

### LOCAL STAKEHOLDER CONSULTATION REPORT

# GOLD STANDARD PROGRAMME OF ACTIVITES (PoA)

#### **CONTENTS**

### A. Description of the Programme

- 1. Name, purpose and eligibility of the Programme
- 2. Current status of the Programme

### B. Design of Stakeholder Consultation Process

- 1. Description of physical meeting(s)
  - i. Agenda
  - ii. Non-technical summary
  - iii. Invitation tracking table
  - iv. Text of individual invitations
  - v. Text of public invitations
- 2. Description of other consultation methods used

#### C. Consultation Process

- 1. Participants' in physical meeting(s)
  - i. List
  - ii. Evaluation forms
- 2. Pictures from physical meeting(s)
- 3. Outcome of consultation process
  - i. Minutes of physical meeting(s)
  - ii. Minutes of other consultations
  - iii. Assessment of all comments
  - iv. Revisit sustainable development assessment
  - v. Summary of changes to project design based on comments

### D. Sustainable Development Assessment

- 1. Own sustainable development assessment
  - i. 'Do no harm' assessment
  - ii. Sustainable development matrix
- 2. Stakeholders blind sustainable development matrix
- 3. Consolidated sustainable development matrix

### E. Discussion on Sustainability Monitoring Plan

### F. Description of Stakeholder Feedback Round

### Annex 1. Original participants list



# Annex 2. Original feedback forms



# SECTION A. DESCRIPTION of the PROGRAMME

# A. 1. Name, purpose and eligibility of the Programme

#### Name of the Programme

Indonesia Domestic Biogas Programme of Activities (IDBP) (ID 1172)

### **Purpose of the Programme**

The application of biogas for cooking purposes is a relatively unknown practice in Indonesia. Aside from a number of pilot programmes implemented over the past two decades, biodigester use has hardly penetrated nationwide due to habitual, financial and technological barriers.

The objective of the proposed Indonesia Domestic Biogas Programme of Activities ('programme') is to develop a biogas sector through a market approach and realise the installation of approximately 80,000 biodigesters at households, local communities, SMEs ('users') with livestock across Indonesia between 2011 and 2020. The programme stimulates nationwide adoption of biogas technology through:

- (i) capacity development targeting households, local communities, SMEs, construction service providers and equipment suppliers;
- (ii) provision of an investment subsidy to households, local communities, SMEs on the purchase of the biogas technology, and;
- (iii) offering of credit facilities through a number of affiliated financial institutions.

The biodigester technology promoted under this programme offers its users access to clean and renewable energy. This energy is generated by burning the methane gas from the digestion of animal manure. The digestion takes place in a biodigester tank outside of the house or building of the user. This programme reduces both carbon dioxide (CO<sub>2</sub>) emissions from the use of fossil fuels or non-renewable biomass for cooking purposes, and mitigates methane (CH<sub>4</sub>) emissions from the baseline manure treatment practices. Aside from mitigating impact on climate change, the programme also positively contributes to the energy security across the country.

### Eligibility of the Programme

According to the Gold Standard guidance (v2.1), the programme is considered eligible if all of the following conditions are satisfied:

- Scale of the activity: The programme will include small-scale and micro-scale voluntary project activities (VPAs) and shall therefore adhere to both small-scale programme rules listed in Annex F of the Gold Standard Toolkit and micro-scale guidelines outlined in the Gold Standard's micro-scale programme rules. Emission reductions achieved by the micro-scale VPAs included in the programme shall be limited to a maximum of 10,000 tonnes of CO<sub>2</sub>e in any year of their crediting.
- Host country: The programme is located in the Republic of Indonesia, which is a Non-



Annex 1 Country under the Kyoto Protocol;

- Type of activity: The programme activity classifies as a Renewable Energy project. In accordance with Annex C to the Gold Standard Toolkit, biogas project activities shall be eligible for emission reductions from both methane avoidance and non-renewable fuel substitution as long as at the time of validation it can be proven that the system is designed in a way to make use of some of the biogas recovered for the delivery of energy services. The biodigesters implemented in this programme deliver renewable biogas for cooking purposes, which is combusted to generate heat.
- Greenhouse gases: The emission reduction of greenhouse gases (GHG) intended to be achieved by the programme includes methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>), two GHGs that are eligible under Gold Standard;
- Official Development Assistance: Official Development Assistance (ODA) is used for the partial financing of the programme. The credits to be generated by programme are not transferred, directly or indirectly, to meet the funder's GHG reduction requirements. A written declaration of the programme's appropriate use of ODA has been issued and submitted to the Gold Standard Foundation, attached in an annex to the PoA-DD.
- *Timeframe:* The programme is being implemented at the time of first submission to the Gold Standard. The programme therefore intends to apply for Retroactive Registration and Retroactive Crediting of its first VPA(s);
- Previous announcement: The feasibility study for the IDBP drafted in January 2009 identifies carbon finance as an important mechanism to ensure the long-term feasibility of the programme which suffers from lack of funding and revenues.
- Other certification schemes: No credits related to GHG reductions of this programme are
  otherwise committed under another mechanism other than the Gold Standard one.
  Therefore, no double counting will occur from the issuance of Gold Standard carbon
  credits originating from this programme.

### A. 2. Current programme status

In 2008 SNV, at the request of the Government of Indonesia, carried out a feasibility study for a nationwide biogas programme. The study confirmed that biogas as a source of energy for cooking has great potential in Indonesia. Additionally, the application for carbon finance to secure the sustainability of the programme in the long term was also mentioned. Based on the findings, the Royal Netherlands Embassy decided to initiate support to the Indonesian Ministry of Energy and Mineral Resources in setting up the IDBP in collaboration with the Dutch organisations Hivos and SNV. The Indonesian Directorate General for Electricity and Energy Utilization (DGNREEC), a directorate under the Ministry of Energy and Mining Resources (MEMR), became the Indonesian counterpart for the programme.



The programme officially commenced in May 2009. IDBP established its central organisational framework and recruited its core staff by November 2009. The National Biogas Programme Support Office (NBPSO) was established, which supports local implementation of the biodigester programme through local offices. By the end of 2009 the first 62 biodigesters were commissioned, followed by an additional 1,583 in 2010 and 2,988 in 2011.

Currently, IDBP operates eight local offices across Indonesia. As per 9<sup>th</sup> January 2012, IDBP realised the construction of 4,555 units of biodigesters nationwide.

# SECTION B. DESIGN OF STAKEHOLDER CONSULTATION PROCESS

# B. 1. Design of physical meeting

### i. Agenda

The agenda of the meeting is outlined below:

Time	Activity
08.00	Registration
08.30	Opening (objective of the day, rules of the day, agenda)
08.40	Presentation: IDBP Programme and progress update
09.00	Presentation: National Energy Scheme and its relation with IDBP
09.20	Questions and answers and clarifications for IDBP
10.00	Coffee break
10.15	Do No Harm assessment explanation
10.45	Blind exercise: Sustainable Development including discussion on the Monitoring of the Sustainable Development
12.15	Discussion: Selecting the Continuous Input Mechanism
12.30	Note on the stakeholder feedback round
12.40	Conclusions and closing
13.00	Lunch

### ii. Non-technical summary of the Programme

The programme aims to install approximately 80,000 biodigesters at households, local



communities, SMEs with livestock across Indonesia between 2011 and 2020.

The biodigester technology implemented under this programme offers its users access to clean and renewable energy. This energy is generated by burning the methane gas that is recovered from animal manure stored in the biodigester tank outside of the house or building of the user. This clean energy reduces greenhouse gases and mitigates the impact on climate change, and also positively contributes to the energy security across the country.

The programme targets livestock owners that are currently relying on biomass and fossil fuel for cooking purposes. Purchasing fuel for cooking is expensive, and households, local communities, SMEs spend a lot of their time collecting fuel. Furthermore, burning fuel, especially firewood, for cooking purposes is not healthy as it causes respiratory diseases, especially affecting women and children who spend most of the time indoors.

Participation in the programme is entirely voluntary. The biodigester technology is affordable as the programme offers a subsidy, hereby allowing households, local communities, SMEs to invest in a biodigester either from accrued savings or through the offering of a loan. The users are trained on how to use and maintain the biodigester once installed. The operation of the biodigester is relatively easy and includes daily feeding of the system with a mixture of manure and water. The resulting waste sludge can be applied as fertiliser on farm land.

The programme brings a number of environmental and sustainable development benefits. These include:

- 1. Substitution of expensive fossil fuels such as kerosene and LPG, freeing up households, local communities, SMEs' finances;
- 2. Substitution of firewood, freeing up time spent to collect the wood and mitigating impact on deforestation;
- 3. Elimination of dangerous fumes that can lead to respiratory diseases in households, local communities, SMEs;
- 4. Generation of waste sludge that can be used as fertiliser and substitute expensive artificial fertilisers;
- 5. Creation training and job opportunities in the programme for the local community;
- 6. Offering of subsidy money and loans to facilitate the investment by the households, local communities, SMEs.

#### iii. Invitation tracking table

Category (code)	Organisation	Name of invitee	Way of invitation	Date of invitation	Y/N?
Local people or their	KPSP Setia Kawan, farmers' cooperative	H. Haryanto	By airmail & fax	Jan 12, 2012	Yes
official	Site Manager LPTP, farmers' cooperative	Sumino	By airmail & fax	Jan 12, 2012	Yes
representati ves	PT Nestle Indonesia, farmers' cooperative	Yuli Sari Yeni	By airmail, fax & email	Jan 12, 2012	Yes



( <b>A</b> )					
	Biogas user in East Java, Head of Village Women Group	Sunarti	By airmail & fax	Jan 17, 2012	Yes
	Tandangsari Saving- Loan Cooperative, Tanjungsari	Toni Kartobi	By airmail & fax	Jan 17, 2012	Yes
	Global News, media	Danny	By text message	Feb 15, 2012	Yes
	Berita Metro, media	Yudi	By text message	Feb 15, 2012	Yes
	Dairy Farmers' Cooperative	Ramdan Sobari	By text message	Feb 15, 2012	Yes
	Mining and Energy Division, Office of Public Works, Bali Province	Ir. I Putu Agus Budiana, M.Si	By airmail & fax	Jan 12, 2012	Yes
	Mining and Energy Department, West Nusa Tenggara Province	Ir. Eko Bambang Sutedjo	By airmail & fax	Jan 12, 2012	Yes
	Mining and Energy Department, East Nusa Tenggara Province	Drs. Bria Yohanes,	By airmail & fax	Jan 12, 2012	Yes
	Mining and Energy Department, North Sumatera Province	Ir. Gembira Sebayang	By airmail & fax	Jan 12, 2012	Yes
Local government	Mining and Energy Department, North Sumatera Province	Ir. Andawarneri,	By airmail & fax	Jan 12, 2012	No
( <b>B</b> )	Mining and Energy Department, West Sumatera Province	Ir. Robert Heri.	By airmail & fax	Jan 12, 2012	No
	Mining and Energy Department, Jambi Province	Ir. Irmansyah Rachman.	By airmail & fax	Jan 12, 2012	No
	Mining and Energy Department, Lampung Province	Ir E Piterdono HZ SE MM	By airmail & fax	Jan 12, 2012	No
	Mining and Energy Department, West Sulawesi Province	Agussalim Tamadjoe	By airmail & fax	Jan 12, 2012	No
	Mining and Energy Department, Riau Province	Isdianto	By airmail & fax	Jan 12, 2012	No
	Ministry of Finance	Ir. Musdhalifah M., MT	By airmail & fax	Jan 9, 2012	No
	Ministry of Environment	Ir. Laksmi Dhewanthi, M.A	By airmail & fax	Jan 9, 2012	No
	Ministry of Cooperatives and Small and Medium Enterprises	Ir. Victoria br. Simanungkalit, MM	By airmail & fax	Jan 9, 2012	Yes
	Ministry of National	Ir. Jadhie J.	By airmail	Jan 9, 2012	Yes



	Development Planning	Ardajat,	& fax		
	Development Flaming	7 tradjat,	a lax		
	Center for Research and Technological Development of Renewable Electricity and Energy	Director	By airmail & fax	Jan 9, 2012	No
	Ministry of Agriculture	Dr. Bess Tiesnamurti,	By airmail, Fax & email	Jan 9, 2012	No
Local policy makers &	Ministry of Agriculture, Directorate General of Livestock	Ir. Fauzi Luthan,	By airmail & fax	Jan 9, 2012	No
representati ves	Mining and Energy Department, West Java Province	Ir. Yerry Yanuar M.M	By airmail & fax	Jan 9, 2012	Yes
(B)	Mining and Energy Department, Central Java Province	Ir. Teguh Dwi Paryono, MT,	By airmail & fax	Jan 9, 2012	Yes
	Mining and Energy Department, East Java Province	Zainuddin	By airmail & fax	Jan 9, 2012	Yes
	Mining and Energy Department, D.I Yogyakarta Province	Ir. Rani Sjamsinarsi, M.T,	By airmail & fax	Jan 9, 2012	No
	Mining and Energy Department, South Sulawesi Province	Ir. H Gunawan Palaguna Msi	By airmail & fax	Jan 9, 2012	Yes
	Hivos RO SEA	Jan Jaap Kleinrensink	Directly	Jan 13, 2012	No
	SNV International	Sundar Bajgain	Directly	Jan 13, 2012	Yes
	Ministry of Social Affairs	Ahmad Sobari	By airmail, Fax & email	Jan 9, 2012	Yes
	Ministry of Forestry	Dr. Yetty Rusli	By airmail, & fax	Jan 9, 2012	Yes
	National Council on Climate Change	Mr. Rachmat Witoelar	By airmail, & fax	Jan 9, 2012	No
Local NGO	Yayasan Keanekaragaman Hayati Indonesia (KEHATI)	Arnold Sitompul, Ph.d	By airmail, Fax & email	Jan 9, 2012	Yes
representati ves working	VECO Indonesia	Rogier Eijkens	By airmail & fax	Jan 12, 2012	No
on topic relevant to	CARE Indonesia	Margaretha Ari Widowati,	By airmail & fax	Jan 9, 2012	Yes
programme	WALHI	Pius Ginting	By airmail & fax	Jan 9, 2012	Yes
( <b>D</b> )	Yayasan Pelangi	Nur Amalia	By airmail & fax	Jan 9, 2012	No
	Indonesian Climate Action Network (ICAN)	Fabby Tumiwa	By airmail, fax & email	Jan 17, 2012	No



	Indonesian Law Study Foundation	Wagiman	By airmail, fax & email	Feb 7, 2012	No
	Marine and Coastal Resources Study Centre, Bogor Agricultural Institute (IPB)	Arief Budi Purwanto	By airmail, fax & email	Feb 7, 2012	Yes
	Gold Standard Foundation	Ellen May Zanoria Reynes	By email	Jan 9, 2012	Yes
	Millenium Corporation Challenge Indonesia	Y. Nindito Adisuryo	By airmail, fax & email	Jan 20, 2012	Yes
	Millenium Corporation Challenge Indonesia	Gofur	By airmail, fax & email	Jan 20, 2012	Yes
	Millenium Corporation Challenge Indonesia	Wray Troy	By airmail, fax & email	Jan 20, 2012	No
	Winrock International	Bernard Castermans	By airmail, fax & email	Jan 9, 2012	No
International	WWF	Klaas-Jan Teule	By airmail, Fax & email	Jan 9, 2012	No
develop- ment organisation	United Nation Development Program (UNDP)	Verania Andria	By airmail, fax & email	Jan 9, 2012	No
( <b>F</b> )	USAID	Retno Setianingsih	By airmail, fax & email	Jan 9, 2012	No
	KfW	Cynthia Hendrayani	By airmail, fax & email	Jan 25, 2012	No
	KfW	Thorsten Schneider	By airmail, fax & email	Jan 25, 2012	No
	Climate Focus	Szymon Mikolajczyk	By email	Jan 17, 2012	Yes
	PT Bank Nasional Indonesia (Persero)	Leonard T Panjaitan	By airmail, fax & email	Jan 20, 2012	Yes
	Persatuan Insinyur Indonesa	Ir. Bambang Purwohadi	By airmail, fax & email	Jan 25, 2012	Yes
Others	Micro Turbine Cogeneration Technology Aplication Project	Budi Prasetyo	By airmail, fax & email	Feb 7, 2012	No
	Yayasan Bitari	Ishak Tan	By airmail, fax & email	Feb 7, 2012	Yes
	LSM Lembaga Lingkar Bumi	Thomas Acquino	By airmail, fax & email	Feb 7, 2012	Yes



PT. Ilham Treda Industri	Bambang Agus	By airmail, fax & email	Feb 7, 2012	Yes
Rabobank Foundation	Bern Dwyanto	By airmail & fax	Jan 12, 2012	Yes

Please explain how you decided that the above organisations/individuals are relevant stakeholders to your programme. Also, please discuss how your invitation methods seek to include a broad range of stakeholders (e.g. gender, age, and ethnicity).

As indicated in the Programme Design Consultation (PDC) report submitted to the Gold Standard Foundation on 21<sup>st</sup> February 2012, prior to hosting the Local Stakeholder Consultation (LSC) Hivos consulted relevant stakeholders on whether to organise stakeholder consultations on a national level or various consultations in the different target regions. All stakeholders approached in the PDC agreed with the proposal from the IDBP to host one LSC meeting on programme level on the national level. Hivos therefore organised a single LSC meeting on the national level and invited a broad range of both national and regional stakeholders. To encourage all parties to be present, Hivos offered to sponsor the associated travel (flight, train and bus tickets) and sleeping arrangements (Hotel Ibis Tamarin, Jakarta).

The invitations sought to cover a broad range of stakeholder types representing all regions likely to be affected by the programme. Through its involvement in the programme since the setup in 2009 as the managing entity Hivos has built an extensive network with stakeholders both on the local and national level, placing this entity in the right position to identify the relevant stakeholders to the programme. In total 70 targeted invitations were sent out by electronic and regular mail, covering a wide range of stakeholders that included individuals, organisations, companies and government entities.

In order not to close the opportunity for other interested parties to join the LSC, Hivos also used alternative means of communicating to a broader audience concerning the occurrence of the meeting. As described in Section B.1.5 on this report, a public invitation for the LSC was published in Kompas Daily, the most widely read newspaper in Indonesia. Furthermore, a public announcement was published on the IDBP website (www.biru.or.id). The presence of both the individual and general public invitations ensures broad representation and a good mix of viewpoints.



#### iv. Text of individual invitations

### Individual invitations (English version):



Attn to

Szymon Mikolajczyk
Climate Focus BV
Sarphatikade 13
1017 WV Amsterdam
mobile: +31 6 1590 5779
Office: +31 20 262 10 38
E-mail: s.mikolajczyk@climatefocus.com

Date : 17 January 2012 No. : 1.8.4/ 072/RdG/ac

Re : Invitation to Local Stakeholders Meeting for qualification of CDM Gold Standard

Dear Sir,

Since May 2009, Hivos in cooperation with the Directorate General New Renewable Energy and Energy Conservation (DGNREEC) of the Ministry of Energy and Mineral Resources (MEMR) of the Republic of Indonesia: has implemented Indonesia Domestic Biogas Programme (also known as BIRU Programme). IDBP contributes to the improvement of access towards new renewable energy, quality of family's health and saving the government's subsidy on kerosene. IDBP aims to build 8,000 unit bio-digesters in minimum six provinces across Indonesia until the end of 2012. As per 9th January 2012, 4,555 units of bio-digesters have been constructed.

The Indonesia Domestic Biogas Programme (BIRU) aims to qualify under the Gold Standard certification, which is an international foundation that offers additional sponsorship to clean energy initiatives that reduce greenhouse gas emissions and promote sustainable development. Receiving this certification will enable the programme to offer subsidies to households that are interested in joining the programme, anywhere across Indonesia.

As part of the requirements put forth by the Gold Standard Foundation, the programme invites you to attend the stakeholder consultation meeting that BIRU will host in Jakarta. The meeting will be held on:

Day / Date : Thursday, 16 Februari 2012

Time : 09.00 - 14.00 Venue : (tbc)

We welcome you to attend this meeting to give you the possibility to learn more about the programme and listen to any feedback you may have concerning the design of the programme and its impacts on sustainable development.

We welcome you to read an introduction of the programme in Annex 1. For more information on IDBP, please visit our website <a href="www.biru.or.id">www.biru.or.id</a>, or you can reach us at +62 812 8030 2020 or by e-mail at <a href="mailto:info@biru.or.id">info@biru.or.id</a> with specific information regarding addition requested programme documentation. The meeting agenda is can be seen in Annex 2.

Please notify us may you need assistance concerning the direction in Jakarta or suggestions for overnight stay, may such need be. Kindly fill in the form in Annex 3 and send it back to Agi S. Cakradirana melalui e-mail <a href="mailto:a.cakradirana@hivos.or.id">a.cakradirana@hivos.or.id</a>, or through facsimile number: +62 21 780 8115 by the latest on Friday, 3<sup>rd</sup> February 2012.

For your information, the announcement of this meeting will be released in KOMPAS daily newspaper on 18 January 2012. We look forward to hearing from you soon.

Robert de Groot

IDB Programme Manager

Hivos Regional Office Southeast Asia



#### Annex 1 of the invitation (English version):

#### Annex 1

Introduction to the programme.



The Indonesia Domestic Biogas Gold Standard Programme aims to install about 90,000 small-size biodigesters at rural households throughout Indonesia by 2022.

The programme targets small-scale livestock owners that are currently relying on biomass and fossil fuel for cooking purposes. These households typically reside in rural areas and come from a poor and middle-income class. Purchasing fuel for cooking is expensive, and households spend a lot of their time collecting firewood to ensure enough fuel is present. Furthermore, burning wood for cooking purposes is not healthy as it causes respiratory diseases, especially affecting women and children who spend most of the time indoors.

The biodigester technology implemented under this programme will offer its users access to clean and renewable energy. This energy will be generated by burning the methane gas that will be generated from animal manure stored in the biodigester tank outside of the house of the user. This clean energy will reduce greenhouse gases and mitigate the impact on climate change, and also positively contribute to the general energy security of rural regions across the country.

Participation in the programme is entirely voluntary. The biodigester technology is affordable as the programme offers a subsidy, hereby allowing poor households to invest in a personal biodigester either from personal savings or through the offering of a loan. The users are trained on how to use and maintain the biodigester once installed, which is safe and straight forward. The operation of the technology mainly includes daily feeding of the installation with a mixture of manure and water. The resulting waste sludge can be applied as fertiliser on the farm land.

There are a number of environmental and sustainable development benefits associated with the programme. These include:

- 1. Substitution of expensive fossil fuels such as kerosene and LPG, freeing up household finances;
- 2. Substitution of firewood, freeing up time spent to collect the wood and mitigating impact on
- 3. Elimination of dangerous fumes that can lead to respiratory diseases in households;
- Generation of waste sludge that can be used as fertiliser and substitute expensive artificial fertilisers;
   Creation training and job opportunities in the Programme for local people;
- 6. Offering of subsidy money and loans to facilitate the investment by the household.



# Annex 2 of the invitation (English version):

Annex 2

Local Stakeholders Consultation Meeting Agenda



Time	Activity	Remarks
08.00	Registration	Amalia Fubani
08.30	Opening	Facilitator
08.45	Programme's agenda explanation	Climate Focus or facilitator
09.00	Presentation: BIRU Programme and progress update	Robert de Groot
09.20	Presentation: National Energy Scheme and its relation with IDBP	Maritje Hutapea
10.20	Questions and answers and clarifications	Fasilitator
10.45	Coffee break	
11.00	Blind exercise: Sustainable Development	
11.30	Discussion: Monitoring Sustainable Development	
12.00	Discussion: Selecting Continuous Input Mechanism	
12.30	Conclusions and closing	
13.00	Lunch	Amalia Fubani

# Annex 3 of the invitation:

Annex 3

Attendance Confirmation Form



Name	:		
Sex	:	Male	Female
Organization	:		
Position	:		
E-mail	:		
Mobile number	:		
Will you participate in the LSC Meeting?	:	Yes	No

Kindly fill return this form to Agi S. Cakradirana by e-mail to  $\underline{a.cakradirana@hivos.or.id}$ , or through facsimile number: +62 21 780 8115 by the latest on Friday,  $3^{rd}$  February 201

### v. Text of public invitations

**Figure 1:** Text of public invitation for the LSC published in Kompas Daily (national newspaper) on Wednesday 18<sup>th</sup> of January 2012 (p.38)



Kompas Daily is the most widely read newspaper in Indonesia. It is published by the Kompas-Gramedia Group and has s a reputation for high-quality writing and investigative journalism.

Figure 2: Text of public invitation for the LSC published on the IDBP website (www.biru.or.id)

ANNOUNCEMENT: Local Stakeholder Consultation in preparation for qualification and certification of the Gold Standard.

The meeting will be conducted on:

Day & Date: Thursday, February 16, 2012

Time: 08.00 s / d 13:00 pm

Venue: Hotel Ibis Tamarin, Jl. K.H. Wahid Hashim No.77 Central Jakarta, 10 340 - Indonesia

#### Agenda:

- Presentation of the Indonesian Domestic Biogas Programme
- Presentation of the National Energy Policy
- Question and Answer, and clarification
- Simulation of Sustainable Development
- Discussion of monitoring and feedback mechanisms

For further information please contact:





# B. 2. Description of other consultation methods used

If individuals and/ or entities (e.g. NGOs) are unable to attend the physical meeting, please discuss other methods that were used to solicit their feedback/ comments (e.g. questionnaires, phone calls, interviews).

Before the hosting the physical meeting, IDBP made repeated efforts to get in touch with the invitees by contacting them via mobile phone and e-mail. In some cases, to get their confirmation of attendance, IDBP also tried to contact the invitees through their staff, which was followed by resending the documents via facsimile. In situations where stakeholders could not make it to the physical meeting, they were invited to submit any queries or concern to Hivos via phone or e-mail.

# SECTION C. CONSULTATION PROCESS

### C. 1. Participants' in physical meeting(s)

### i. List of participants

The original participants' list is included in Annex 1.

Category	Name of	Title	Male/	Organisation	Contact details
Code	participant		Female		
	Sunarti	Head of	Female	(ID Plant under	Krenceng Village,
		Village		name of	Kepung Sub-district,
		Women		Suparno : SJP	Kediri District, East
		Group		0012)	Java – Indonesia
					Mobile phone: +62 812
					3417 1632
Local	Toni Kartobi	Dairy	Male	Tandangsari	Tanjungsari,
people , or		farmer/Co		Saving-Loan	Sumedang, West Java
their official		operative		Cooperative,	- Indonesia
representati		manager		Tanjungsari	Mobile phone: +62 812
ves		(ID plant			210 5645
		no. STP			
( <b>A</b> )		00012)			
	Sumino	Director	Male	LPTP	Komplek Kampus
					Adyhasa Jl. Raya Palur
					Km. 5
					Tegal Asri, Rt 4/6,
					Karanganyar, Solo –
					Indonesia



			,		
					Mobile phone: +62 813 290 39 885 E-mail: mino@lptp.or.id
	Yuli Sari Yeni	Creating Shared Value (CSV) Specialist	Female	Nestle	Wisma Nestle 5th Floor, Perkantoran Hijau Arkadia, Jl. Letjen TB Simatupang Kav. 88, Jakarta 12520 - Indonesia PO Box 5555 Jakarta 12000 Office phone: +62 21 788 36000 Office facsimile:+62 21 788 36001 Mobile phone: +62 8122 783 507 E-mail: yuli- sari.yeni@id.nestle.com
	Drh. Ramdan Sobari	Secretary	Male	Bandung Utara Dairy Farmers Cooperative	Jl. Pasar Panorama No. 23, Lembang, West Java – Indonesia Office phone: +62 22 2786 298 Office facsimile: +62 22 278 6431 Mobile phone: +62 811 220 4773 E-mail: ramdan@kpsbu.co.id
	H. Hariyanto	Secretary	Male	Dairy Farmer Cooperative (KPSP) Setia Kawan	Kecamatan Tutur, Pasuruan, Jawa Timur Office facsimile: +62 343 499 322 Mobile phone: +62 812 522 8446 E-mail: hariyantokpsp@yahoo. co.id
	Danny	Journalist	Male	Global News	redaksimo@yahoo.com Mobile phone: +62 815 669 6079
	Yudi	Reporter	Male	Berita Metro	-
_					



	Ir. I Putu Agus	Head of	Male	Mining and	Jl. Beliton No. 2,
	Budiana, M.Si	Mining		Energy	Denpasar 80235 – Bali
	,	and		Division, Office	- Indonesia
		Energy		of Public	Office phone: +62 361
		Division		Works, Bali	222883
				Province	e-mail :
					pabudiana@yahoo.co.i
					d
					Mobile phone: +62 812
					389 0481
	Ir. Eko	Head of	Male	Mining and	Jl. Majapahit No. 40,
	Bambang	Mining		Energy	Kekalik
	Sutedjo	and		Department,	Post box 1056,
		Energy		West Nusa	Mataram 83010 -
		Departme		Tenggara	Indonesia
		nt		Province	Office phone: +62 370
					621356 - 625765 -
Local					640748
government					Office facsimile: +62
(B)					370 625766
, ,					Mobile phone: +62 812
					3707 459
					E-mail:
					esutedjo@yahoo.co.id
	Ir. Gembira	(Implemen	Male	Mining and	Jl. Setiabudi Pasar Dua
	Sebayang	tor) Head		Energy	No. 84, Tanjungsari
		of		Department,	Medan-20115, North
		Electricity		North	Sumatera - Indonesia
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Local NGO representati ves working on topic relevant to programme	Wagiman	Director	Male	Indonesian Law Study Foundation	Mobile phone: +62 878 940 85912, E-mail: wagiman2007@yahoo. com
(D)	Ishak Tan	Director	Male	Bitari Foundation	Office phone: +62 22 70770554 Office e-mail: bittari@yahoo.com Mobile phone: +62 811 229 107 E-mail: Ishaktan_bitari@yahoo. com
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The original invitation list attached in Annex 1 includes stakeholder's phone numbers and their signatures as initially provided in the LSC Report template.

# ii. Evaluation forms



Below you can find 4 representative evaluation forms from the LSC in English. The original evaluation forms (in original language) are included in Annex 2.

# Original evaluation form 1:

Name: Bern Dwyanto	<b>Telephone:</b> +62 815 99 55 068
Organisation: Rabobank Foundation	Email: bern.dwyanto@rabobank.com
What was your impression of the meeting?	It was valuable for the general development of the biogas sector and to increase the biogas utilisation within local communities.
What do you like about the IDBP programme?	The programme utilises renewable energy which is cleaner, produces no emission and has many social and economic benefits.
What do you do not like about the IDBP programme?	None. I completely support the programme. However, the coordination between the field staff and the cooperative can be improved so that the targeted construction number can be achieved and the farmers can fully make use financial support offered by the programme.
Signature: See Annex 2	Date: 16 February 2012

# Original evaluation form 2:

Name: Ir. Gembira Sebayang	Telephone: +62 813 7560 1348 ; +62 61 821 3533
<b>Organisation:</b> Mining and Energy Office, North Sumatera Province	Email: gembirasebayang@rocketmail.com
What was your impression of the meeting?	Very good and useful both for Hivos and the overall community. The programme is also in line with the government's sustainability policies.
What do you like about the IDBP programme?	The programme generates a number of positive impacts: (1) it increases the welfare of community; (2) it increases the quality of human resources; (3) it generates clean, renewable energy.
What do you do not like about the IDBP programme?	The programme is currently limited only to a few provinces, not yet spreading all over Indonesia.
Signature: See Annex 2	Date: 16 February 2012

# Original evaluation form 3:

Name: Gofur	<b>Telephone:</b> +62 811 104 75 98
Organisation: Millenium Coorporation Challenge	Email: ngofur@yahoo.com
What was your impression of the meeting?	Very positive. It was attended by many stakeholders (CSO, private sector, implementers, donor and government). This indicates that biogas is needed and is important.



What do you like about the IDBP programme?  What do you do not like about the IDBP programme?	There are a number of benefits of the programme: (1) there are trickle-down effects (economic); (2) emission from methane is decreased; (3) the programme increases local people's capacity; (4) the programme increases environmental awareness at the local level.  None.
Signature: See Annex 2	Date: 16 February 2012

#### Original evaluation form 4:

Name: Sri Saptaningsih	Telephone: +62 812 1058 4741
Organisation: Ministry of Environment	Email: saptalh@yahoo.com
What was your impression of the meeting?	It was very useful. The stakeholders were allowed to share their thoughts on biogas utilisation and development.
What do you like about the IDBP programme?	There are a number of benefits of the programme: (1) decrease of air and water pollution; (2) creation of job opportunities; (3) provision of alternative energy.
What do you do not like about the IDBP programme?	Please pay attention and follow up on the utilisation of the bio-slurry.
Signature: See Annex 2	Date: 16 February 2012

#### Comments accompanying Annex 2.

The attendants of the LSC meeting gave positive remarks about the consultation, stating that it was a very useful event for sharing updates about IDBP progress and to promote IDBP itself to government and local stakeholders from other potential areas where IDBP has not gone to. The meeting was also appreciated because it brought together stakeholders from different fields; government of Indonesia, business and banking sector, local authorities and users and that it showed how biogas is necessary and needed.

The attendants also perceived IDBP as a very positive programme because it helps promoting cleaner new renewable energy, decreases air and water pollution, increases local capacity and awareness about environment, and from the economic perspective it provides trickle-down effect as it opens up new job opportunities for local people. One participant mentioned that he found out biogas is easy to use and has three Ps benefits: people, profit and planet.

Based on the evaluation, none of the attendants had a negative opinion about IDBP. They did, however, note that a few things should be improved, such as bio-slurry utilisation and the number of awareness meetings should be increased. One participant suggested that IDBP could explore utilization of other energy sources such as tofu waste and consider the construction of bigger size bio-digesters. Another participant thought that due to its subsidy policy, IDBP does not allow co-financing from provincial government, and another suggested that IDBP should really make use of cooperatives in terms of financial mobilisation, e.g. to provide credit access to potential users.

All of the above mentioned concerns were already discussed during the Question and Answer session. IDBP has started in 2012 to intensify bio-slurry utilisation amongst its user by conducting around 150 trainings for users. As IDBP is targeting ca. 5,000 new users in 2012, the number of



awareness meetings will also be increased. Regarding the bigger size bio-digesters that can also utilise tofu waste, IDBP is open to that kind of technology development although it has not yet become its primary goal. IDBP will consider it again and keep tracking biogas technology developments. For co-financing schemes with the government, IDBP in principle adheres to the existing development concept of limited subsidy, but will consider applying a more flexible policy in 2012, especially for vulnerable groups. In relation to the roles of cooperatives for financial mobilisation, IDBP has been making efforts not only to establish credit access from cooperatives to potential users, but also to connect the cooperatives with other financial institutions from which the cooperatives can get loans. IDBP will intensify these efforts in 2012, and beyond.

### C. 2. Pictures from physical meeting(s)

# Picture 1 from the physical meeting:





# Picture 2 from the physical meeting:



Picture 3 from the physical meeting:





Picture 4 from the physical meeting:



Picture 5 from the physical meeting:





#### C. 3. Outcome of consultation process

### i. Minutes of physical meeting(s)

# LOCAL STAKEHOLDER CONSULTATION MEETING ON GOLD STANDARD QUALIFICATION Jakarta, IBIS Tamarin Hotel, 16 February 2012

#### **OPENING**

The Local Stakeholder Consultation Meeting was opened by Ms. Agi S. Cakradirana, Programme Development Officer and welcomed all participants from Jakarta and other provinces.

Ms. Agi S. Cakradirana requested all the participants to introduce themselves and to mention their place of origin as well as affiliated organisation.

The introduction was then followed by the rules of the game during the meeting/discussion in which participants were kindly asked to:

- 1. Turn off or silent mobile-phones
- 2. Be punctual at all discussions
- 3. Exit the room whenever receiving an incoming call during the discussion.

The programme then further continued with the Opening from Mr. Robert de Groot, Programme Manager the IDBP Programme.

Mr. De Groot conveyed that all participants attending this meeting represent the donors, local and national government, business partners, local representatives Gold Standard expert as well as colleagues from Hivos and welcomed all to the discussion.

Mr. De Groot then informed the participants that funding for the IDBP is uncertain despite the programme having the ambition to grow in scale. Mr. De Groot expressed hope that the biogas programme could be developed all across Indonesia.

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#### 1st SESSION: PRESENTATION

#### Developing a Sustainable Biogas Sector in Indonesia, by Robert de Groot

In this presentation, Mr. De Groot described the main objectives of the IDBP programme as well as the benefits of having biogas as a renewable energy source.

(Powerpoint presentation available upon request)

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#### 2nd SESSION: PRESENTATION

#### The link between IDBP and National Energy Policy, by Maritje Hutapea

In this presentation, Mrs. Maritje Hutapea described how the IDBP programme fits into Indonesia's national strategy for energy security and sustainable growth.



# 4th SESSION : PRESENTATION Do Not Harm Assessment, by Ms Agi S. Cakradirana, Programme Development Officer

Ms. Cakradirana mentioned to the participants that in order to obain the Gold Standard certification, Hivos has to undertake the "Do Not Harm" assessment. In principle, Hivos and IDBP ensure that when implementing the programme, it does not endanger the environment.

She further explained that the "Do Not Harm" assessment has 4 principles. Ms. Cakradirana described each of the principles and mentioned each of the scoring for risks that might impact the human and environment aspects. In summary, the risks for all the mentioned principles were presented as low, and thus not harmful.

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#### **Questions and Comments**

See Section C.3.iii, below

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5th SESSION: DISCUSSION

**SUSTAINABLE DEVELOPMENT (Indonesian Development Biogas Programme)** 

Facilitator : Agi S. Cakradirana

Ms. Cakradirana emphasised that this exercise must be carried out by the programme in line with Gold Standard guidelines and must actively involve the participants of the meeting. She welcomed participants to provide their comments and scorings for each of the twelve indicators.

The result for the scorings is listed below:

No.	Indicators	Score
1.	Quality of water	Positive
2.	Quantity and quantity of air	Positive
3.	Condition of soil	Positive
4.	Other pollutants	Positive
5.	Biodiversity	Positive
6.	Quality of employment	Positive
7.	Livelihood of the poor	Positive
8.	Access to affordable and clean energy services	Positive



9.	Human and institutional capacity	Positive
10.	Quantitative employment and income generation	Positive
11.	Balance of payments and investment	Neutral
12.	Technology transfer and technical self-reliance	Positive

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6th SESSION: DISCUSSION

**Future monitoring** 

Facilitator: Agi S. Cakradirana

The faciliator invited the participants to provide their comments and inputs on better future monitoring for the IDBP programme.

Some of the inputs and comments are as follows:

- 1) To provide a pool of information through inputs from participants, bulleting and e-mail.
- 2) Provide on-line as well as off-line forums for biogas discussion, and encourage it to the community since access to information is still low.
- 3) Spread the research results in order to gain stronger understanding and ownership
- 4) There should be a better effort to assist the biogas beneficiaries in establishing a business plan. There should be a transfer of knowledge, build cooperation with NGOs etc.
- 5) There are many success stories therefore these stories should be formulated and brought forward to the central and local government so that biogas can be encouraged and recommended in a structural manner.
- 6) Hivos owns a strong database of baseline data. The baseline should be published on the website and distributed to stakeholders for their knowledge.
- 7) Conduct a periodic evaluation in order to indicate the strength and weakness and accelerate the development.
- 8) A need to improve Hivos' technology as the current one is not yet finalised.
- 9) Publish success stories generated under the IDBP.
- 10) Determine an APBD regulation for further funding.

The facilitator also shared with the participants, the mechanism on how to access information on biogas, through these channels as below:

1) website: www.biru.or.id

2) Hotline: 0812-8030-2020

3) Message Book at the IDBP's Provincial Office

4) Regular Meeting



The facilitator then mentioned that a feedback round following the meeting will take place, during which all participants will receive insight into the finalised meeting documents and will be able to see how their comments have been incorporated.

At the end of the meeting, the facilitator encouraged participants to complete the Evaluation Form and to return it to the administration desk.

Meeting adjourned at 14:00 hours.

### ii. Minutes of other consultations

Not applicable.			

#### iii. Assessment of all comments

Stakeholder comment	Yes/ No?	Explanation (Why? How?)
Q1: How long is the period during which a user is required to repay the biodigester purchase? What does the subsidy mechanism look like? When does the user get the return of investment, in terms of fishery and agricultural benefits?	Yes	A1: The benefits of biogas may not be apparent immediately for the user, because the user must invest a considerable amount of money upfront, and not every user is ready to do this. For instance, a user who is ready to invest in a biodigester through credit will need to spend IDR150,000 (around EUR 12.00) as a monthly instalment for three years. The user usually repays the instalment to their cooperative in cash, or in the form of milk price deduction that is paid by the cooperative to the user.
Q2: The biogas development is currently implemented in some parts of Indonesia only. Can it be implemented nationwide? From the side of the government, the need for new renewable energy is increasing. Unfortunately, inadequate action is occurring on this front.	Yes	A2: The target for biogas implementation is not limited to the initial set of provinces only, but all of Indonesia. However, as this is only the initial stage of the biogas programme and the responsibility to implement biogas programme does not solely rely on the central government. That is why provincial governments are invited to this kind of meetings, so that they can share the result of the meetings to the other local authorities. The provincial government can allocate a part of their budget for biogas development. IDBP expects to expand into Sumatra island, because it has a lot of potential. At this stage, MCC also already stated that they are interested to do a pilot project in Jambi, therefore IDBP will also explore about the next working areas with MCC. It is expected that in the future there will be increasingly more provinces



Many hamlets still do not have access to electricity. The awareness meetings about biogas benefits are really needed. The level of awareness of the people is still low; therefore collaboration between the provincial and the central government as well as Hivos is necessary.   Q4: Can IDBP build bigger size bio-digesters, such as 20 m3, and make it not limited to cattle manure but also use it for tempeh waste? There are demo plots done by other stakeholders in some areas in Central Java that make use of tempeh waste.  Q5: Can the level of IDBP subsidy rate be increased? For instance, the subsidy for small size biodigester is IDR 2 million (around EUR 170), but can bigger sized biodigesters qualify for a higher subsidy rate?  Q6: There are 1,500 dairy farmers in Tandangsari, Sumedang, West Java. Only 40 of them have biogas. At the moment, the dairy cow market is not good. The fodder price is increasing, living cost is also			where biogas is implemented.
digester, and there is a possibility of building bigger biodigester systems in 2012 (between 20 m3 and 50 m3). Currently, IDBP still focuses on domestic biogas, which is for the household. IDB will consider it again, as it is also related with the interest of the programme and SNV as the technical partner. IDBP will keep tracking biogas technology developments.  Yes  A5: IDBP does not intend to change the subsidy rate because the digester size should match with the user's need for biogas. For instance, a user who has 4 to 5 family members and owns 10 could build but does not need a 8 m3 biodigester because the energy need for the whole family will be met with a 6 m3 digester. By providing a flat subsidy rate, IDBP encourages people to use the energy as efficient as possible.  No farmers in Tandangsari, Sumedang, West Java. Only 40 of them have biogas. At the moment, the dairy cow market is not good. The fodder price is increasing, living cost is also	electrification ratio is 76.63%.  Many hamlets still do not have access to electricity. The awareness meetings about biogas benefits are really needed. The level of awareness of the people is still low; therefore collaboration between the provincial and the central government as well as Hivos is	Yes	into electricity, but it requires high biogas input. It should also be remembered that the gas quality from biogas – in unprocessed conditions - contains a high level of sulphur and water particles
subsidy rate be increased? For instance, the subsidy for small size biodigester is IDR 2 million (around EUR 170), but can bigger sized biodigesters qualify for a higher subsidy rate?  Q6: There are 1,500 dairy farmers in Tandangsari, Sumedang, West Java. Only 40 of them have biogas. At the moment, the dairy cow market is not good. The fodder price is increasing, living cost is also	bio-digesters, such as 20 m3, and make it not limited to cattle manure but also use it for tempeh waste? There are demo plots done by other stakeholders in some areas in Central Java	Yes	bigger biodigester systems in 2012 (between 20 m3 and 50 m3). Currently, IDBP still focuses on domestic biogas, which is for the household. IDBP will consider it again, as it is also related with the interest of the programme and SNV as the technical partner. IDBP will keep tracking biogas
farmers in Tandangsari, Sumedang, West Java. Only 40 of them have biogas. At the moment, the dairy cow market is not good. The fodder price is increasing, living cost is also	subsidy rate be increased? For instance, the subsidy for small size biodigester is IDR 2 million (around EUR 170), but can bigger sized biodigesters qualify	Yes	rate because the digester size should match with the user's need for biogas. For instance, a user who has 4 to 5 family members and owns 10 cows could build but does not need a 8 m3 biodigester, because the energy need for the whole family will be met with a 6 m3 digester. By providing a flat subsidy rate, IDBP encourages people to use the
general is not good. How can we increase the dairy cow market like in Malaysia?	farmers in Tandangsari, Sumedang, West Java. Only 40 of them have biogas. At the moment, the dairy cow market is not good. The fodder price is increasing, living cost is also increasing and the economy in general is not good. How can we increase the dairy cow market	No	A6: Irrelevant to IDBP.



Q7: In 2005, the Indonesian government adopted a target to increase the use of new renewable energy up to 17%. In Buru Island, Maluku, cattle rearing is done extensively, and the cattle are kept in a communal stable. Can we extend the IDBP programme to Maluku? Furthermore, If we want to promote biogas, how can we explain to the farmers to make use of the manure (that can be used as biogas and bio-slurry)? Because often the farmers bring the manure to the field, mix it with hay and then burn it. Is it possible to build a centralised biogas plant there?	Yes	A7: Communal stable for cattle is a common practice. In the case of Buru Island, the energy access can be integrated with that agricultural system. It is in the best interest of IDBP to ensure that the users can get optimum benefits from biogas. Therefore, although it is known that communal systems often do not work very well due to social factors (technically it is feasible), the IDBP is considering building a number of communal plants, so manure of these communities can be used for biogas and eventually for fertiliser. As for centralised biogas, it depends on the distance between the stable and the houses. In principle, a biogas digester can be built up to 100 meters from the house(s). Maluku may be considered in the later stage of the programme if adequate funding is available.
Q8: Biogas is already present in South Sulawesi. The IDBP is very good there. In South Sulawesi, the electrification rate is 85%, therefore biogas is needed. There are 1 million cattle in South Sulawesi. The target is to increase the number up to 2 million. However, the achievement to build biogas is still difficult because there is no credit access. So it is suggested that:  1. The subsidy should be given from the government (from the provincial budget); 2. The number of trainings for biogas should be increased as well. The provincial government could finance this; Biogas appliances should only be obtained locally, from Indonesia.	Yes	A8: There are many other sources of energy that can increase the electrification level, such as micro hydro, solar, geothermal. Biogas is certainly only one of them. The provincial government is welcome to use their own budget to develop the biogas sector employing the concept of IDBP, with a focus on strengthening biogas service providers through training. Credit access is one of IDBP's biggest challenges. Local governments are welcome to play a role in enhancing access to credit.  As for locally made biogas appliances, it should be remembered that it is crucial to maintain the quality of the biodigesters. Until now, all but one of the appliances are already made locally. The local main gas valve does still not meet IDBP quality standards. IDBP keeps on looking for local manufacturers, including local workshops and technical schools. Until there is a good quality of locally-made appliances, IDBP will only use imported ones to maintain the quality.
Q9: What does the carbon trade look like? What will happen with the carbon credit?	Yes	A9: The carbon trade is aimed at obtaining revenues, which are subsequently pumped back into the programme. Hivos will have the responsibility to ensure that the programme's



		carbon credits are sold on the carbon market and will also have the responsibility to meet monitoring demands resulting from the carbon mechanism under the Gold Standard. Hivos has initiated the development of the mechanism as it sees IDBP as a long-term programme which will in the long run result in considerable carbon emission reductions, which will support the programme financially and make it self-reliant, reducing the need of external funding.
Q10: The central government is actively promoting the biogas programme, but there is a lack of coordination with the provincial government. Not to mention that there is still a programme that builds biogas by using grants (fully-subsidized biodigesters). The grant system is ruining the market. The central and provincial government must have one policy only. The collaboration must be intensified. What will the central government do post-2012 in this respect?	Yes	A10: It is true that there still exist communication problems between the provincial and central government. This is because the provincial government has the freedom to make their own plans. However, the central government always tries to coordinate in relation to biogas development with the provincial government. At the moment the central government intends to work on a regulation framework in the form of a Ministerial Decree so that the National Budget can be used for subsidy.
Q11: What can be done to ensure that there is no problem in operation and maintenance of a communal biodigester?	Yes	A11: The owners of IDBP biodigesters are thoroughly trained, ensuring that they understand how to handle their plant, but they will also get after sales services to ensure that the systems are kept operational. In the case of communal systems this will also be done and the communal aspects will be given special attention to make sure that the group manages their plant jointly in the right way.
Q12. Some farmers still dispose bio-slurry to the gutter and river thereby polluting the water and destroying the environment.  Does IDBP have any training to provide to biodigester users so that they know the advantages of the bio-slurry?	Yes	A13. As part of the IDBP programme, biogas users are entitled to receive knowledge on the advantages of bio-slurry. The programme intensively cooperate with its business partner, herein KBSS Setia Kawan, to ensure that all users should receive the training accordingly.



### iv. Revisit sustainability assessment (to be assessed per Methodology/technology/practice)

Are you going to revisit the sustainable development assessment?	Yes	No
Please note that this is necessary when there are indicators scored 'negative' or if there are stakeholder comments that can't be mitigated		Ø

Reasoning behind the decision: There is no need to revisit the sustainability assessment as no negative scores were assigned during the LSC meeting and the evaluation forms did not feature any negative comments.

### v. Summary of alterations based on comments

Hivos understands and fully agrees with all the comments received. IDBP already pro-actively pursues all of the mentioned areas of operations to which the comments relate. IDBP will continue its active work on all these fronts to further improve the reach, effectiveness and customer satisfaction of the programme. Alterations to the programme design based on the comments received are therefore not required.



# SECTION D. SUSTAINABLE DEVELOPMENT ASSESSMENT (to be done per Methodology/technology/practice)

D. 1. Own sustainable development assessment (to be done per Methodology/technology/practice)

## i. 'Do no harm' assessment

The DNH Assessment is done on the Programme level. This assessment pertains to the biodigester technology which is the only technology applied across all project activities.

Safeguarding principles	Description of relevance to my programme	Assessment of risk (low / medium / high)	Mitigation measure
	Human Rights		
1.	The programme encourages the construction and operation biodigesters fed by livestock manure at the households, local communities and SMEs. It therefore improves the quality of life of users through the provision of clean, renewable energy nationwide.  The installation of biodigesters relies on individual voluntarily investment in a biodigester at a discounted rate. The voluntary nature of this purchase ensures that the individual dignity, cultural property and uniqueness of indigenous peoples are respected.	Low	Not applicable
2.	The programme does not impose any need for involuntary resettlement.	Low	Not applicable
3.	Under the programme, biodigesters are installed directly adjacent to the user on a voluntary basis, and no damage or removal of any critical cultural heritage will take place.	Low	Not applicable
	Labour Standards		
4.	The programme generates employment for locally trained contractors and masons to carry out the dissemination, installation and maintenance of the biodigesters. The programme respects these employees' freedom of association and their right to collective bargaining.	Low	Not applicable
5.	All those employed by the programme are	Low	Not applicable



	adulta inha ana mahinta 9 in ing Sin Carl		
	adults, who are voluntarily engaging in the		
	support of the included project activities		
	through legal employment.		
6.	All those employed by the programme are		
	adults who are voluntarily engaging in the	1	Niet en elisable
	support of the project through legal	Low	Not applicable
	employment. No forms of child labour are		
	tolerated.		
7.	The programme is all-inclusive, installing		
	biodigesters at users with two or more		
	cattle. Additionally, the programme is co-		
	managed by Hivos, an organisation which		
	has an expertise and track record in		
	ensuring discriminatory behaviour is not		
	tolerated. As a result, all eligible users are		
	included in the programme, regardless of	Low	Not applicable
	gender, race, religion, sexual orientation or		
	any other basis. The programme helps to		
	increase gender equality through reducing		
	the time needed for biomass/fuel collection.		
	This is traditionally a woman's role, thereby		
	allowing them to spend more time on other		
	activities.		
8.	The programme involves the installation of		
	biodigesters ranging from 4m <sup>3</sup> to 50m <sup>3</sup> . It		
	employs trained contractors and masons,		
	who are supported by IDBP ensuring that		
	installation of the biodigesters is done in a	Low	Not applicable
	safe manner and minimises risk to		
	workers. The programme does not expose		
	workers to unsafe or unhealthy work		
	environments.		
	Environmental Protection		
9.	The programme takes a precautionary		
	approach with regard to environmental		
	challenges and is not complicit in practices		
	contrary to the precautionary principle. The		
	programme helps to reduce threats or		
	harm to human health through reducing		
	smoke inhalation at the users' premises,	Low	Not applicable
	diverting manure from entering water ways		
	and promoting the use of organic fertiliser		
	(digester slurry) over manufactured		
	fertilisers, thereby also reducing damage to		
	the local environment whilst increasing crop		



10.	The programme does not involve and is not complicit in the conversion or degradation of critical natural habitats. Furthermore, the use of biogas helps to reduce the use of firewood, thereby containing deforestation in the project areas.	Low	Not applicable
	Anti-corruption		
11.	All transactions, including subsidy disbursement, are recorded and carried out in a transparent and traceable manner. Accounting by an external third party occurs on an annual basis. All financial transactions are available to project beneficiaries and legal authorities. The programme thereby minimises the possibility of corruption occurring within its scope of operation.	Low	Not applicable
No additional cri	tical issues were identified.		

## ii. Sustainable development matrix

The SD Assessment is done on the Programme level. This assessment pertains to the biodigester technology which is the only technology applied across all project activities. Below is a presentation of the initial version of the Sustainable Development matrix drafted by Hivos before the LSC meeting took place.

Indicator	Mitigation	Relevance to	Chosen parameter and	Preliminary
	measure	achieving MDG	explanation	score
	•	Enviro	onment	
Air quality	None necessary	MDG 5: Improve maternal health  The programme reduces indoor air pollution through the implementation of the biodigester technology.	There can be a positive impact on the air quality through a reduction of indoor air pollution, thereby improving general health conditions at the users' premises. This is however difficult to assess directly and will therefore not be monitored as part of this programme.	0



Water quality and quantity	None necessary	MDG 7: Ensure environmental sustainability  The programme contributes to environmental sustainability by limiting the amount of manure dumping in local waterways, hereby preventing ground water contamination	There can be a positive impact on environmental sustainability through a reduction of manure dumping into local waterways, thereby reducing ground water contamination. This is however difficult to assess directly and will therefore not be monitored as part of this programme.	0
Soil condition	None necessary	MDG 7: Ensure environmental sustainability  The programme reduces the need for artificial fertilisers, which are more harmful to the environmental integrity than organic fertilisers.  MDG 1: Eradicate extreme poverty and hunger  Use of digester slurry generated under the programme on agricultural soils increases soil fertility and improves crop harvest. The additional yield can either be consumed or sold.	Baseline: Continuous harvesting of land causes deterioration of soil conditions. Only the better-off users can afford to purchase artificial fertiliser, which is becoming increasingly more expensive. This means harvest is not optimal.  Parameter: Application of final biodigester slurry on agricultural fields, collected through the annual Biogas User Survey.  Explanation: The application of sludge increases the organic content and fertility of soils, thereby increasing crop yields.	+
Other pollutants	None necessary	No other pollutants are identified	No other pollutants are identified	0



Biodiversity	None necessary	MDG 7: Ensure environmental sustainability  The programme contributes to the containment of deforestation and forest degradation due to substitution of non-renewable biomass with renewable energy.	There can be a positive impact on biodiversity through a reduction in deforestation due to a reduced dependence on firewood. This is however difficult to assess directly and will therefore not be monitored as part of this programme.	0
	<u> </u>	ronewasie energy.	Total Score:	+1
		Social De	velopment	
employment  Livelihood of	necessary	extreme poverty and hunger  The programme provides quality training in line with IDBP quality standards, thereby generating quality employment helping to reduce poverty.  MDG 1: Eradicate	employment opportunities.  Parameter: Proportion of employees attending vocational training programs, as proven through issuance of a certificate to all masons, collected by the IDBP database.  Explanation: Those attending the trainings will acquire technical skills and knowledge.  Baseline: Health issues related	+
the poor	necessary	extreme poverty and hunger  The programme helps to alleviate poverty through the creation of employment. Users will have a lower annual expenditure due to a reduced need to purchase nonrenewable biomass, fossil fuels and artificial fertilisers, therefore leaving more income available for other purposes (eg. healthcare). Reduced smoke inhalation also	to respiratory diseases are occurring. Additionally, users, and especially women, experience limited available time due to the need to invest time in firewood collection and cooking.  Parameter: Improvement of living conditions in terms of health benefits, collected through the annual Biogas User Survey.  Explanation: Improved perceived health conditions by the user are an indication of improved livelihood of the poor.	+



		improves		
		respiratory health.		
Access to affordable and clean energy services	None necessary	MDG 1; MDG 5; MDG 7:  The programme helps to reduce poverty through reducing fuel purchasing costs; better indoor air quality reduces maternal and child respiratory stress; reduction in use of non-renewable biomass as a fuel helps to reduce deforestation and forest degradation locally.	Baseline: Combustion of LPG, kerosene and firewood lead to particulate matter and carbon monoxide pollution and deforestation, and therefore do not provide clean energy services. Also, prices of all fuels are increasing, presenting a rising financial burden to users.  Parameter: Number of biogas units installed, in use and operating, collected by the IDBP database.  Explanation: The number of operational and in-use biogas units indicates that the programme has successfully promoted access to affordable and clean energy services, increased users' general wellbeing and contributed to the containment of deforestation and forest degradation.	+
Human and institutional capacity	None necessary	MDG 3: Promote gender equality and empower women  The programme supports gender equality by freeing up women's time that can be dedicated to other beneficial activities.	Baseline: Women spend much of their time collecting firewood and cooking, and have little spare time to undertake activities that stimulate personal and entrepreneurial development.  Parameter: Saving time in collecting firewood on the user level, collected through the annual Biogas User Survey.  Explanation: Saving time in collecting firewood on the user level promotes gender equality by freeing up valuable time for women, who are generally in charge of collecting firewood.	+
Total Score:				+4
	Economic and technological development			
Quantitative employment and income	None necessary	MDG 1: 1B: Achieve decent employment for	Baseline: Limited training and employment opportunities currently exist in the target	+



generation		women, men and young people  The programme creates employment opportunities and provides trainings, to date directly employing 53 persons while engaging another 475 certified masons in the construction process. As the programme grows through time, the quantitative employment rate will increase.	regions outside of farming.  Parameter: Number of jobs generated by within the IDBP as well as the number of masons employed, collected by the IDBP database.  Explanation: The number of jobs created under the programme indicates quantitative employment and income generation benefits.	
Balance of payments and investment	None necessary	MDG 8: Develop a global partnership for development  The programme facilitates foreign investment in Indonesia through the integration of ODA finance.	Baseline: Limited and geographically constrained foreign capital dedicated to the domestic biogas market.  Parameter: Quantity of foreign revenue invested in the programme in terms of ODA or other financial means.  Explanation: Indicates a change compared to the baseline in the investment into a technology (in this case biodigesters)	+
Technology transfer and technical self- reliance	None necessary	MDG 8: Develop a global partnership for development  The programme promotes knowledge sharing to realise domestic implementation of quality standard biodigesters. Training provided to masons builds on best case practices gathered from projects operational	Baseline: Limited training opportunities and transfer of technology in the biogas sector, both on the mason and user levels.  Parameter: Number of masons trained and users attending the operation and maintenance training, collected by the IDBP database.  Explanation: The programme builds vocational knowledge in the domestic biogas sector, which was previously absent. This increases technical self-	+



elsewhere in the world.	reliance.	
	Total Score:	+3
		+8

No further comments apply.

## D. 2. Stakeholders Blind sustainable development matrix

Indicator	Mitigation	Relevance to	Chosen parameter and	Preliminary
	measure	achieving MDG	explanation	score
Environment				
Air quality	None necessary	MDG 5: Improve maternal health  The programme reduces indoor air pollution through the implementation of the biodigester technology.	The participants of the LSC meeting agreed that the impact on air quality is likely to be positive. However, when asked about how the stakeholders could assist with the monitoring of this impact, or how this could be achieved in a cost-effective way, no consensus was reached.	+
Water quality and quantity	None necessary	MDG 7: Ensure environmental sustainability  The programme contributes to environmental sustainability by limiting the amount of manure dumping in local waterways, hereby preventing ground water contamination	The participants of the LSC meeting agreed that the impact on water quality is likely to be positive. However, when asked about how the stakeholders could assist with the monitoring of this impact, or how this could be achieved in a cost-effective way, no consensus was reached.	+
Soil condition	None necessary	MDG 7: Ensure environmental sustainability  The programme	Baseline: Continuous harvesting of land causes deterioration of soil conditions. Only the betteroff users can afford to purchase artificial fertiliser, which is	+



Other pollutants	None necessary	reduces the need for artificial fertilisers, which are more harmful to the environmental integrity than organic fertilisers.  MDG 1: Eradicate extreme poverty and hunger  Use of digester slurry generated under the programme on agricultural soils increases soil fertility and improves crop harvest. The additional yield can either be consumed or sold.  No other pollutants are identified  MDG 7: Ensure environmental sustainability  The programme contributes to the containment of deforestation and	becoming increasingly more expensive. This means harvest is not optimal.  Parameter: Application of final biodigester slurry on agricultural fields, collected through the annual Biogas User Survey.  Explanation: The application of sludge increases the organic content and fertility of soils, thereby increasing crop yields.  The participants of the LSC meeting agreed that the lack of other pollutants is a positive feature of the programme. However, when asked about how the stakeholders could assist with the monitoring of this impact, or how this could be achieved in a cost-effective way, no consensus was reached.  The participants of the LSC meeting agreed that the impact on biodiversity is likely to be positive. However, when asked about how the stakeholders could assist with the monitoring of this impact, or how this could be achieved in a cost-effective	+
			of this impact, or how this could	+
			Total Score:	+5
Social Development				



Quality of employment	None necessary	MDG 1: Eradicate extreme poverty and hunger  The programme provides quality training in line with IDBP quality standards, thereby generating quality employment helping to reduce poverty.	Baseline: Limited training and employment opportunities.  Parameter: Proportion of employees attending vocational training programs, as proven through issuance of a certificate to all masons, collected by the IDBP database.  Explanation: Those attending the trainings will acquire technical skills and knowledge.	+
Livelihood of the poor	None necessary	MDG 1: Eradicate extreme poverty and hunger  The programme helps to alleviate poverty through the creation of employment. Users typically have a lower annual expenditure due to a reduced need to purchase non- renewable biomass, fossil fuels and artificial fertilisers, therefore leaving more income available for other purposes (eg. healthcare). Reduced smoke inhalation also improves respiratory health.	Baseline: Health issues related to respiratory diseases are occurring. Additionally, users, and especially women, experience limited available time due to the need to invest time in firewood collection and cooking.  Parameter: Improvement of living conditions in terms of health benefits, collected through the annual Biogas User Survey.  Explanation: Improved perceived health conditions by the users are an indication of improved livelihood of the poor.	+
Access to affordable and clean energy services	None necessary	MDG 1; MDG 5; MDG 7:  The programme helps to reduce poverty through reducing fuel purchasing costs; better indoor air quality reduces maternal and child respiratory stress; reduction in use of non-renewable	Baseline: Combustion of LPG, kerosene and firewood lead to particulate matter and carbon monoxide pollution and deforestation, and therefore do not provide clean energy services. Also, prices of all fuels are increasing, presenting a rising financial burden to users.  Parameter: Number of biogas units installed, in use and operating, collected by the IDBP database.	+



		biomass as a fuel helps to reduce deforestation and forest degradation locally.	Explanation: The number of operational and in-use biogas units indicates that the programme has successfully promoted access to affordable and clean energy services, increased users' general wellbeing and contributed to the containment of deforestation and forest degradation.	
Human and institutional capacity	None necessary	MDG 3: Promote gender equality and empower women  The programme supports gender equality by freeing up women's time that can be dedicated to other beneficial activities.	Baseline: Women spend much of their time collecting firewood and cooking, and have little spare time to undertake activities that stimulate personal and entrepreneurial development.  Parameter: Saving time in collecting firewood on the user level, collected through the annual Biogas User Survey.  Explanation: Saving time in collecting firewood on the user level promotes gender equality by freeing up valuable time for women, who are generally in charge of collecting firewood.	+
	1		Total Score:	+4
		Economic and techno	ological development	
Quantitative employment and income generation	None necessary	MDG 1: 1B: Achieve decent employment for women, men and young people  The programme creates employment opportunities and provides trainings, to date directly employing 53 persons while engaging another 475 certified masons in the construction process. As the	Baseline: Limited training and employment opportunities currently exist in the target regions outside of farming.  Parameter: Number of jobs generated by within the IDBP as well as the number of masons employed, collected by the IDBP database.  Explanation: The number of jobs created under the programme indicates quantitative employment and income generation benefits.	+



Balance of payments and investment  Technology transfer and technical self-reliance	None necessary	programme grows through time, the quantitative employment rate will increase.  MDG 8: Develop a global partnership for development  The programme facilitates foreign investment in Indonesia through the integration of ODA finance.  MDG 8: Develop a global partnership for development  The programme promotes knowledge sharing to realise domestic implementation of quality standard biodigesters.  Training provided to masons builds on best case practices gathered from projects	As indicated by the participants of the LSC meeting, it is difficult to prove the positive impact of the programme on the balance of payments and investments. The impact is therefore assumed to be neutral.  Baseline: Limited training opportunities and transfer of technology in the biogas sector, both on the mason and user levels.  Parameter: Number of masons trained and users attending the operation and maintenance training, collected by the IDBP database.  Explanation: The programme builds vocational knowledge in the domestic biogas sector, which was previously absent.	O +
		operational elsewhere in the world.	This increases technical self-reliance.  Total Score:	+2
				+11

The facilitator was in charge of leading the participants of the LSC meeting through the 'blind exercise'. Prior the initiating the discussion, the rules of the exercise were explained, noting that after the introductory talk of the facilitator explaining each of the indicators, the group of participants had 10 minutes to reach consensus whether the impact of the programme was negative, neutral or positive.

The actual exercise went quicker than planned as on all but one point there was unanimous decision by the stakeholders that the impacts of the programme are positive. Only for indicator 11 (balance of payments and investment) a decision was reached that a neutral impact is most suitable. No negative impacts of the programme were identified, therefore omitting the need for a revisit of the Sustainable Development matrix.



Give analysis of difference between own sustainable development matrix and the one resulting from the blind exercise with stakeholders. Explain how both were consolidated.

Neither the own Sustainable Development matrix nor the matrix agreed upon by the participants of the LSC meeting featured any negative score. There were a number of differences concerning the assessment of whether several indicators have a positive or rather neutral impact. These included the following indicators:

Indicator	Own SD assessment	LSC SD assessment
Air quality	Neutral	Positive
Water quality and quantity	Neutral	Positive
Other pollutants	Neutral	Positive
Biodiversity	Neutral	Positive
Balance of payments and investment	Positive	Neutral

The participants of the LSC meeting agreed that the impact on air and water quality, other pollutants and biodiversity is likely to be positive. However, when asked about how the stakeholders could assist with the monitoring of these impacts, or how this could be achieved in a cost-effective way, no consensus was reached. Therefore, to be conservative, the Consolidated Sustainable Development matrix features a neutral score for all five indicators.

This consolidated matrix, alongside the argumentation provided in this section, will be shared with the stakeholders during the Feedback Round. Stakeholder will therefore receive insight into the final proposed matrix and will be given the opportunity to comment on its makeup.

#### D. 3. Consolidated sustainable development matrix

Indicator	Mitigation	Relevance to	Chosen parameter and	Preliminary
	measure	achieving MDG	explanation	score
		Enviro	onment	
Air quality	None necessary	MDG 5: Improve maternal health  The programme reduces indoor air pollution through the implementation of the biodigester technology.	As indicated by the participants of the LSC meeting, there can be a positive impact on the air quality through a reduction of indoor air pollution, thereby improving general health conditions at the users' premises. This is however difficult to assess directly and will therefore not be monitored as part of this programme.	0
Water quality	None	MDG 7: Ensure	As indicated by the participants	0



and quantity	necessary	environmental sustainability  The programme contributes to environmental sustainability by limiting the amount of manure dumping in local waterways, hereby preventing ground water contamination	of the LSC meeting, there can be a positive impact on environmental sustainability through a reduction of manure dumping into local waterways, thereby reducing ground water contamination. This is however difficult to assess directly and will therefore not be monitored as part of this programme.	
Soil condition	None necessary	MDG 7: Ensure environmental sustainability  The programme reduces the need for artificial fertilisers, which are more harmful to the environmental integrity than organic fertilisers.  MDG 1: Eradicate extreme poverty and hunger  Use of digester slurry generated under the programme on agricultural soils increases soil fertility and improves crop harvest. The additional yield can either be consumed or sold.	Baseline: Continuous harvesting of land causes deterioration of soil conditions. Only the better-off users can afford to purchase artificial fertiliser, which is becoming increasingly more expensive. This means harvest is not optimal.  Parameter: Application of final biodigester slurry on agricultural fields, collected through the annual Biogas User Survey.  Explanation: The application of sludge increases the organic content and fertility of soils, thereby increasing crop yields.	+
Other pollutants	None necessary	No other pollutants are identified	No other pollutants are identified	0
Biodiversity	None necessary	MDG 7: Ensure environmental sustainability  The programme contributes to the containment of	As indicated by the participants of the LSC meeting, there can be a positive impact on biodiversity through a reduction in deforestation due to a reduced dependence on firewood. This is however difficult to assess	0



		deforestation and forest degradation due to substitution of non-renewable biomass with renewable energy.	directly and will therefore not be monitored as part of this programme.	
			Total Score:	+1
		Social De		
Quality of employment	None necessary	MDG 1: Eradicate extreme poverty and hunger  The programme provides quality training in line with IDBP quality standards, thereby generating quality employment helping to reduce poverty.	Baseline: Limited training and employment opportunities.  Parameter: Proportion of employees attending vocational training programs, as proven through issuance of a certificate to all masons, collected by the IDBP database.  Explanation: Those attending the trainings will acquire technical skills and knowledge.	+
Livelihood of the poor	None necessary	MDG 1: Eradicate extreme poverty and hunger  The programme helps to alleviate poverty through the creation of employment. Users will have a lower annual expenditure due to a reduced need to purchase non- renewable biomass, fossil fuels and artificial fertilisers, therefore leaving more income available for other purposes (eg. healthcare). Reduced smoke inhalation also improves respiratory health.	Baseline: Health issues related to respiratory diseases are occurring. Additionally, users, and especially women, experience limited available time due to the need to invest time in firewood collection and cooking.  Parameter: Improvement of living conditions in terms of health benefits, collected through the annual Biogas User Survey.  Explanation: Improved perceived health conditions by the users are an indication of improved livelihood of the poor.	+
Access to affordable and clean energy	None necessary	MDG 1; MDG 5; MDG 7: The programme	Baseline: Combustion of LPG, kerosene and firewood lead to particulate matter and carbon monoxide pollution and	+



Human and institutional capacity	None	helps to reduce poverty through reducing fuel purchasing costs; better indoor air quality reduces maternal and child respiratory stress; reduction in use of non-renewable biomass as a fuel helps to reduce deforestation and forest degradation locally.  MDG 3: Promote gender equality and empower women  The programme supports gender equality by freeing up women's time that can be dedicated to other beneficial activities.	deforestation, and therefore do not provide clean energy services. Also, prices of all fuels are increasing, presenting a rising financial burden to users.  Parameter: Number of biogas units installed, in use and operating, collected by the IDBP database.  Explanation: The number of operational and in-use biogas units indicates that the programme has successfully promoted access to affordable and clean energy services, increased users' general wellbeing and contributed to the containment of deforestation and forest degradation.  Baseline: Women spend much of their time collecting firewood and cooking, and have little spare time to undertake activities that stimulate personal and entrepreneurial development.  Parameter: Saving time in collecting firewood on the user level, collected through the annual Biogas User Survey.  Explanation: Saving time in collecting firewood on the user level promotes gender equality by freeing up valuable time for women, who are generally in charge of collecting firewood.	+
			Total Score:	+4
		Economic and techno	ological development	
Quantitative employment and income generation	None necessary	MDG 1: 1B: Achieve decent employment for women, men and young people The programme creates employment	Baseline: Limited training and employment opportunities currently exist in the target regions outside of farming.  Parameter: Number of jobs generated by within the IDBP as well as the number of masons employed, collected by the IDBP	+



		opportunities and provides trainings, to date directly employing 53 persons while engaging another 475 certified masons in the construction process. As the programme grows through time, the quantitative employment rate will increase.	Explanation: The number of jobs created under the programme indicates quantitative employment and income generation benefits.	
Balance of payments and investment	None necessary	MDG 8: Develop a global partnership for development  The programme facilitates foreign investment in Indonesia through the integration of ODA finance.	As indicated by the participants of the LSC meeting, it is difficult to prove the positive impact of the programme on the balance of payments and investments. The impact is therefore assumed to be neutral.	0
Technology transfer and technical self- reliance	None necessary	MDG 8: Develop a global partnership for development  The programme promotes knowledge sharing to realise domestic implementation of quality standard biodigesters. Training provided to masons builds on best case practices gathered from projects operational elsewhere in the world.	Baseline: Limited training opportunities and transfer of technology in the biogas sector, both on the mason and user levels.  Parameter: Number of masons trained and users attending the operation and maintenance training, collected by the IDBP database.  Explanation: The programme builds vocational knowledge in the domestic biogas sector, which was previously absent. This increases technical self-reliance.	+
			Total Score:	+2
				+7
Justification of	choices, data	source and provision	on of references	
Air quality  In the baseline scenario the use of biomass and fossil fuels for us cooking leads to considerable contamination of the independent of the contamination of the conta				



	environment with particulate matter and carbon monoxide (CO), causing respiratory health problems. This is confirmed by numerous sources <sup>1</sup> . Resulting respiratory health problems are a serious issue on across the globe. Recent statistics indicate that in 2004, indoor air pollution resulting from the combustion of solid and fossil fuels was responsible for an estimated 2 million deaths worldwide <sup>2</sup> . As it is difficult for IDBP to prove the exact positive impact the programme has on air quality, it is assumed to be neutral.
Water quality and quantity	Diverting livestock waste to the biodigesters implemented under each
	VPA can have a positive effect on the quality of water ways due to a
	reduced prevalence of manure disposal in water ways. However,
	since this has not been established as a dominant form of disposal
	the effect is considered minor. Additionally, reduced indoor combustion of fossil fuels and biomass will result in a cleaner
	premise, and therefore less use of water for cleaning at user level.
	But since the biodigesters require the addition of water the impact on
	the quantity of water used is also considered to be neutral.
Soil condition	The biodigesters implemented under each VPA will produce slurry as
	part of the anaerobic digestion of waste. This slurry has a higher
	fertility than direct application of manure to the field <sup>3</sup> and is provided
	free of charge to users as a bi-product of biogas production. In many
	cases across Indonesia the purchase of chemical fertilisers is not
	financially feasible for users, and soils can become degraded due to
	continued harvests <sup>4</sup> . The application of slurry to agricultural soils can
	therefore help to improve soil condition through increasing organic content. As it is difficult for IDBP to prove the exact positive impact the
	programme has on soil conditions, it is assumed to be neutral.
Other pollutants	No other pollutants are identified. This indicator is therefore assumed
'	to be neutral.
Biodiversity	Current local rates of forest destruction exceed the maximum
	replacement rate, leading to deforestation and forest degradation. A
	recent study provides detailed insight into the rates of deforestation in
	Indonesia between 1990 and 2005 <sup>5</sup> . During that period, 21.32 million
	ha of forest had been cleared, which represents 17.6% of total
	national coverage. This is a strong indication that removal of forests in
	an unsustainably manner is occurring rapidly, and open forest and

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<sup>&</sup>lt;sup>1</sup> GTZ. Biogas Digest – Volume III. Available at: http://www.gtz.de/de/dokumente/en-biogas-volume3.pdf

<sup>&</sup>lt;sup>2</sup> WHO (2010) Health in the green economy: Co-benefits to health of climate change mitigation. Available at: http://www.who.int/hia/hgebrief henergy.pdf

<sup>&</sup>lt;sup>3</sup> See for example: Kurchania, A.K. and Panwar, N.L. (2011) Experimental investigation of an applicator of liquid slurry, from biogas production, for crop production, Environmental Technology, 32 (8), p. 873 – 878.

<sup>&</sup>lt;sup>4</sup> Stott, D.E., Mohtar R.H, and Steinhardt, G.C (2001) Sustaining the Global Farm: Rainfall-runoff harvesting for controlling erosion and sustaining upland agriculture development. p. 431-439.

<sup>&</sup>lt;sup>5</sup> Hansen, M.C. *et al.* (2009) Quantifying changes in the rates of forest clearing in Indonesia from 1990 to 2005 using remotely sensed data sets. Environmental Research Letters



	scrub coverage are decreasing with high rate of depletion. A report published by the Food and Agriculture Organization of the United Nations (FAO) attributes part of the deforestation to firewood collection by households <sup>6</sup> . As it is difficult for IDBP to prove the exact positive impact the programme has on biodiversity, it is assumed to be neutral.
Quality of employment	Each VPA aims to install 1,000s of biodigesters and will require constructing and monitoring effort by local staff. Each VPA shall create quality, permanent job opportunities. All staff will be supported by vocational training sessions supported by the programme. On completion of these trainings, all attendees will receive a certificate proving their attendance and skills gained.
Livelihood of the poor	Each VPA shall improve the livelihood of the poor through reducing user energy costs in the long term and freeing up time for other income generating activities through a reduced need to spend time collecting firewood. Users on average spend IDR 120,000 (EUR 100) on cooking fuels per year or an average of 20 hours collecting firewood per week <sup>7</sup> . This is particularly relevant for women, whose role it is traditionally to collect firewood <sup>8</sup> . Additionally, since women tend to constitute the larger percentage of those living in poverty <sup>9</sup> , each project activity shall also help to promote gender equality through the active employment of women. This will also benefit the programme as a whole since women, as the primary users of cooking fuels, will be more effective at marketing the biogas installations, and associated cook stoves, to other women.
	Each VPA shall also benefit the quality of life of the poor, particularly women and children, through improved health (less smoke inhalation), less time spent on cleaning soot from the user, collecting fuel and cooking. This will free up time for other activities.
Access to affordable and clean energy services	Each VPA shall improve user's access to safe and affordable energy. Biogas fuel shall be available at the simple turn of a knob, requiring no laborious collection of fuel and no additional costs beyond initial setup other than for maintenance. As long as the manure digester is used and maintained properly, a secure supply of biogas will be provided in each project activity.
Human and institutional capacity	Each VPA shall offer vocational training to engaged staff on the marketing, installation and maintenance of the biodigesters. Women will be especially encouraged to take up roles in marketing, where

 $<sup>^{\</sup>rm 6}$  FAO (1997) Regional Study on Wood Energy Today and Tomorrow in Asia: Regional Wood Energy Development Programme in Asia.

<sup>&</sup>lt;sup>7</sup> IDBP Baseline Survey (2010, 2012).

<sup>&</sup>lt;sup>8</sup> WHO (2006) Fuel for Life: Household Energy and Health: Section 2, p.19. Available at: http://www.who.int/indoorair/publications/fflsection2.pdf

<sup>&</sup>lt;sup>9</sup> UN Women. Women, Poverty and Economics. Available at: http://www.unifem.org/gender\_issues/women\_poverty\_economics/



	their experiential expertise will be particularly beneficial to the success of the programme as a whole. Women, as the primary users of the technology, will be more effective at marketing the product to other women. Less time spent on firewood collection, user cleaning and cooking will also allow more time to be available for other activities, such as greater school attendance due to the reduced domestic responsibility of children.
Quantitative employment	The overall development objective of the programme is to promote
and income generation	and disseminate domestic biodigesters as a local, sustainable energy source through the development of a commercial sector that focuses its implementation through a multi-stakeholder sectoral development approach.
	The construction and maintenance of biodigesters in each VPA shall
	result in the creation of employment opportunities nationwide. By stimulating this new business sector, each VPA will therefore also create opportunities for entrepreneurs to enter the market.
Balance of payments and	Each VPA will contribute to the establishment of a long-term market
investment	for biogas in Indonesia, thereby helping to encourage further foreign
	investment in the clean energy sector. However, as it is difficult for
	IDBP to prove the exact positive impact the programme has on
	biodiversity, it is assumed to be neutral.
Technology transfer and	Currently, the application of biogas for cooking purposes is a relatively
technological self-reliance	unknown practice in Indonesia. Aside from a number of pilot programmes implemented in the 1990s and 2000s, biodigester use has hardly penetrated the country due to habitual, financial and technological barriers. Through the programme, each VPA shall stimulate nationwide adoption of biogas technology through (i) capacity development targeting users, construction service providers (CPOs) and equipment suppliers, (ii) the provision of an investment subsidy to the users on the purchase of the biogas technology, and (iii) the offer of credit facilities through a number of affiliated (micro) finance institutions. This programme will contribute to national development goals of reducing poverty in an environmentally sustainable way.
	Each VPA will hire and train local contractors and masons, thereby transferring technological capacity to local companies allowing them to further offer services in future. The biodigesters will be constructed using locally available materials. As part of the programme, each VPA will openly engage local communities in their activities, including offering training on installation and maintenance of biodigesters.



## SECTION E. DISCUSSION ON SUSTAINABILITY MONITORING PLAN (to be done per Methodology/technology/practice)

### E. 1. Discussion on Sustainability Monitoring Plan

Discuss stakeholders' ideas on monitoring sustainable development indicators. Do people have ideas on how this could be done in a cost effective way? Are there ways in which stakeholders can participate in monitoring?

In terms of monitoring, the participants suggested that IDBP provides an online and offline communication tool to obtain inputs from stakeholders. This could also serve to disseminate information regarding the emission reduction activities implemented under the programme. Success stories should also be published. These success stories should be presented to the local and central governments so that biogas can be effectively promoted. On its website, IDBP is also suggested to publish results of meetings and other relevant updates.

In brief, these are the inputs from the attendants:

- 1) To provide a pool of information through inputs from participants, bulleting and e-mail.
- 2) Provide on-line as well as off-line forums for biogas discussion, and encourage it to the community since access to information is still low.
- 3) Spread the research results in order to gain stronger understanding and ownership
- 4) There are many success stories therefore these stories should be formulated and brought forward to the central and local government so that biogas can be encouraged and recommended in a structural manner.
- 5) Hivos owns a strong database of baseline data. The baseline should be published on the website and distributed to stakeholders for their knowledge.
- 6) Conduct a periodic evaluation in order to indicate the strength and weakness and accelerate the development.
- 7) Publish success stories generated under the IDBP.

#### E. 2. Continuous input mechanism

Method Chosen	Contact	Justification
Continuous Input Process Book	The book will be stationed at the provincial offices (PBPO)	While users are likely to have mobile phones, it is important to provide access to a physical log book. The provincial offices of the IDBP offer a convenient location for these log books, allowing users in the area easy access.
Telephone Access	+62 (0) 812 8030 2020 +62(0) 21 789 24 89	The provided number is a mobile phone number to enable users to either call or text their comments to IDBP. Mobile phone use is the primary means of communication nationwide,



		especially since landlines are expensive.
Internet/email access	www.biru.or.id email: info@biro.or.id	For users with access to the internet, direct contact with the IDBP through the programme's website is important.
Nominated Independent Mediator (optional)	Not applicable	



SECTION F.	DESCRPTION OF THE DESIGN OF THE STAKEHOLDER
	FEEDBACK ROUND

[See Toolkit 2.11]		



## ANNEX 1. ORIGINAL PARTICIPANTS LIST

Page 1 of the participants list:



## ANNEX 2. ORIGINAL EVALUATION FORMS

**Evaluation forms 1 and 2:** 

## Main sponsors







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