



INTERIM REPORT

Indonesia Domestic Biogas Programme

January - June 2014



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Abbreviations

ASS	After Sales Service (resulting in partner inspection reports)
BAPPEDA	Regional Planning Bureau
BIRU	<i>Biogas Rumah</i> (domestic biogas)
BSM	Bank Syariah Mandiri
BSNI	National Standardization Agency of Indonesia
CLP	Climate Leadership Programme
CPO	Construction Partner Organization
DAK	Dana Alokasi Khusus (Specific Allocation Fund)
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
GIZ	<i>Gesellschaft für Internationale Zusammenarbeit</i> (Agency for International Cooperation)
HH	Households
Hivos	Humanistic Institute for Cooperation with Developing Countries
IDBP	Indonesia Domestic Biogas Programme
INSTIPER	<i>Institut Pertanian Instiper</i> (Agricultural Institute)
IPPHTI	<i>Ikatan Petani Pengendalian Hama Terpadu Indonesia</i> (Integrated Pest Control of Indonesian Farmers Group)
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	<i>Op Eigen Wieken</i>
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
tCO ₂ e	Tonnes of CO ₂ equivalent
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 June 2014): 6 (of 12) months (50%)

The data includes activities in East Java, which are funded through the ENDEV programme.

No.	Activities	Achievements	Remarks/target
1	Number of digesters produced	Total: 12,241 units Jan-Jun 2014: 989 units Under Norway Embassy: 194 units (39% from target 500 units) Under ENDEV: 796 units (40% from target: 2,000 units)	
2	Functioning rate	97%	
3	No of promotion activities	<p>Community Meeting on biogas awareness and slurry use</p> <p>Total Activities: 36 community meetings, 9 events Total Participants: 776 (582 men, 194 women)</p> <p><i>West Java (239 men, 124 women):</i></p> <ol style="list-style-type: none"> Dissemination of BIRU in KKNM PPMD students of UNPAD, Wanasari, Surian, Sumedang Dissemination of BIRU to cattle farmers in Nagrok, Wanayasa, Purwakarta Dissemination of BIRU to cattle farmers member of KPSBU in Belapati, Cihideung, Parongpong Dissemination of BIRU to Rukun Berkah Community of Satria Jaya, Tambun Utara, Bekasi Dissemination of BIRU to cattle farmers in Sukabungah, Bojongmangu, Bekasi Dissemination of BIRU to cattle farmers to leaders of cattle farmer groups in KUD KAUM Mandiri-Ciwidey Dissemination of BIRU to Hurip Mandiri group in KPGS work area, Garut Dissemination of BIRU to Pamegatan group in KPGS work area, Garut Dissemination of BIRU in Planning of Cattle Farm Area Design in the Upper Watershed of Citarum 2014. Organized by Government of West Java. Dissemination of BIRU to Simpang group in KPGS work area, Garut Dissemination of BIRU credit from BSM and Facet in Rukun Berkah group Dissemination of BIRU credit from BSM and Facet in Tani Suka Mekar group Dissemination of BIRU to Sirnamukti group in KPGS work area, Garut Dissemination of BIRU to Ciroyom group in KPGS work area, Garut Dissemination of BIRU to Ngamplang-Cibodas group in KPGS work area, Garut Dissemination of BIRU to KPSBU members in Gunung Masigit, Parongpong 	

No.	Activities	Achievements	Remarks/target
		<p><i>Central Java</i></p> <ol style="list-style-type: none"> Dissemination of BIRU at Saung Tani Kaliurang, Yogyakarta (3 June 2014) Dissemination of BIRU at Andini Luhur (29 March 2014) BEM weekly meeting Other CPOs in Central Java, monthly <p><i>East Java</i></p> <ol style="list-style-type: none"> Biogas awareness meeting at Suratmajan, Masopati, Magetan (11 Feb 2014) Community meeting at Pule, Trenggalek (23 April 2014) <p><i>Lampung</i></p> <ol style="list-style-type: none"> Dissemination at Tanjung Bintang, Lampung Selatan conducted by YLPMD Dissemination of BIRU at Lampung Timur conducted by YLPMD and YRE <p><i>NTB (69 men, 9 women):</i></p> <ol style="list-style-type: none"> PNPM-MP meeting, Jonggat, Lombok Tengah, KPRI Prisma (28 March 2014) UNRAM students and PSP-NTB, Narmada. <p><i>South Sulawesi (209 men, 46 women):</i></p> <ol style="list-style-type: none"> Dissemination of BIRU in Bantaeng (29 Jan 2014) Dissemination of Kiva in KSU Bulusaukang (15 Feb 2014) Awareness meeting in Bulusaukang (3 & 5 Feb 2014) Dissemination of BIRU in Ballocci, Pangkep (21 Mar 2014) Dissemination of BIRU in Takalar (6 April 2014) Dissemination of BIRU in 3 villages in Wajo (17 April 2014) Dissemination of DAK in Takalar (28 March 2014) Dissemination of cost-sharing approach in Takalar (2 April 2014) Dissemination at Timbuseng (10 May 2014) <p><i>Sumba NTT (65 men, 15 women):</i></p> <ol style="list-style-type: none"> Dissemination at the construction of the first digester in Kamanggih (30 April 2014) Dissemination at community meeting in La Au (preparation meeting of Microhydro Instalation, 8 May 2014) 	

No.	Activities	Achievements	Remarks/target
		<p>Event & Participation</p> <ol style="list-style-type: none"> 1. Annually Livestock Contest, Rancabali, Ciwidey, Bandung, West Java (25-26 June 2014) 2. Maros Big Fair, Maros, South Sulawesi (22-25 June 2014) 3. Citarum Bestari Declaration Exhibition, Bandung, West Java (22 June 2014) 4. NTB Expo 2014, Turida Sweta, Mataram, NTB (12-15 June 2014) 5. The 4th Indo-EBTKE CONEX , Jakarta (4-6 June 2014) 6. Ceremony of Handover of Reactor from YRE to the Regent of Lombok Utara, Lendang Galuh, Sokong, Tanjung, Lombok Utara, NTB (20 Februari 2014) 7. Presentation at KOSTRAD Kariango Batallion 427 South Sulawesi 8. Presentation at Preparation Meeting of "Gelar Teknologi Tepat Guna" of BP4MD, South Sulawesi 9. Presentation at Musrembang (Annually Development Planning Meeting) South Sulawesi <p>Production of promotion and other materials</p> <ol style="list-style-type: none"> 1. Reproduced of BIRU folded brochure 2. Reproduced of BIRU programme brochure, Bahasa Indonesia and English 3. Produced Roll-up banner of BIRU Achievement 2009 – 2013 4. Produced Roll-up banner of Bio-slurry 5. Upgraded and finalized the BIRU website with the new design 6. Activated and maximized community engagement through social media (Facebook and Twitter) 7. Administered hotline 8. Radio promo: Yayasan Sion (Central Java), Radio Salewangang (South Sulawesi) 9. TV promo: BEM and CV Sarana Sejahtera (Central Java), Celebes TV (South Sulawesi) 10. Local newspaper: CD Suara Bhakti & Qibar Alami (Central Java), Suara NTB, Radar Lombok & Lombok Post (NTB) 	
4	No and % of households using credit	7,295 of 12,241 (59%) households total EUR 2,2122,308 Jan-Jun 2014: 564 households Total EUR 121,645	
5	No of credit providers (including cooperatives)	43 credit providers	
6	MFI development	<ol style="list-style-type: none"> 1. Cooperation in biogas credit financing with FACET will continue through Induk Koperasi Syariah (INKOPSYAH). 2. Andini Luhur, a dairy cooperative, has become a new lending partner of RBF in Central Java. 3. YRE approved as KIVA partner to disburse loans in biogas credit financing. 	

No.	Activities	Achievements	Remarks/target
7	Subsidy disbursed	January – June 2014: EUR 112,520 (Norway Embassy) EUR 72,761 (Endev)	
8	No of construction partners	Cooperatives: 12 NGOs: 18 SMEs: 22	
9	No of provinces, districts and sub-districts	103 districts and 609 subdistricts January – June 2014: 41 new subdistricts	
10	No of masons & supervisors trained	Total 940 masons and 170 supervisors January – June 2014: 73 masons and 7 supervisors	
11	No of users trained	Total 9,356 users (6,452 male, 2,904 female) January – June 2014: 515 users (267 male and 248 female)	
12	No of plants inspected by CPOs (ASS = maintenance reports)	Overall: 10,944 inspections Jan-Jun 2014: 955 maintenance inspections	
13	No of plants inspected by BIRU staff (during construction and after construction & after ASS/After Sales Service)	Overall: 5,211 inspections a. 487 inspections during construction b. 4,724 inspection after construction (3,893 plants already received ASS) Jan-Jun 2014: 319 inspections a. 20 inspections during construction b. 299 inspections after construction	
14	Bio-slurry activities	1. January 2014: Pre Survey of Climate Smart Agriculture in Lembang with Soil & More International staff. 2. February 2014: Re-fresher bio-slurry training in Lombok. 3. April 2014: Ref-fresher bio-slurry training in Salatiga and Yogyakarta. 4. May 2014: Bio-slurry demo-plot in Garut 5. June 2014: Feasibility study - 'Climate Smart Agriculture' Hivos Bio-slurry Indonesia	
15	Biogas appliances R&D	1. Research for filter H2S and CO2 (25 April 2014 – September 2014) 2. Provide for reactor identity 3. Additional biogas lighting appliance 4. Additional biogas stoves supplier	Activity 4.2.5 Activity 4.2.5 Activity 4.3.1 Activity 4.3.1

No.	Activities	Achievements	Remarks/target
16	Contribution from Gol	2009 – 2013: Governor Program in NTB: EUR 350,343 DGNREEC program in East Java: EUR 35,758 January – June 2014: DGNREEC program in East Java: EUR 44,484 South Sulawesi Province program: EUR 1,138	
17	Biogas Expertise Centre activity	As necessary	
18	External training and workshop participation	<p><i>Central Java</i></p> <ol style="list-style-type: none"> 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 Instiper 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) <p><i>West Java</i></p> <ol style="list-style-type: none"> 1. Seminar & Workshop of “Pembentukan Jejaring Masyarakat Peduli Waduk Cirata”, LPPM-UNPAD, Hotel Mitra, Bandung (7 January 2014). <p><i>South Sulawesi</i></p> <ol style="list-style-type: none"> 1. Agricultural Extension Training, Training Service of Agricultural Department of Batangkaluku, Popo, Galesong Selatan, Takalar, South Sulawesi 	
19	External workshops organized	<p><i>Central Java</i></p> <ol style="list-style-type: none"> 1. Consultation meeting about BIRU programme for Joglo Tani Group in Sleman (4 June 2014) 2. Consultation meeting about BIRU programme for Farmers and Stock Farmers Groups in Alian, Kebumen (3 June 2014) 3. Consultation meeting with Faculty of Engineering of Gadjah Mada University about BIRU community work of the students (4 June 2014) <p><i>Lampung</i></p> <ol style="list-style-type: none"> 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) 	

No.	Activities	Achievements	Remarks/target
	External workshops organized	<p><i>West Java</i></p> <ol style="list-style-type: none"> 1. Meeting with RBF, KUD Puspamekar, and CV Energi Persada for an biogas credit assessment for cattle farmers member of KUD Puspamekar (12 Februari 2014). 2. Meeting with BSM Kopo and KUD Pasir Jambu to discuss BIRU credit (19 Februari 2014). 3. Meeting with board member of Koperasi Krangaan 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) 	
20	Internal workshops/ meetings organized	<p><i>National:</i></p> <ol style="list-style-type: none"> 1. Quality Inspectors meeting, Jakarta, 3-4 March 2014 <p><i>CPO Meeting in Provincial level:</i></p> <ol style="list-style-type: none"> 1. West Java (2): 17 April 2014, 25 May 2014 2. Central Java & DIY (5): 24 Feb 2014, 25 Feb 2014, 27 Feb 2014, 10 June 2014, 12 June 2014 3. East Java (1): April 2014 4. South Sulawesi (1): 15 April 2014 5. Sumba (1): 26 June 2014 	
20	No of coordination meeting with Gol	<p>Total: 63</p> <p><i>National:</i></p> <ol style="list-style-type: none"> 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 <p><i>Central Java (24)</i></p> <ol style="list-style-type: none"> 1. Consultation meeting with Department of EMR of Semarang about construction planning of BIRU digesters through subsidy sharing (16 May 2014) 2. Consultation meeting with Department of EMR of DIY about construction planning of 90 BIRU digesters in Yogyakarta (2 May 2014) 3. Consultation meeting with PNPM Mandiri about BIRU programme in Kaliwungu, Semarang (12 March 2014) 4. Consultation meeting with Department of EMR of Wonogiri about biogas programme in Wonogiri in 2014 (24 March 2014) 5. Consultation meeting with Department of Irrigation of DIY about biogas programme cooperation with BIRU (13 March 2014) 	

No.	Activities	Achievements	Remarks/target
21	No of coordination meeting with Gol	<ol style="list-style-type: none"> 6. Consultation meeting with Department of EMR of Gunung Kidul about biogas programme through DAK mechanism (7 January and 4 March 2014) 7. Consultation meeting with Koperasi Ngudi Luhur about Rabo Bank Foundation funding (10 February 2014) 8. Consultation meeting with Department of EMR of Sukoharjo about 2014 biogas programme in Sukoharjo (6 & 20 February 2014) 9. Consultation meeting with Department of EMR of Semarang about construction planning of BIRU digesters through subsidy sharing (16 May 2014) 10. Consultation meeting with Department of EMR of DIY about construction planning of 90 BIRU digesters in Yogyakarta (2 May 2014) 11. Consultation meeting with PNPM Mandiri about BIRU programme in Kaliwungu, Semarang (12 March 2014) 12. Consultation meeting with Department of EMR of Wonogiri about biogas programme in Wonogiri in 2014 (24 March 2014) 13. Consultation meeting with Department of Irrigation of DIY about biogas programme cooperation with BIRU (13 March 2014) 14. Consultation meeting with Department of EMR of Gunung Kidul about biogas programme through DAK mechanism (7 January and 4 March 2014) 15. Consultation meeting with Koperasi Ngudi Luhur about Rabo Bank Foundation funding (10 February 2014) 16. Consultation meeting with Department of EMR of Sukoharjo about 2014 biogas programme in Sukoharjo (6 & 20 February 2014) 17. Consultation meeting with Department of EMR of Semarang about construction planning of BIRU digesters through subsidy sharing (16 May 2014) 18. Consultation meeting with Department of EMR of DIY about construction planning of 90 BIRU digesters in Yogyakarta (2 May 2014) 19. Consultation meeting with PNPM Mandiri about BIRU programme in Kaliwungu, Semarang (12 March 2014) 20. Consultation meeting with Department of EMR of Wonogiri about biogas programme in Wonogiri in 2014 (24 March 2014) 21. Consultation meeting with Department of Irrigation of DIY about biogas programme cooperation with BIRU (13 March 2014) 22. Consultation meeting with Department of EMR of Gunung Kidul about biogas programme through DAK mechanism (7 January and 4 March 2014) 23. Consultation meeting with Koperasi Ngudi Luhur about Rabo Bank Foundation funding (10 February 2014) 24. Consultation meeting with Department of EMR of Sukoharjo about 2014 biogas programme in Sukoharjo (6 & 20 February 2014) 	

No.	Activities	Achievements	Remarks/target
		<p><i>Lampung (5)</i></p> <ol style="list-style-type: none"> 1. Meeting with Head of PMD of Tanggamus about joint programme preparation of Government of Tanggamus, community and BIRU 2. Meeting with Head of Family Planning & Women Empowerment Bureau of Pringsewu about presentation preparation to the Regents and BAPPEDA 3. Meeting with Department of EMR of Lampung Tengah about biogas programme through DAK 2014 mechanism 4. Meeting with Department of EMR of Tulang Bawang Barat about biogas programme through DAK 2014 mechanism 5. Consultation meeting with Department of EMR of Lampung Province about the possibility of joint programme like in NTB. <p><i>NTB (2)</i></p> <ol style="list-style-type: none"> 1. Stakeholder meeting in Sumbawa Barat (5 May 2014) 2. Stakeholder meeting in Bima (8 May 2014) <p><i>South Sulawesi (28)</i></p> <ol style="list-style-type: none"> 1. Meeting with Cooperation Bureau of Governor Office of South Sulawesi (6 January 2014) 2. Meeting with SKPD (Regional Working Unit), Cooperation Bureau and Hivos (15 January 2014) 3. Coordination meeting with Energy Conservation Section of Department of EMR (22 January 2014) 4. Meeting with BLHD of South Sulawesi about partnership agreement (6 February 2014) 5. Monitoring from Cooperation Bureau to Maros (21 February 2014) 6. Meeting with BLHD of South Sulawesi (24 February 2014) 7. Meeting with BLHD of South Sulawesi and Cooperation Bureau of Governor Office of South Sulawesi (25 February 2014) 8. Partnership agreement signatory with the Governor of South Sulawesi (26 February 2014) 9. Follow up meeting about partnership agreement (27 February 2014) 10. Monitoring from Cooperation Bureau to Sinjai and Bulukumba (3 March 2014) 11. Meeting with Energy Conservation Section of Department of EMR and CPOs (12 March 2014) 12. Meeting with Head of Department of EMR of South Sulawesi (14 February 2014) 13. Annually Development Planning Meeting (24 March 2014) 14. Meeting with BAPPEDA of South Sulawesi to prepare presentation for BAPPEDA in district level (5 April 2014) 15. Stakeholder Meeting (15 April 2014) 	

No.	Activities	Achievements	Remarks/target
		<p>16. Coordination meeting with Department of EMR of Sinjai (10 January 2014)</p> <p>17. Coordination meeting with BAPPEDA of Bantaeng (29 January 2014)</p> <p>18. Coordination meeting with BAPPEDA of Barru (3 February 2014)</p> <p>19. Coordination meeting with Department of Livestock of Barru (3 February 2014)</p> <p>20. Coordination meeting with Head of Electrical Office of Sinjai (6 February 2014)</p> <p>21. Coordination meeting with Head of Electrical Office of Bone (5 February 2014)</p> <p>22. Coordination meeting with Secretariat of Takalar (14 February 2014)</p> <p>23. Audience meeting with Regent of Takalar (17 Februari 2014)</p> <p>24. Meeting with Regent and Department of EMR of Takalar (11 March 2014)</p> <p>25. Coordination meeting with Department of Livestock of Pangkep (13 March 2014)</p> <p>26. Coordination meeting with Regent and Department of EMR of Pangkep (13 March 2014)</p> <p>27. Follow up meeting with and Department of EMR of Bone (12 June 2014)</p> <p>28. Coordination meeting with Head of Electrical Office of Enrekang (5 Juni 2014)</p> <p><i>East Java (1)</i></p> <p>1. Stakeholder Meeting to coordinate and evaluate the implementation of partnership with Dirjen EBTKE Kementerian ESDM (January 2014)</p>	

1. Introduction

This is the fifth Interim Report of the Indonesia Domestic Biogas Programme (IDBP) which has been running since 15 May 2009. The implementation of IDBP this year is funded by the Royal Norwegian Embassy and ENDEV, and implemented by Hivos with assistance from SNV, which started on 1 January 2014 and will run under the current contribution agreement until 31 December 2014. This Interim Report 2014 describes the activity undertaken from 1 January 2014 until 30 June 2014 in anticipation of the National Biogas Advisory Committee meeting in September 2014.



2. Programme Objectives

Overall Objective

The overall objective of the IDBP program is: *“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.”* In line with this objective, the programme aims to expand the use of bio-digester technology by farmers for improved waste management to reduce emissions in the livestock and dairy sectors. The emission reduction calculation is done through the use of approved methodology under the Gold Standard Foundation. Sector development implies the close cooperation of all relevant stakeholders (government, non-government and private sector) at all levels and that those stakeholders are sufficiently equipped to fulfill the necessary functions. Expanded adoption of biogas by more farmers will create job opportunities in the biogas sector (contractors, masons, input suppliers, training institutions and the users themselves) that in the long run will help to support the protection of ecosystems and biodiversity. An overview of the specific objectives and their respective output indicators are presented below.

Indicators for the overall objectives are:

1. Average increase of EUR 150 in the annual income of livestock farming households through substitution of cooking fuel and bioslurry sales
2. 50% of users report improved health and living conditions, particularly of women and children
3. 70% of livestock farming households have cleaner surroundings due to proper management of animal waste
4. At least 3 tonnes average annual reduction of greenhouse gas emissions per HH (projected 76,800 tonnes of Co₂e annually for IDBP digesters by 2016)
5. 1,000 jobs created to service the new domestic biogas sector (contractors, masons, mason assistants, plus input suppliers, other supporting functions) by 2016



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. 3,600 digesters installed in 6 provinces, and meet minimum targets for operation and user satisfaction (>95% user satisfaction; >90% operate at project end)
2. At least 50% of users access credit to fund their purchase
3. At least 70% of BSPs and active supervisors/masons receive satisfactory performance ratings
4. For at least 65% of digesters, bioslurry is utilised for productive purposes
5. At least 30% average Financial Internal Rate of Return (FIRR) for biogas users
6. Local availability of domestic biogas appliances and aftersales services in 6 provinces in Indonesia
7. Improved enabling environment: at least 50% of digester subsidies provided by national/local governments

8. Improved enabling environment: local foundation YRE has been supported to become an accepted carbon mechanism proponent

Expected results and indicators

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.

Result indicators:

- 1.1. 3,600 biodigesters installed in 6 provinces in line with IDBP standards for construction, appliances, user training, aftersales services and inclusion of women
- 1.2. At least 30% of participants in community awareness meetings for the promotion of biogas are women
- 1.3. 100% of HH at least one person receives user training; at least 50% of HH a woman receives user training
- 1.4. 150 masons and supervisors trained and certified in digester construction and maintenance
- 1.5. At least 65% of HH sell or apply bioslurry for agriculture or fish rearing in a proper manner; at least 30% of bioslurry processing/trade is conducted by women
- 1.6. 100% of targeted Quality Inspection visits completed (10% during construction; 15% after construction; 5% after ASS visits) and logged on program MIS

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.

Result indicators:

- 2.1. 20 BSPs have established Participation Agreements and adopt IDBP Standard Operating Guidelines
- 2.2. 20 BSPs have received technical support and capacity building for business and institutional development
- 2.3. 20 local Lending Partner Organizations (cooperatives, BRP, MFI) are linked to credit providers to channel loans for smallholder livestock enterprises.
- 2.4. 100 entrepreneurial operations established and active in the processing and sale of bioslurry; at least 30% of bioslurry operations are run by women
- 2.5. Local foundation YRE is recognised by government as a core actor in biogas sector development in Indonesia
- 2.6. 5 new biogas appliance designs are developed, tested and certified for use

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.

Result indicators:

- 3.1. 2 biogas appliance designs (e.g. stove, lamp) are standardised and registered by the Indonesian government
- 3.2. National and/or local governments allocate funds to support market-based domestic biogas dissemination
- 3.3. Establishment and functioning of a Domestic Biogas Expertise Centre
- 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

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). 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 – June 2014

The funding for the Indonesia Domestic Biogas Programme by the Royal Norwegian Embassy is allocated for the activities in seven provinces: East Java, Central Java (including Yogyakarta), West Java, Nusa Tenggara Barat, Nusa Tenggara Timur, South Sulawesi and Lampung and scheduled to finish by 31 December 2014. Under this funding agreement, 989 (out of the targeted 4,000 units, 25%) biogas digesters have been built from January-June 2014.

Activities in the provinces in Java are also funded by GIZ's Endev Programme and government matching funds for subsidies. Hivos contributes through the carbon credit funds obtained by IDBP through the carbon mechanism which is registered under the Gold Standard.

4.1 Promotion, marketing and construction of 3,600 digesters

4.1.1. Numbers of digesters produced

After a successful phase of production from 2009-2013 (which resulted in 11,249 digesters, compared with the target of 11,000), the progress in first semester 2014 has been slower. As of 30 June 2014, only 989 digesters from the total target of 3,000 in Java have been constructed. The low performance has been caused by the following factors:

- Delay on the co-financing program agreements with the Indonesian Government in several Provinces;
- Election activities in Indonesia that diverted the attention of some CPOs from construction and promotion;
- Eruption of Mount Kelud in East Java temporarily halted some construction activities. This caused a subsequent delay in the Bantuan Material project between IDBP and DGNREEC in East Java;
- A stagnant credit programme with FACET Programme of UNEP and Bank Syariah Mandiri.

The table below gives the actual results per province during the period January to June 2014.

Province	January	February	March	April	May	June	Total
Bali	65	6	24	3	0	0	98
West Java	38	25	33	12	13	32	155
Central Java	24	15	17	17	51	53	175
East Java	90	92	89	80	45	71	467
Lampung	2	4	1	1	12	5	25
NTB	0	5	11	3	8	0	27
South Sulawesi	18	5	5	4	0	0	32
Sumba (NTT)	3	2	2	1	1	3	12
Total	240	152	182	121	130	164	989

This table shows that Bali, NTB, South Sulawesi and Sumba (NTT) are underperforming target areas. However, expected 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.



4.1.2. Functioning rate

Overall the digester functioning rate is above 96 percent which is higher than most of other biogas programme countries in Asia. About 4 percent of digesters are not in operation due to reasons including household migration, sale or death of cattle, and natural calamities such as eruptions and floods. However, IDBP is trying to increase the operational rate by taking some extra measures to minimize the problems mentioned above.

4.1.3. Community participation in awareness meetings

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 January-June 2014, more than 30 awareness meeting were conducted in 9 provinces. Most of them were conducted in cooperative meeting forums. Some cooperatives which are also BIRU CPOs did not report the activity to BIRU since they claimed the programme as their own. This can be a good sign as it demonstrates local programme ownership, ensuring sustainability. However it is also disadvantageous in that BIRU is not able to track how many farmers have been exposed to the programme. As happened in East Java, BIRU only provided support for communication and promotion materials such as leaflets, brochures, video and so on. The CPO produced some other materials such as banners and baliho. Technical assistance about promoter fees was also given to CPO by BIRU East Java.

The scope of promotional activities was different in each area. During January-June 2014, YRE's office in South Sulawesi was focused on promoting cooperation for biogas construction through cost sharing methods between government, IDBP and users, as well as promoting access to credit through BSM and Kiva. The promotion activities including awareness meetings, field visit, Focus Group Discussions, printed material (brochure and leaflet), bio-slurry and a biogas-based worm cultivation demo-plot.



Some users voluntarily promoted BIRU door-to-door to ensure cattle farmers were aware of biogas utilization and construction. In Central Java, this method attracted half of the total number of new user during January-June 2014. Personal interaction plays a key role in this programme, as can also be seen in Sumba-NTT. Fifty two (52) users registered to install the digester in May-June 2014 as a result of personal approaches from BIRU staff.

4.1.4. Access to finance

1. Cooperation with FACET and INKOPSYAH

Biogas credit financing cooperation between BIRU, FACET and Bank Syariah Mandiri (BSM) has officially ended, because in the first semester of 2014 BSM did not manage to roll out the agreed loan scheme. BSM only gave biogas loans to one user in Lampung and one user in South Sulawesi by using the usual KUR scheme (with interest rate of 22% per annum) instead of FACET scheme (with interest rate of 9% per annum). By the time of this report, FACET has been exploring a new cooperation with Induk Koperasi Syariah (INKOPSYAH) as a lending partner for biogas financing. INKOPSYAH supervises 26 Baitul Maal wa Tamwil (BMT), Sharia-based cooperatives across Indonesia. After meeting IDBP, INKOPSYAH expressed their interest in becoming a BIRU CPO, yet as a start, it is suggested that they first take on the role of a lending partner for biogas users, at least for the first year.

2. A new lending partner of RBF in Central Java

One of IDBP construction partners, the “Andini Luhur” dairy cooperative from Central Java, has become a new partner of RBF as a lending partnership in 2014. RBF disbursed EUR 906,909 (or 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 an additional interest rate within reasonable limits (max. 10-12%) as their profit to biogas users. A loan of funds from RBF is expected to be one of credit solutions for biogas financing.

3. YRE through IDBP becomes KIVA partner to disburse biogas loans in Indonesia

Yayasan Rumah Energi has been approved as a KIVA partner for the disbursement of biogas loans in Indonesia. Kiva is a U.S. based non-profit organization that allows people to lend money via the 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 (www.kiva.org). The intent 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 has entered into Experimental phase with a funding limit of USD 50,000 per group loan submission. The mechanism of this partnership is: YRE will submit loan applications for groups of up to 10 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 max.60 days the funds will be transferred to a specific YRE account, and can then be disbursed to the selected CPO to build biogas digesters. The fact that biogas users will not receive cash funds helps to avoid unnecessary risks. The administrative processes of this arrangement are currently underway, including the selection of selected CPOs to implement the Kiva loan scheme, and agreement on installment collection methodology and the loan repayment process.

For the first phase of KIVA loan disbursement, BIRU has chosen 2 CPOs, LKM "Rukun Makmur" in Central Java and YLPMD at Lampung. A review has been done, including conducting direct briefing on operational mechanism of KIVA scheme, and to ensure the capacity of the two CPOs to execute the KIVA loan scheme. If the loan repayment process runs smoothly for the first 2-3 installments, then both of the CPOs may submit 10 biogas users for next loan phase.

IDBP will be able to increase its Kiva funding limit if the first loan repayments are in-line with the required schedule. KIVA funding is expected to become one of the credit solutions for biogas financing in other provinces, such as West Java and South Sulawesi.

4. Other potential biogas credit financing

IDBP is also still looking for alternative financing biogas from other institutions. Some banking institutions such as BRI and several local banks have been approached both at national and provincial levels. Some banks welcomed the Programme, but will still need continuous engagement to raise their awareness about the potential benefits of a biogas project. More information will be provided to these banks regarding the potential of bio-slurry, BIRU SNI, and the 3-year guarantee for BIRU digesters.

4.1.5. Subsidy administration

IDBP is committed to ensuring the subsidy disbursement system is fully transparent. A clear and strict procedure has therefore been developed. Since the beginning of IDBP, good administrative management has been an important part of the implementation. Partners have been requested to make well-organised subsidy requests to ensure IDBP can maintain good management of the disbursement process, but unfortunately many partners often ignore these administrative procedures. The lack of communication between staff in provinces and CPOs is one of the reasons for delays in subsidy disbursement. With this in mind, during the second semester the IDBP will conduct a Refresher in Administrative Training for partners and staff in provinces. Hopefully this training will enable the CPOs to better fulfill the administrative requirements of the program.

From January until June 2014, IDBP disbursed EUR 185,281 for the subsidy (EUR 112,520 from Norway Embassy and EUR 72,761 from ENDEV).

4.2 Capacity development, quality assurance and monitoring

4.2.1. Partnership status with BSPs

IDBP aims to establish strong, professional and business-oriented partners for biogas construction and maintenance services. By the end of 2013, more than 60 Construction Partner Organizations were registered under the IDBP. The performance of these CPOs has been highly variable. After intensive review and

evaluation 17 partners were discontinued. Intensive partner recruitment started at the beginning of 2014, and since then 7 new partners have been added.

Regular monthly meetings have been conducted between the Provincial Offices and the partners to discuss what achievements and progress against targets. Also discussed are the difficulties encountered in the field and measures needed to be taken to address them.

4.2.2. Capacity building

IDBP has provide capacity-building for partner organisations on management, technical skills and human resources. Several trainings and follow-ups were provided for partner staff. The aim of capacity-building support is that partners will be able to run their biogas businesses without external support. The following trainings were organized for the partners:

4.2.2.1. Masons and supervisors training

Since the beginning of the programme, IDBP has trained a total of 940 masons and 170 supervisors from all partner organisations. In 2014, a total of 73 masons and 7 supervisors were trained. These trained human resources are sufficient to meet the targets of IDBP at this stage, however because of low biogas demand not all trained human resources are currently fully utilized.

4.2.2.2. Users training

Besides training for the staff of partner organizations, IDBP also organizes user training on the proper operation and maintenance of biogas digesters. The aim is to train all biogas users so that biogas can be operated without major problems. The training is organized by partner organizations. From the beginning of the programme, IDBP has trained a total of 9,356 users (6,452 male, 2,904 female). In 2014, a total of 515 users (267 male and 248 female) were trained. Training will be continued for the remaining users.



4.2.3. Quality control of the digesters

The quality of the constructed digesters is key to the success of the programme. It guarantees the return of user investment, and stimulates demand by demonstrating to potential users the reliability of the technology. From the beginning, IDBP has introduced strict, standardised quality control procedures. Every province has trained and qualified quality inspectors who check the digester during and after construction. The digesters will be inspected randomly during the first 3 years of operation to ensure they are well maintained by the partners and functioning properly. Since the beginning of the programme, a total of 5,211 digesters have been inspected (487 digesters being inspected during construction). In 2014, 319 newly constructed digesters were inspected. The inspections have determined that all digesters are of high quality and constructed following the approved standards and designs.

4.2.4. Bio-slurry utilization

1. Supporting Climate Smart Agriculture (CSA)

Climate Smart Agriculture has become something of a catch phrase in recent years to describe and group together all kinds of practices, interventions and mechanisms that help farmers mitigate or adapt to climate change. IDBP is interested in bio-slurry's potential for climate change mitigation and adaptation, so it has collaborated with Hivos and Dutch consulting firm Soil and More International for a feasibility study on bio-slurry's potential role in Climate Smart Agriculture in Indonesia. The study will develop methodology to assess the potential for carbon reduction and soil carbon sequestration from bio-slurry fertiliser use by Hivos Biogas households. The feasibility study started in late January 2014 and is scheduled to finish in August 2014. A preliminary report indicates there is potential for a carbon reduction of at least 2 tonnes CO₂e/hectare/year when a farmer is using bio-slurry. The use of fresh bio-slurry can effect a reduction of 7 tCO₂e/ha/year, dried bio-slurry application by 6.56 tCO₂e/ha/year, and the use of bio-slurry compost by 7 tCO₂e/ha/year.

2. Cooperation with University

To ensure sustainable future use of bio-slurry utilization by farmers and agricultural students, in February 2014 the BIRU programme conducted a joint visit with INSTIPER to a farmer who had successfully experimented with bio-slurry-based liquid organic fertilizer. The farmer had also successfully sold the liquid bio-slurry fertilizer to his neighbors and local SMEs, generating an additional monthly income of between EUR27-67 for his household. From the visit it was determined that bio-slurry has good potential for use as a liquid organic fertilizer (especially for vegetables). As a result of BIRU's joint activities with INSTIPER to raise its understanding of bio-slurry, the university is now in the process of including bio-slurry utilization in their curriculum.

3. Monitoring of Bio-slurry Utilization

Over the period January-June 2014, progress on bio-slurry training has been slow. Monitoring shows that the reasons for slow progress are different in high-output and low-output provinces. In the provinces where there is a high rate of construction, the bio-slurry training rate is low because the partners are concentrating on the building activities. In these cases, the number of user trainings will be increased in the last quarter of the year. However, in provinces where construction output is low, partners are not pro-actively following up on training for users. In these case, NBPSO and PBPO offices will provide several active masons with a refresher training so that they can give the trainings to the users.



4. Bio-slurry Expo

The BIRU programme together with Hivos' Sumba Iconic Island programme participated in a DGNREEC Expo in Jakarta from 4-6 June 2014. This year's topic was "Time to Deliver Clean Energy for the Nation". During the three-day event, the issue that was most frequently asked by visitors is about the utilization of bio-slurry and its benefits for farmers. By the end of the event, the BIRU-SII booth won 2nd best booth award.

4.2.5. Biogas appliances research and design

Research for filter H₂S and CO₂

It has been noticed that biogas appliances, particularly stoves, are rusted because of the H₂S (Hydrogen sulfide) and CO₂ (Carbon dioxide) contained in biogas. As a solution to this problem, IDBP has begun development of a filter to reduce the H₂S and CO₂ content of biogas.

As of April 2014, YRE has been cooperating with Lembaga Pelayanan Pengabdian Masyarakat of Institute Technology Sepuluh November Surabaya (LPPM ITS) in East Java to perform research and create a simple biogas filter to reduce H₂S and CO₂. This research is being conducted by BIRU-East Java, and delivered by graduating ITS students under the supervision of a BTO (Biogas Technical Officer).

Research will take at least 5 months. To date the team has constructed 3 test units of biogas filters which will be installed in 3 different places in East Java. By the end of September 2014 it is anticipated that the team can produce an appropriate compact filter appliance for use in the BIRU programme.

Provision of digester's identity

In the several places other organizations have claimed the BIRU digesters as their own. IDBP has therefore introduced a unique identity plate in each digester so that BIRU digesters are clearly identified. The identity plate is made of zinc plate and affixed in a clearly visible location on the BIRU reactor.

In coordination with the BIRU-Central Java team, by the end of August 2014 approximately 3000 zinc identification plates will have been printed and be available for use on all future BIRU reactors.

4.3 Establishment of enabling environment for biogas sector development

4.3.1. Standardization of biogas appliances by the Gol

Additional biogas lighting appliance

To fulfill demand for an optional biogas appliance for lighting, in early 2014 Yayasan Rumah Energi approved a standardized biogas lamp model 799 Bg made by PT. Solihin Jaya Industry (a biogas appliances supplier) located in East Java. This is a new biogas lamp model to replace PT Solihin Jaya's discontinued previous model. This lamp was approved based on field tests and feedback from users, CPOs and BIRU quality inspectors.

Additional biogas stoves supplier

To ensure there are good supplies of approved biogas stoves, in early 2014 Yayasan Rumah Energi identified a potential new stove supplier, named PT Arto Metal, located in East Java. PT Arto Metal would be added to the two existing suppliers of IDBP-approved products, namely Khazanah Bahari from West Java and PT Solihin Jaya from East Java. As all IDBP-approved stoves must meet the minimum requirement of 50% efficiency, PT Arto Metal is currently conducting stove efficiency tests. It is hoped that by the end of 2014 PT Arto Metal's products can be approved by IDBP.

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

The Government of Indonesia has welcomed IDBP's co-financing scheme as an approach to sector development. In 2013, DGNREEC launched a material contribution scheme in East Java, in which IDBP and the government each contributed ca. EUR107, and the remaining costs were borne by the farmers. Unfortunately the implementation was not particularly successful. The targeted 1,500 units were not

completed due to administrative problems in the DGNREEC and so the project was extended into 2014. Initially, DGNREEC planned to replicate the financing scheme in other provinces in Java. However, this plan has been cancelled due to the delays in the pilot scheme.

A more successful case has been co-financing in NTB, which also attracted the interest of South Sulawesi province. This year the Provincial Government of South Sulawesi allocated IDR 1,000,000,000 in BIRU programme co-financing for 200 farmer households.

Apart from that, 6 district recipients of Specific Allocated Funds (*Dana Alokasi Khusus/DAK*) from DGNREEC also decided to work with IDBP on various co-financing schemes. Cooperation plans with provincial and district governments are detailed in the table below:

Cooperation	Number of digesters to be built in 2014
Provincial Budget – South Sulawesi Province	200
Specific Allocated Fund – Bone district, SSul	34
Specific Allocated Fund – Enrekang district, SSul	65
Specific Allocated Fund – Takalar district, SSul	135
Specific Allocated Fund – Lombok Utara district, NTB	224
Specific Allocated Fund – Bima district, NTB	80
Total	738 units

To ensure that the market-based approach is maintained while still accommodating cooperation requests from the government, in May 2014 the BIRU programme released a memo to its provincial offices urging that government subsidy levels be kept low. Despite this effort, some district governments have still insisted on giving high subsidies per unit, such as in Bone District, South Sulawesi. IDBP decided to accommodate this cooperation because it is crucial to showcase the high quality of BIRU digesters to potential users. Without government cooperation, there is no guarantee of digester quality. IDBP has already informed the district and provincial governments that in the future the proportion of farmers' contributions should increase.

4.3.3. Activities of Biogas Expertise Centre

A Biogas Expertise Center has been established under DGNREEC, and is technically supported by BIRU. SNV Advisors visit the center from time to time to provide the staff with technical advice as required. For the first semester of 2014, no activity was done due to the DGNREEC's schedule. However, DGNREEC informed IDBP that activities of the Expertise Centre will be resumed in September 2014 to ensure that knowledge transfer continues.

4.3.4. Coordination with domestic biogas stakeholders

Due to the co-financing scheme plans, a lot of meetings took place between the IDBP and the Gol. At the national level, at least two meetings were conducted to discuss about the implementation plans in Java provinces. In the provinces, the BIRU team has continued to actively liaise with both the provincial and district governments. In total, there were 3 meetings at national and 60 at provincial levels.

4.3.5. Carbon credit mechanism

The first retroactive verification process of IDBP under the Gold Standard continued in 2014. From January to June 2014 there were two rounds of clarifications between the IDBP, the verifier/DOE and the Gold Standard. The main issues concerned the need for the renewable energy and methane avoidance

components to be in line with the CDM standard; the requirement for an annual monitoring survey; and the fuel consumption calculation per household. The response to the first two issues was positive: both the threshold and the methane avoidance are in line with the CDM standard, and the monitoring survey is already done annually by IDBP as the Biogas User Survey (BUS). As of 25 June 2014, most of the issues were accepted and approved by the Gold Standard. It is expected that the last round will be closed before the end of July 2014. The total amount of VERs under review for the first verification process is 33,046 tCO₂e.

5. Challenges and lessons learned

- 1. Promo and marketing:** Each province needs a specific approach on promotion and marketing due to the availability of BIRU human resources as well as cultural differences and other conditions. For example, the BIRU team in East Java has a Partnership Officer who supervises and monitors the promotion activities in the province, but BIRU teams in other provinces do not have this position and assign the responsibility to PC or QI staff.
- 2. Programme implementation versus carbon monitoring:** There are several issues that came up during the carbon monitoring process, such as: the utilization of bio-slurry, the use of biogas standard-approved stoves and use of fuelwood/kerosene/LPG in the biogas households. The practices involving these aspects will need to be improved because they are directly related to the carbon emission reduction calculation. Failure to comply to the Gold Standard mechanism will have an impact in the number of emission reductions, which eventually will affect the amount of funds that can be obtained by IDBP.
- 3. Co-financing scheme:** As IDBP produces more good quality digesters, more trust is obtained from various stakeholders. One of the indicators is that there are more requests to build digesters using fully-subsidized systems or for the addition of more subsidies. On one hand, it is good that there is more interest in disseminating the domestic bio-digesters to more farmers, and that the IDBP partners are being acknowledged for high-quality work. On the other hand, the higher the subsidies the lower the farmer contribution, and the more difficult it is to realize market-based sector development. IDBP will therefore need to be flexible while at the same time making sure the market-based approach remains intact.
- 4. Bio-slurry for green community:** In Sumba one of the biogas users from Waingapu has successfully influenced local farmers to change their minds about green farming. As a first step, this user applied the bio-slurry for small scale production in rice, cucumbers and tomatoes. When this was a success, he started to produce liquid organic fertilizer made of bio-slurry. He promoted his products via radio and farmer community with price of IDR 25,000 per litre. In addition to that he also invited the farmers in the neighborhood to become productive farmers. With one facilitator from IPPHTI (Ikatan Petani Pengendalian Hama Terpadu Indonesia), the local farmers were trained on how to combine liquid bio-slurry fertiliser with organic materials from their surroundings, such as pig and cow dung, to improve plant cultivation. Now in Waingapu, especially in the Woka area, the problem of dung pollution has significantly decreased. The “Woka” farmer group are happy because they have successfully harvested 20 beds of mixed vegetables with a gross revenue of IDR 6 million per month.

Annex



Annex 1: BIRU Office Addresses

No	Province	Address	Phone	Fax
1	Jakarta	Jl. Ampera IV Gg. H. Rais No. 1, Pasar Minggu, Jakarta Selatan 12550	+6221-7821086	+6221-7806746
			+6221-7821090	
2	West Java	Jalan Tanjidor No 19 Turangga, Bandung Jawa Barat	+6222-7308287	
3	Central Java & DIY	Balai ESDM Solo, Jl. Balekambang Lor, no.3, Solo	+62271-733593	
4	East Java	Jl. Bunga Monstera 21, Kelurahan Tulusrejo, Kec Lowokwaru, Malang, 65119	+62341-486737	+62341-471053
5	Bali	Jln. Mahendradatta, Raya Semabaung No. 3 X, Gianyar-Bali	+62817-356028	
6	NTB	Jl. Jalan Kebyar Nomor 7 Mataram, Mataram - Nusa Tenggara Barat	+62370-630580	
7	South Sulawesi	Jl. Perintis Kemerdekaan Km. 10, Kompleks Perumahan Bukit Khatulistiwa I Bl. F No 4, Kel. Biringkanaya, Kec. Tamalanrea, Kota Makassar-Sulawesi Selatan		
8	Lampung	Jl Pramuka Perumahan Bumi Puspa Kencana 3 Blok J No 1, Kota Bandar Lampung Lampung	+62721-8012903	+62721-8012903
9	NTT	Jl. Ikan Hiu Samping TK Mutiara Perumnas, RT 41 RW 07 Kelurahan Kambajawa, Kecamatan Kota Waingapu, Nusa Tenggara Timur	+62387-2564534	+62387-2564534

Annex 2: 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
NGO		
23.	Yayasan Pemerhati Lingkungan Hidup (PiLaH)	NTB
24.	Pusat Studi Pembangunan NTB	NTB
25.	Yayasan Mitra Membangun Masyarakat Sejahtera (YM3S)	NTB
26.	Yayasan Sumberdaya dan Lingkungan untuk Pelestarian Pembangunan (YSLPP)	NTB

No.	Name of Construction Partners	Province
27.	Yayasan Sion	Central Java
28.	Yayasan Trukajaya	Central Java
29.	Lembaga Pengkajian Kemasyarakatan dan Pembangunan (LPKP)	East Java
30.	Lembaga Pengembangan Pertanian Nahdatul Ulama (LPP-NU)	Lampung
31.	LKM Rukun Makmur	Central Java
32.	Yayasan Suara Bhakti	Central Java
33.	Pusat Inkubasi Bisnis Usaha Kecil (Pinbuk)	Central Java
34.	Lembaga Pendidikan dan Pemberdayaan Anak Bangsa (LPPAB)	East Java
35.	Yayasan Lembaga Pembinaan Masyarakat Desa (YLPMD)	Lampung
36.	Yayasan Manikaya Kauci	Bali
37.	Yayasan Alam Lestari	Sumba (NTT)
38.	Yayasan Sosial Donders	Sumba (NTT)
39.	Yayasan Sumba Sejahtera	Sumba (NTT)
40.	Idep Selaras Alam	Bali
Cooperative		
41.	KPRI Prisma	NTB
42.	KAN Jabung	East Java
43.	KSU Jaya Abadi	East Java
44.	KUD Semen	East Java
45.	KPSP Setia Kawan	East Java
46.	KUD Sumber Makmur Ngantang	East Java
47.	KUD Tani Wilis	East Java
48.	Koperasi SAE Pujon	East Java
49.	KUD Sri Wigati	East Java
50.	KUD Tani Makmur	East Java
51.	KSU Bulu Saukang	Lampung
52.	Koperasi Andini Luhur	Central Java

Annex 3: 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	
	2012	Kauman, Krisik, Pulung, Ponorogo, Siman, Jambon	0	6	
	2013	Ngrayun, Balong, Sukorejo, Slahung	0	4	
	2014	Badegan, Mlarak	0	2	

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
East Java	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, Tawangsari	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, Jagonayan, 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
		2013	Banyudono	0	1
		2014	Sidomulyo	0	1

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
Central Java	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, Spto 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	

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
DI 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
	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 & DI Yogyakarta				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, Cisurupan	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

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
West Java	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
	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 (including Banten and DKI Jakarta)				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 Baccoe	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

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
Nusa Tenggara Barat	Lombok Tengah	2010	Pujut	1	1
		2012	Batukliang, Jonggat, Kopang, Praya Barat, Pringgarata, Janapria, Praya Timur	0	7
	Lombok Barat	2010	Gerung, Narmada	1	2
		2011	Sekotong, Lembar, Gunungsari, Lingsar, Batulayar	0	5
		2012	Labu api, Gunungsari, Lingsar, Sekotong, Senteluk	0	5
	Lombok Utara	2011	Tanjung, Pemenang, Gondang	1	3
		2012	Bayan, Gangga, Kayangan	0	3
	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
	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	
Kota Bima	2013	Bima, Soromandi, Rasanae	1	3	
Dompu	2013	Dompu, Kramat Mulya	1	2	
Bali	Gianyar	2010	Payangan	1	1
		2011	Ubud, Tegallalang	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

Province	District/city	Year	Sub-district	Tot D	Tot SD
				2010-2014	
Bali	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
Selayar	2011	Payangan	1	1	
Total Nusa Tenggara Barat and Bali				19	108
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
	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	17
Lampung	Pesawaran	2012	Padang Cermin	1	1
		2013	Gedong Tataan	0	1
	Tulang Bawang Barat	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	0	1
	Kota Metro	2013	Metro Utara, Metro Timur, Metro Selatan	1	3
	Lampung Timur	2013	Batang Hari, Way Jepara, Pasir Sakti, Braja Selebah, Raman Utara	1	5
		2014	Sekampung, Pekalongan	0	2
	Lampung Selatan	2013	Natar, Jati Agung	1	2
2014		Sukabumi, Sidomulyo, Merbau Mataram	0	3	
Total Lampung				6	26
Total number of districts and sub-districts 2010, 2011, 2012, 2013 and 2014				103	609

Annex 4: List of Credit Providers

No.	Name of Credit Providers	Province
1	Kop SAE Pujon	East Java
2	KUD Sumber Makmur	East Java
3	KUD Karangploso	East Java
4	KUD DAU	East Java
5	KUD Gondanglegi	East Java
6	KUD Satya Dharma	East Java
7	Kop Agro Niaga	East Java
8	KPSP Sidodadi	East Java
9	KUD Tani Luhur	East Java
10	KUD Ngajum	East Java
11	KUB Sami Mandiri	East Java
12	KPSP Setia Kawan	East Java
13	KUD Dadi Jaya	East Java
14	KUD Sembada	East Java
15	KPUB Sapi Jaya	East Java
16	KUD Kertajaya	East Java
17	KUD Tani Jaya	East Java
18	KUD Karya Bhakti	East Java
19	KUD Suka Mulya	East Java
20	KUD Sri Among Tani	East Java
21	KUD Tulus Bakti	East Java
22	KUD Subur	East Java
23	KUD Sri Wigati	East Java
24	KUD Tani Wilis	East Java
25	KUD Sumber Makmur	East Java
26	KUD Sri Sedono	East Java
27	KUD Semen	East Java
28	KUD Jaya Abadi	East Java
29	KUD Argopuro	East Java
30	KUD Tani Makmur	East Java
31	Kop Dana Mulya	East Java
32	KUD Batu	East Java
33	KPSP Maju Jaya Makmur	East Java
34	KSU Marsudi Mulyo	East Java
35	KPSP Sudi Mulyo	East Java
36	KUD Karyo Ngremboko	East Java
37	Galur Murni	East Java
38	Mahesa	East Java
39	KPSBU	West Java
40	KPGS	West java
41	Koperasi Andini Luhur	Central Java
42	Yayasan Trukajaya	Central Java
43	KSU Bulu Saukang	South Sulawesi

Annex 5: Promotion and marketing materials



Apa itu Biogas?

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

Memakai biogas terbukti:

- Lebih ekonomis Pabrik gas dan pupuk pribadi bisa didapatkan dengan biaya murah. Pupuk dari bio-slurry (ampas biogas) bisa menjadi sumber pendapatan 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

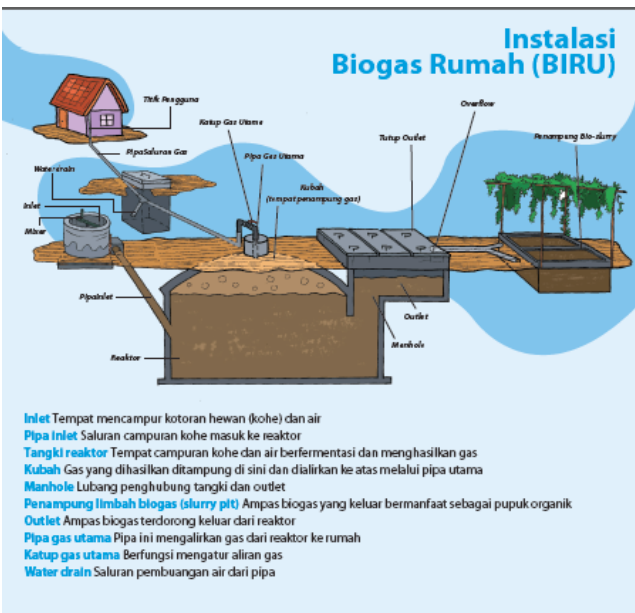
Program Biogas Rumah (BIRU) telah dimulai sejak 2009 dan saat ini program BIRU bekerja di Jawa Barat, Jawa Tengah, DI Yogyakarta, Jawa Timur, Bali, NTB (Lombok dan Sumbawa), NTT (Sumba), Sulawesi Selatan dan Lampung.

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



Keunggulan Program BIRU

- Subsidi 2 juta rupiah per unit reaktor
- Reaktor berstandar SNI 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)



- Inlet** Tempat mencampur kotoran hewan (kohe) dan air
- Pipa Inlet** Saluran campuran kohe masuk ke reaktor
- Tangki reaktor** Tempat campuran kohe dan air berfermentasi dan menghasilkan gas
- Kubah** Gas yang dihasilkan ditampung di sini dan dialirkan ke atas melalui pipa utama
- Manhole** Lubang penghubung tangki dan outlet
- Penampung limbah biogas (slurry pit)** Ampas biogas yang keluar bermanfaat sebagai pupuk organik
- Outlet** Ampas biogas terdorong keluar dari reaktor
- Pipa gas utama** Pipa ini mengalirkan gas dari reaktor ke rumah
- Katup gas utama** Berfungsi mengatur aliran gas
- Water drain** Saluran pembuangan air dari pipa

Tahapan Pemasangan BIRU:

1. Isi formulir Pendaftaran
2. Petugas BIRU akan melakukan survei lokasi
3. Tanda tangani Perjanjian pra-konstruksi
4. Pembangunan reaktor BIRU dimulai
5. Lama pembangunan: 7-13 hari (tidak termasuk masa penggalian tanah)



Kantor Pusat BIRU - Indonesia Domestic Biogas Programme
 Yayasan Rumah Energi (YRE)
 Jl. Ampara IV Gg. H. Rais No.1 Jakarta 12550
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 Hotline: +62812 8030 2020
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 www.rumahenergi.org | www.biru.or.id

Kantor BIRU :

Mitra BIRU :

Folded brochure of BIRU (March 2014)

102 successful installation of systems in the decision-making process by having Biogas facilitated agreements signed by both spouses, providing equal access for men and women to participate in the certified construction, bio-slurry application, and user operation and maintenance training courses to have an equal role of benefit realization, having access to credit financing, and opportunities to generate additional income utilizing biogas technology.

"If we use biogas for the kitchen, we can't make double benefit. Gender not having to spend anything for cooking fuel, we also gain additional income!"
Majalah Gunawan, Semarang

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

More Finance

100 and three years later with the private sector (the dairy sector), such as Nanta 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 team is diversified mostly through cooperative and micro financing institutions.

"I hope our activity will get better and better. Hopefully, I can't to buy a pig-park track to support the business!"
Fathiyah, Pangrehpanah, Ponorogo

Fathiyah is a farmer in Pangrehpanah, Ponorogo, East Java and a member of BIRU Sukoharjo, a Kabupaten award-winning dairy cooperative. This Kabupaten is an environmental conservation award and was presented by the Indonesian President, Mr. Bambang Yudhoyono on May 10, 2012.

For a 100% biogas, Fathiyah had to pay IDR 4.4 million in addition to the IDR 2 million subsidy received. With the low interest loan from the cooperative, she got an installment of IDR 1.6 million per month or around IDR 5.3 per 100 days for five years - much less than what she would 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 make a small garden to grow flowers and other plants.

Implementers

Hivos Hivos is a Dutch development organization supporting sustainable business, ensuring that their work is credible in a risk-free and sustainable world. It works with all stakeholders equal opportunities to ensure opportunities for local development, and where they can actively and equally participate in decision-making processes that determine their lives. Their work and their focus is on the people who have more than 100 partner organizations in over 100 countries across the globe and has 170 staff members and 11 office worldwide.

SNV SNV is a Netherlands development organization that supports development services to over 1,000 clients in 50 countries in Africa, Asia, Latin America and the Middle East. The energy sector, their main focus is on domestic biogas production which the organization has provided expertise through applied research in Bangladesh, 1000 research, supporting the development of a first commercial-scale biogas sector in Nepal. SNV global office in Indonesia and international recognition.

Technical Support Programme Support Office (Support Biogas Programme) (TSP)
TSP is a technical support office for the Biogas Programme in Indonesia. It provides technical support to the Biogas Programme in Indonesia. It is located in Jakarta, Indonesia. It is a part of the Biogas Programme in Indonesia.

Ministry of Energy and Mineral Resources (MEMR)
MEMR is the Indonesian Ministry of Energy and Mineral Resources. It is responsible for the development and management of the energy and mineral resources in Indonesia. It is located in Jakarta, Indonesia.

Ministry of Agriculture, Forestry and Fisheries (MARA)
MARA is the Indonesian Ministry of Agriculture, Forestry and Fisheries. It is responsible for the development and management of the agriculture, forestry and fisheries sectors in Indonesia. It is located in Jakarta, Indonesia.

Ministry of Environment, Forestry and Climate Change (KLHK)
KLHK is the Indonesian Ministry of Environment, Forestry and Climate Change. It is responsible for the development and management of the environment, forestry and climate change sectors in Indonesia. It is located in Jakarta, Indonesia.

Ministry of Health (KEMKES)
KEMKES is the Indonesian Ministry of Health. It is responsible for the development and management of the health sector in Indonesia. It is located in Jakarta, Indonesia.

Ministry of Education and Culture (KEMDIKBUD)
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Just imagine what more than 11,200 rural families owning a biogas digester consider a simple daily job: it only takes ten minutes of getting two buckets of raw dung and mixing it with water in the digester inlet, and cooking gas is available for the whole day. The environment improves and the family is healthier. No more waste of time, energy and money to get firewood or cooking gas for the family. With a portable gas and organic fertilizer factory at their own, rural families are stepping deftly towards a better and more convenient life with access to affordable, renewable and clean energy.

Indonesian Domestic Biogas Programme

The Indonesian Domestic Biogas Programme is an initiative of more than 500 family working with the Indonesian Ministry of Energy and Mineral Resources, the programme is implemented by Regional Rural Energy (RRE) with funds made available by United Kingdom Development (UKDF). The programme is implemented by providing access to a modern and sustainable form of renewable energy for rural people.

The Indonesian Domestic Biogas Programme (IDBP) is a biogas programme in Indonesia. It is implemented by the Indonesian Ministry of Energy and Mineral Resources. It is located in Jakarta, Indonesia.

- Started in May, 2009 with financial support from the Netherlands Embassy and as of December 2013, has built 11,200 biogas digesters
- Covered more than 100 provinces in Indonesia including West Java, Central Java, Yogyakarta, East Java, West Java, Lampung, Bali, South Sulawesi, East Nusa Tenggara, Lampung
- Works with approximately 80 Community Partner Organizations (CPOs)
- This program has installed more than 1,000 biogas systems in rural Indonesia

BIRU Achievement
May 2009 - December 2013

Year	Biogas Digesters Installed	Biogas Systems Installed
2009	1,012 (0.04%)	1,012 (0.04%)
2010	54 (0.00%)	54 (0.00%)
2011	185 (0.01%)	185 (0.01%)
2012	156 (0.01%)	156 (0.01%)
2013	1,007 (0.04%)	1,007 (0.04%)
Total	2,243 (0.01%)	2,243 (0.01%)

Building a Self-Reliant and Sustainable Biogas Sector

The BIRU Programme aims at the development of the biogas sector by creating biogas demand and supply. The demand side is developed by enhancing awareness among potential biogas users, undertaking business raising and marketing activities, providing an investment incentive and by financing access to credit. The supply side is developed by selecting biogas sector partners, which are governed by Decree on Self-Reliant Biogas Sector. This is done by providing intensive farm training and other assistance in setting up those organizations' biogas projects. Partners are supported with technical consultation and the development of manufacture of biogas appliances, such as stoves and lamps.

For now, the biogas digester are not given to farmers for free. They have to pay around 10% of the digester's cost themselves, which is a considerable amount for many small farmers.

Standardizing Quality

Source quality control ensures that construction partner organizations are equally involved in their responsibilities with regard to the quality of the biogas plants and the guarantee of sustained use of the biogas plants. The BIRU approach is to work with well-working biogas plants.

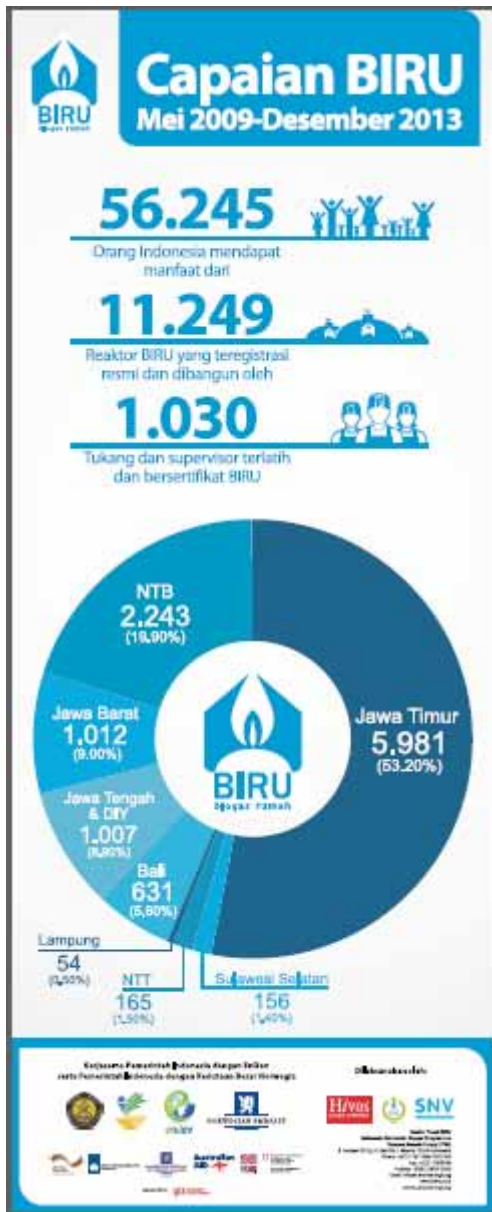
Partners have a reputation who have the task to systematically check the work of the partners, and the BIRU team has quality inspectors to make sure that partners adhere to the quality standards. In 2012, the Indonesian Ministry of Energy and Mineral Resources (MEMR) has already approved the BIRU Biogas Digester Design as national biogas standard with number SK 126.

An Independent Technical Assessment in December 2011 showed that the BIRU digester built in Indonesia are of high quality. In a short time a number of partners have been able to develop the local manufacture of biogas appliances. Now, almost all appliances are locally made and have a good quality. Research and development of biogas appliances will continue to reach even higher quality standards.

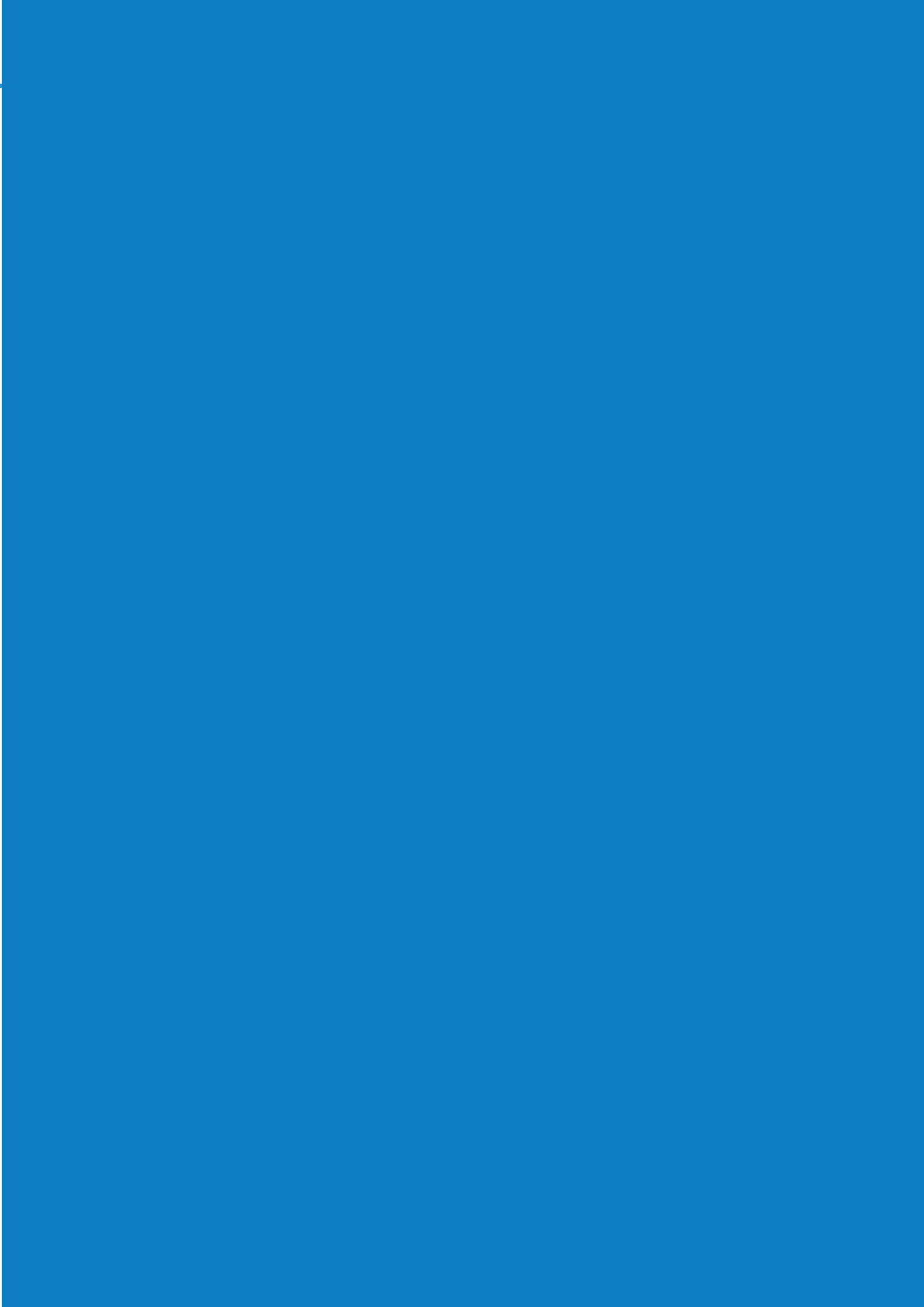
Gender Mainstreaming

The key implementer, TSP (Rural Energy TSP), promotes empowerment and engagement of women in order to achieve gender equality in all levels of society. By creating access and control over natural resources and benefits, leading to empowerment of rural women (rural women poverty reduction) as well as control over natural resources and benefits, the programme is contributing to the economic, bio-slurry management and risk reduction and maintenance training, leading to empowerment of rural women and self-reliance.

BIRU Programme Brochure (INA & ENG version, March 2014)



Roll-up banner of BIRU Achievement 2009 – 2013 and Bio-slurry (March 2014)



**A Cooperation of the Government of Indonesia and EnDev
and the Government of Indonesia and the Royal Norwegian Embassy**



NORWEGIAN EMBASSY

Funded by:



Ministry of Foreign Affairs of the Netherlands



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Implemented by:



**Indonesia Domestic Biogas Programme
Yayasan Rumah Energi (YRE)**

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