2011	Kubu, Bebandem	1	2
		2012	Manggis, Karang asem, Rendang, Sidemen, Selat, Seraya	0	5
		2014	Pempatan, Abang	0	2
	Selayar	2011	Payangan	1	1
Total Lombok and Bali				19	118
Sumba (NTT)	Sumba Barat Daya	2011	Wewewa Timur, Kodi	1	2
		2012	Weetabula, Loura, Wewewa Barat	0	3
		2013	Tambolaka	0	1
	Sumba Timur	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
	Sumba Tengah	2012	Katikutana	1	1
		2014	U Ratu Nggai Barat	0	1
	Sumba Barat	2012	Kota Waikabubak	1	1
		2014	Tana Riu	0	1
Total Sumba (NTT)				4	19
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
	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
		2014	Sekampung, Pekalongan	0	2
	Lampung Selatan	2013	Natar, Jati Agung	1	2
		2014	Sukabumi, Sidomulyo, Merbau Mataram	0	3
	Bandar Lampung	2014	Kemiling	1	1
	Pringsewu	2014	Adi Luwih, Gading Rejo	1	1
	Pesisir Barat	2014	Bengkunat	1	1
Total Lampung				9	29
Total number of districts and sub-districts 2010, 2011, 2012, 2013 and 2014				106	624

Annex 7. List of Joint Cooperation Hivos and Government of Indonesia for Biogas Digesters Construction

No	Name of MoU
1	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources NTB 2013
2	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Lombok Utara 2013 - 2014
3	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Bima 2014
4	MoU Hivos with Provincial Government Sulawesi Selatan 2014
5	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Kabupaten Bone Sulawesi Selatan 2014
6	MoU Hivos with Provincial Government Kabupaten Takalar Sulawesi Selatan 2014
7	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Kabupaten Enrekang Sulawesi Selatan 2014
8	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Pangkajene 2014
9	MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Kabupaten Barru Sulawesi Selatan 2014
10	Draft MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Kalimantan Tengah 2015 and Jambi 2015
11	Draft MoU Hivos with Provincial Energy Departments Ministry of Energy and Mineral Resources Jambi 2015

Annex 8: List of Meeting and Workshop

External training and workshop participation

Central Java

1. Workshop on Energy Security, organized by Trukajaya in Salatiga (June 2014)
2. Workshop on Domestic Biogas Programme, organized by Department of EMR of Central Java in Blora (16 April 2014)
3. Session of Biogas and Bio-slurry in Seminar of National Crops in Instipor Yogyakarta (March and April 2014)
4. Session of Bio-slurry Utilization for Various Organic Crops in Seminar of Various and Cultivation Crops organized by Suara Bhakti (April 2014)
5. Workshop and Training of Kiva on digester construction loan with CPO (Jakarta, 23 January 2014)

West Java

1. Dissemination of "Technology and Machine Tools for Animal Husbandry", Department of Animal Husbandry of West Java Province, Bandung, 28 November 2014.
2. Seminar & Workshop of "Pembentukan Jejaring Masyarakat Peduli Waduk Cirata", LPPM-UNPAD, Hotel Mitra, Bandung (7 January 2014).

South Sulawesi

1. Agricultural Extension Training, Training Service of Agricultural Department of Batangkaluku, Popo, Galesong Selatan, Takalar, South Sulawesi

External workshops organized

Lampung

1. Meeting with WWF representative about programme plan in Pesisir Barat
2. Meeting with Manager Assistant of CRD PT GGP about programme plan in 3 districts (Lampung Utara, Lampung Tengah and Lampung Timur)

West Java

1. Meeting with RBF, KUD Puspamekar, and CV Energi Persada for an biogas credit assessment for cattle farmers member of KUD Puspamekar (12 February 2014).
2. Meeting with BSM Kopo and KUD Pasir Jambu to discuss BIRU credit (19 February 2014).
3. Meeting with board member of Koperasi Krangan Lembur Mandiri (KLM) in Bekasi to introduce BIRU programme (14 April 2014).
4. Meeting with Mason Group, KPGS and RBF in KPGS Cikajang Garut (6 Mei 2014).
5. Meeting with RBF (8 Mei 2014).
6. Consultation Meeting with Business Sector of BRI about KPPE programme for biogas (20 Mei 2014)

Central Java

1. Meeting with RBF, Koperasi Musuk and Koperasi Tekun, 1-2 Desember 2014
2. Meeting with FOV Biogas-Pinbuk, 18 Agustus 2014
3. Workshop of BIRU in Blora, 3 December 2014
4. Consultation meeting about BIRU programme for Joglo Tani Group in Sleman (4 June 2014)
5. Consultation meeting about BIRU programme for Farmers and Stock Farmers Groups in Alian, Kebumen (3 June 2014)
6. Consultation meeting with Faculty of Engineering of Gadjah Mada University about BIRU community work of the students (4 June 2014)

NTT

1. Multi Stakeholder Meeting, organized by Millenium Challenge Account (MCA)

South Sulawesi

1. Meeting with CSR team of Pertamina at BLHD Province Office (13 August 2014)
2. Meeting with CSR team of Pertamina in Makassar (19 August 2014)
3. Meeting with lecture of Agriculture Faculty of Hasanuddin University (23 September 2014)
4. Meeting with CSR team of Yayasan Kalla in Bone (25 September 2014)
5. Meeting with CSR team of PT Energy Sengkang in Wajo (25 September 2014)

Coordination meeting with Gol

National (6)

1. Coordination meeting, IDBP and DGNREEC, Jakarta, 7 January 2014
2. Coordination meeting on Bantuan Material, IDBP and DGNREEC, Jakarta, 7 April 2014
3. Coordination meeting on Bantuan Material, IDBP and DGNREEC, Jakarta, 23 April 2014
4. Coordination meeting on biogas advisory committee, IDBP 2015 expansion, expertise center, IDBP and DGNREEC, Jakarta, 16 July 2014
5. Coordination meeting on carbon credit, asset list, IDBP and DGNREEC, Jakarta, 24 July 2014
6. Pre-advisory committee meeting, IDBP and DGNREEC, Serpong, 30 September 2014

Lampung (9)

1. Meeting with the Head of EMR Department of Lampung for the study visit to NTB, 2 September 2014
2. Meeting with the Head of EMR Department of Lampung Timur about BIRU programme and partnership, 4 September 2014.
3. Meeting with the Head of BP4K Tulang Bawang about action plan of BIRU implementation, 21 Agustus 2014.
4. Meeting with the Head of EMR Department of Tulang Bawang about follow up plan after the demoplot built by BP4K, 28 Agustus 2014.
5. Meeting with Head of PMD of Tanggamus about joint programme preparation of Government of Tanggamus, community and BIRU
6. Meeting with Head of Family Planning & Women Empowerment Bureau of Pringsewu about presentation preparation to the Regents and BAPPEDA
7. Meeting with Department of EMR of Lampung Tengah about biogas programme through DAK 2014 mechanism
8. Meeting with Department of EMR of Tulang Bawang Barat about biogas programme through DAK 2014 mechanism
9. Consultation meeting with Department of EMR of Lampung Province about the possibility of joint programme like in NTB.

West Java (2)

1. Meeting with Department of EMR of West Java, 4 November 2014.
2. Meeting with BKP3 of Bandung, 28 November 2014.

Central Java (33)

1. Stakeholder meeting in Yogya, 15 December 2014
2. Stakeholder meeting in Solo, 17 December 2014
3. Consultation meeting with Department of EMR of Rembang, 21- 22 August 2014.
4. Meeting with PNPM Pati about cost-shared biogas construction plan in Pati, 9 September 2014
5. DAK meeting in Yogya, 12 September 2014
6. Meeting with Department of Irrigation of Bantul of biogas construction plan in the department work area, 22 September 2014
7. Consultation meeting with PNPM Pati, 6 October 2014
8. Consultation meeting with Department of EMR of DIY about biogas construction plan 2015, 7 November 2014
9. Consultation meeting with PNPM Pati, 23 November 2014

10. Consultation meeting with Department of EMR of Semarang about construction planning of BIRU digesters through subsidy sharing (16 May 2014)
11. Consultation meeting with Department of EMR of DIY about construction planning of 90 BIRU digesters in Yogyakarta (2 May 2014)
12. Consultation meeting with PNPM Mandiri about BIRU programme in Kaliwungu, Semarang (12 March 2014)
13. Consultation meeting with Department of EMR of Wonogiri about biogas programme in Wonogiri in 2014 (24 March 2014)
14. Consultation meeting with Department of Irrigation of DIY about biogas programme cooperation with BIRU (13 March 2014)
15. Consultation meeting with Department of EMR of Gunung Kidul about biogas programme through DAK mechanism (7 January and 4 March 2014)
16. Consultation meeting with Koperasi Ngudi Luhur about Rabo Bank Foundation funding (10 February 2014)
17. Consultation meeting with Department of EMR of Sukoharjo about 2014 biogas programme in Sukoharjo (6 & 20 February 2014)
18. Consultation meeting with Department of EMR of Semarang about construction planning of BIRU digesters through subsidy sharing (16 May 2014)
19. Consultation meeting with Department of EMR of DIY about construction planning of 90 BIRU digesters in Yogyakarta (2 May 2014)
20. Consultation meeting with PNPM Mandiri about BIRU programme in Kaliwungu, Semarang (12 March 2014)
21. Consultation meeting with Department of EMR of Wonogiri about biogas programme in Wonogiri in 2014 (24 March 2014)
22. Consultation meeting with Department of Irrigation of DIY about biogas programme cooperation with BIRU (13 March 2014)
23. Consultation meeting with Department of EMR of Gunung Kidul about biogas programme through DAK mechanism (7 January and 4 March 2014)
24. Consultation meeting with Koperasi Ngudi Luhur about Rabo Bank Foundation funding (10 February 2014)
25. Consultation meeting with Department of EMR of Sukoharjo about 2014 biogas programme in Sukoharjo (6 & 20 February 2014)
26. Consultation meeting with Department of EMR of Semarang about construction planning of BIRU digesters through subsidy sharing (16 May 2014)
27. Consultation meeting with Department of EMR of DIY about construction planning of 90 BIRU digesters in Yogyakarta (2 May 2014)
28. Consultation meeting with PNPM Mandiri about BIRU programme in Kaliwungu, Semarang (12 March 2014)
29. Consultation meeting with Department of EMR of Wonogiri about biogas programme in Wonogiri in 2014 (24 March 2014)
30. Consultation meeting with Department of Irrigation of DIY about biogas programme cooperation with BIRU (13 March 2014)
31. Consultation meeting with Department of EMR of Gunung Kidul about biogas programme through DAK mechanism (7 January and 4 March 2014)
32. Consultation meeting with Koperasi Ngudi Luhur about Rabo Bank Foundation funding (10 February 2014)
33. Consultation meeting with Department of EMR of Sukoharjo about 2014 biogas programme in Sukoharjo (6 & 20 February 2014)

East Java (1)

1. Stakeholder Meeting to coordinate and evaluate the implementation of partnership with Dirjen EBTKE Kementerian ESDM (January 2014)

Bali (1)

1. Stakeholder meeting at Department of EMR of Bali, 2 December 2015.

NTB (3)

1. Stakeholder meeting in Sumbawa Barat (5 May 2014)
2. Stakeholder meeting in Bima (8 May 2014)
3. Coordination Meeting with Government (local and national) in KLU (22 October 2014)

NTT (1)

1. Meeting to assess the partnership with Department of EMR of Sumba Barat Daya

South Sulawesi (55)

1. Meeting with Head of Energy Conservation and Electricity Division of EMR Department of South Sulawesi (8 July 2014)
2. Stakeholder Meeting (22 July 2014)
3. Meeting with BPMDK of South Sulawesi (4 August 2014)
4. Meeting with EMR Department of South Sulawesi (18 August 2014)
5. Meeting with EMR Department of South Sulawesi (25 August 2014)
6. Consultation Meeting with Ministry of Agriculture and Directorate General of Intellectual Property Rights (27 August 2014)
7. Meeting with Head of EMR Department of Tojo Unauna, Central Sulawesi (30 August 2014)
8. Meeting with EMR Department of South Sulawesi (1 September 2014)
9. Meeting with EMR Department of South Sulawesi (5 September 2014)
10. Meeting with BPMDK of South Sulawesi (11 September 2014)
11. Coordination Meeting with BLHD of South Sulawesi (3 October 2014)
12. Meeting with Head of Energy Conservation and Electricity Division of EMR Department of South Sulawesi (24 November 2014)
13. Meeting with Head of Energy Division of EMR Department of Pangkep (8 July 2014)
14. Meeting with Head of Electricity Division of EMR Department of Barru (3 September 2014)
15. Meeting with Head of BPMD of Enrekang (16 September 2014)
16. Meeting with Head of Energy Division of Mining Department of Enrekang (16 September 2014)
17. Meeting with EMR Department of Sinjai (24 September 2014)
18. Meeting with Head of Environment Department of Sinjai (24 September 2014)
19. Coordination Meeting with Secretary of the Government of Sinjai (24 September 2014)
20. Coordination Meeting with Head of EMR Department of Bone (24 September 2014)
21. Meeting with Secretary of the Government of Sinjai (7 October 2014)
22. Meeting with Head of Environment Department of Sinjai (7 October 2014)
23. Coordination meeting with Mining Department of Pangkep (13 October 2014)
24. Meeting with Head of Electricity Division of Mining Department of Takalar (27 October 2014)
25. Coordination Meeting with staff of Mining Department of Jeneponto (15 November 2014)
26. Coordination Meeting Head of EMR Department of Bantaeng (17 November 2014)
27. Coordination Meeting with BPK, Mining Department of Bone, supervisor consultant and CV Rytma Green Sinergy (29 December 2014)
28. Meeting with Cooperation Bureau of Governor Office of South Sulawesi (6 January 2014)
29. Meeting with SKPD (Regional Working Unit), Cooperation Bureau and Hivos (15 January 2014)
30. Coordination meeting with Energy Conservation Section of Department of EMR (22 January 2014)
31. Meeting with BLHD of South Sulawesi about partnership agreement (6 February 2014)
32. Monitoring from Cooperation Bureau to Maros (21 February 2014)
33. Meeting with BLHD of South Sulawesi (24 February 2014)
34. Meeting with BLHD of South Sulawesi and Cooperation Bureau of Governor Office of South Sulawesi (25 February 2014)
35. Partnership agreement signatory with the Governor of South Sulawesi (26 February 2014)
36. Follow up meeting about partnership agreement (27 February 2014)
37. Monitoring from Cooperation Bureau to Sinjai and Bulukumba (3 March 2014)

38. Meeting with Energy Conservation Section of Department of EMR and CPOs (12 March 2014)
39. Meeting with Head of Department of EMR of South Sulawesi (14 February 2014)
40. Annually Development Planning Meeting (24 March 2014)
41. Meeting with BAPPEDA of South Sulawesi to prepare presentation for BAPPEDA in district level (5 April 2014)
42. Stakeholder Meeting (15 April 2014)
43. Coordination meeting with Department of EMR of Sinjai (10 January 2014)
44. Coordination meeting with BAPPEDA of Bantaeng (29 January 2014)
45. Coordination meeting with BAPPEDA of Barru (3 February 2014)
46. Coordination meeting with Department of Livestock of Barru (3 February 2014)
47. Coordination meeting with Head of Electrical Office of Sinjai (6 February 2014)
48. Coordination meeting with Head of Electrical Office of Bone (5 February 2014)
49. Coordination meeting with Secretariat of Takalar (14 February 2014)
50. Audience meeting with Regent of Takalar (17 Februari 2014)
51. Meeting with Regent and Department of EMR of Takalar (11 March 2014)
52. Coordination meeting with Department of Livestock of Pangkep (13 March 2014)
53. Coordination meeting with Regent and Department of EMR of Pangkep (13 March 2014)
54. Follow up meeting with and Department of EMR of Bone (12 June 2014)
55. Coordination meeting with Head of Electrical Office of Enrekang (5 Juni 2014)

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