

GOLD STANDARD POA PASSPORT

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SECTION A. Programme Title

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

SECTION B. Programme description

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 2009 and 2020. The technical specification of the biodigester used in this PoA shall comply with the related technical requirement under IDBP. 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 (CO₂) emissions from the use of fossil fuels or non-renewable biomass for cooking purposes, and mitigates methane (CH₄) 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.

SECTION C. Proof of programme eligibility

C.1. Location of the Programme of Activities (Physical/Geographical boundary)

The Republic of Indonesia, nationwide.

C.2. Programme Type

Please tick where applicable:

Programme type	Yes	No
Do the activities within the programme, classify as a Renewable Energy project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Do the activities within the programme classify as an End-use Energy Efficiency Improvement project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please justify the eligibility of your 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 voluntary project activities (VPAs) and shall therefore adhere to small-scale programme rules listed in Annex F of the Gold Standard Toolkit.
- *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 (CH₄) and carbon dioxide (CO₂), 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.

Pre-Announcement	Yes	No
Was your programme previously announced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Explain your statement on pre-announcement:</p> <p>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. The programme was announced to go ahead in May 2009, following the provision of funding to kick-start implementation. The effort to include carbon finance into the IDBP commenced in parallel to early programme implementation.</p>		

C.3. Greenhouse gas

Greenhouse Gas	
Carbon dioxide	<input checked="" type="checkbox"/>
Methane	<input checked="" type="checkbox"/>
Nitrous oxide	<input type="checkbox"/>

SECTION D. Stakeholder Consultation and Sustainability Assessment at PoA/VPA level

	PoA	VPA
At what level is the LSC done?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
At what level is the SD assessment done?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
At what level is the DNH assessment done?	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Provide justification if the LSC/SD/DNH assessment is done only at PoA level.

There are four reasons why the stakeholder consultation and sustainability assessments are performed at the PoA level instead of the project activity level:

- *Identical geographical boundary:* Each VPA under the programme may include biodigesters which are implemented anywhere within the national boundaries of the Republic of Indonesia.
- *Identical technology:* All of the project activities implemented under the programme will implement a biodigester system. The particular size of the biodigester system will be determined on the user level and is contingent upon the user size and number of animals kept. This is independent from VPAs, which are implemented nationwide and need to adhere to the small-scale thresholds set forth by the CDM.
- *Similar time frame:* VPAs will be included consecutively given the programme anticipated implementation schedule.
- *Similar socio-economic situation:* The programme targets users that breed cattle or other farm animals and act as individual farmers form part of a cooperative (local community), or run SMEs. The users are in a similar socio-economic situation and can be classified as belonging to the low income class, typically residing in rural areas.

Provide set of Sustainable Development Criteria for inclusion of VPA if SD assessment is done only at PoA level

Sustainable Development Criteria	Explanation
<i>Environment</i>	
<i>Air quality</i>	In the baseline scenario the use of biomass and fossil fuels for user cooking leads to considerable contamination of the indoor environment with particulate matter and carbon monoxide (CO), causing respiratory health problems. This is confirmed by numerous sources ¹ . 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

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

	<p>and fossil fuels was responsible for an estimated 2 million deaths worldwide². As it is difficult for IDBP to prove the exact positive impact the programme has on air quality, VPAs are not required to indicate positive impact on air quality.</p> <p>This indicator therefore does not form part of the Sustainable Development Criteria for inclusion of VPAs.</p>
<i>Water quality and quantity</i>	<p>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.</p> <p>This indicator therefore does not form part of the Sustainable Development Criteria for inclusion of VPAs.</p>
<i>Soil condition</i>	<p>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 field³ 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 harvests⁴. The application of slurry to agricultural soils can therefore help to improve soil condition through increasing organic content.</p>
<i>Other pollutants</i>	<p>No other pollutants are identified. This indicator therefore does not form part of the Sustainable Development Criteria for inclusion of VPAs.</p>
<i>Biodiversity</i>	<p>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 2005⁵. 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 scrub coverage are decreasing with high rate of depletion. A report published by the</p>

² 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

³ 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.

⁴ 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.

⁵ 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

	<p>Food and Agriculture Organization of the United Nations (FAO) attributes part of the deforestation to firewood collection by rural households⁶. As it is difficult for IDBP to prove the exact positive impact the programme has on biodiversity, VPAs are not required to indicate positive impact on biodiversity.</p> <p>This indicator therefore does not form part of the Sustainable Development Criteria for inclusion of VPAs.</p>
<i>Social Development</i>	
<i>Quality of employment</i>	<p>Each VPA aims to install several thousands of biodigesters and will require constructing and monitoring effort by local staff. Each VPA shall create quality 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. Furthermore, as part of the trainings, all staff will undergo a Health and Safety training.</p>
<i>Livelihood of the poor</i>	<p>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 930,000 (EUR 80) on cooking fuels per year or an average of 20 hours collecting firewood per week⁷. This is particularly relevant for women, whose role it is traditionally to collect firewood⁸. Additionally, since women tend to constitute the larger percentage of those living in poverty⁹, 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.</p> <p>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.</p>
<i>Access to affordable and clean energy services</i>	<p>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.</p>

⁶ FAO (1997) Regional Study on Wood Energy Today and Tomorrow in Asia: Regional Wood Energy Development Programme in Asia.

⁷ IDBP Baseline Survey (2012).

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

⁹ UN Women. Women, Poverty and Economics. Available at: http://www.unifem.org/gender_issues/women_poverty_economics/

<i>Human and institutional capacity</i>	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 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.
<i>Economic and technological development</i>	
<i>Quantitative employment and income generation</i>	<p>The overall development objective of the programme is to promote 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 aim of this approach is to involve a wide range of stakeholders connected to the programme in order to ensure local capacity is built and a self-sustaining biogas sector emerges.</p> <p>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.</p>
<i>Balance of payments and investment</i>	<p>Each VPA will contribute to the establishment of a long-term market 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.</p> <p>This indicator therefore does not form part of the Sustainable Development Criteria for inclusion of VPAs.</p>
<i>Technology transfer and technological self-reliance</i>	<p>Currently, the application of biogas for cooking purposes is a relatively 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.</p> <p>Each VPA will hire and train local contractors and constructors, 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</p>

	their activities, including offering training on installation and maintenance of biodigesters. Each VPA will also involve entities outside of the programme in general and technical training about the functioning of the biodigester technology to promote knowledge dissemination and strengthen the domestic biogas market.
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SECTION E. Outcome of the stakeholder consultation process at PoA level

E.1. Assessment of stakeholder comments

Most of the comments IDBP received from the participants were positive. The questions raised by the participants were mostly related to possibilities of biogas implementation; whether the areas can be expanded, to build bigger size digester or to use biogas to power generator. Some participants also asked about the subsidy rate and mechanism that are being implemented by IDBP, while others sought clarification about the possibility of partially financing biogas programme by making use of the provincial government fund. One participant also asked about the operation and maintenance system in the case of a community-operated bio-digester. The responses given to those questions were straight to the point as IDBP already has clear policies on how to deal with the above issues.

Below lists the assessment of all comments received, as presented in the LSC report:

Stakeholder comment	Yes/ No?	Explanation (Why? How?)
Q1: <i>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?</i>	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: <i>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.</i>	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

		<p>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 where biogas is implemented.</p>
<p>Q3: <i>In Central Java, the 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 necessary.</i></p>	Yes	<p>A3: Technically, it is possible to convert biogas 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 thus making it corrosive to the appliances.</p>
<p>Q4: <i>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.</i></p>	Yes	<p>A4: IDBP has been thinking about bigger biogas 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. 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 technology developments.</p>
<p>Q5: <i>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?</i></p>	Yes	<p>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 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 energy as efficient as possible.</p>
<p>Q6: <i>There are 1,500 dairy farmers in Tandangsari, Sumedang, West Java. Only 40 of them have biogas. At the</i></p>	No	<p>A6: Irrelevant to IDBP.</p>

<p><i>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 like in Malaysia?</i></p>		
<p>Q7: <i>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?</i></p> <p><i>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?</i></p>	<p>Yes</p>	<p>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.</p>
<p>Q8: <i>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:</i></p> <ol style="list-style-type: none"> <i>1. The subsidy should be given from the government (from the provincial budget);</i> <i>2. The number of trainings for biogas should be increased as well. The provincial government could finance this;</i> 	<p>Yes</p>	<p>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.</p> <p>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</p>

<i>Biogas appliances should only be obtained locally, from Indonesia.</i>		technical schools. Until there is a good quality of locally-made appliances, IDBP will only use imported ones to maintain the quality.
Q9: <i>What does the carbon trade look like? What will happen with the carbon credit?</i>	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: <i>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?</i>	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: <i>What can be done to ensure that there is no problem in operation and maintenance of a communal biodigester?</i>	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: <i>Some farmers still dispose bio-slurry to the gutter and river thereby polluting the water and destroying the environment.</i>	Yes	A13: As part of the IDBP programme, biogas users are entitled to receive knowledge on the advantages of bio-slurry. The programme

Does IDBP have any training to provide to biodigester users so that they know the advantages of the bio-slurry?

intensively cooperate with its business partner, herein KBSS Setia Kawan, to ensure that all users should receive the training accordingly.

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.

E.2. Stakeholder Feedback Round (in case LSC is done at PoA level)

Please describe report how the feedback round was organised, what the outcomes were and how you followed up on the feedback.

The Stakeholder Feedback Round was arranged by Hivos in order to show stakeholders how their comments from the first consultation were taken into account, as well as to offer the stakeholders a second chance to make additional comments. All individuals present during the Local Stakeholder Consultation were contacted again on 5 April 2012 with an updated version of the PoA-DD, VPA1-DD, the Local Stakeholder Consultation Report and the Gold Standard Passport. These documents incorporated all the comments made by the stakeholders during the Local Stakeholder Consultation. The stakeholders were invited to review the documents and raise any further concerns regarding the programme design. The stakeholders were given two months to respond, and received a reminder one week prior to the submission deadline to encourage a high response rate.

Due to the overall positive feedback from the Local Stakeholder Consultation, the response rate of the Feedback Round was small. Out of the 68 contacted stakeholders, three responded. One inquiry concerned the clarification as to which entity would be in charge of managing the carbon funds generated under the PoA. The other two responses were confirmations that the programme's social and environmental benefits are clear and that the stakeholders are in full support of the PoA. As none of the comments raised concerns, no alteration to the programme design is required.

E. 3. Continuous input mechanism

Method Chosen	Contact	Justification
<i>Continuous Input Process Book</i>	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.
<i>Telephone Access</i>	+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.
<i>Internet/email access</i>	karbon@rumahenergi.org	Increasingly more Indonesians have access to the internet and prefer electronic communication to traditional means. For these stakeholders, contact by email is made possible.

SECTION F. Outcome Sustainability Assessment¹⁰

F.1. '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
<i>Human Rights</i>			
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

¹⁰ In case, DNH/SD assessment is done at the Programme level, DNH/SD assessment per technology/practice included in the Programme shall be provided.

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
<i>Labour Standards</i>			
4.	The programme generates employment for locally trained contractors and constructors 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 adults, who are voluntarily engaging in the support of the included project activities through legal employment.	Low	Not applicable
6.	All those employed by the programme are adults who are voluntarily engaging in the support of the project through legal employment. No forms of child labour are tolerated.	Low	Not applicable
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 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.	Low	Not applicable
8.	The programme involves the installation of biodigesters ranging from 4m ³ to 100m ³ . It employs trained contractors and constructors, who are supported by IDBP ensuring that installation of the biodigesters is done in a safe manner and minimises risk to workers. The programme does not expose workers to unsafe or unhealthy work environments.	Low	Not applicable
<i>Environmental Protection</i>			
9.	The programme takes a precautionary approach with regard to environmental challenges and is not complicit in practices	Low	Not applicable

	contrary to the precautionary principle. The programme helps to reduce threats or harm to human health through reducing smoke inhalation at the users' premises, diverting manure from entering water ways and promoting the use of organic fertiliser (digerster slurry) over manufactured fertilisers, thereby also reducing damage to the local environment whilst increasing crop productivity.		
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
<i>Anti-corruption</i>			
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 critical issues were identified.			

F.2. Sustainable Development matrix

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

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
<i>Environment</i>				

Air quality	None necessary	<p><i>MDG 5: Improve maternal health</i></p> <p>The programme reduces indoor air pollution through the implementation of the biodigester technology.</p>	<p>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.</p>	0
Water quality and quantity	None necessary	<p><i>MDG 7: Ensure environmental sustainability</i></p> <p>The programme contributes to environmental sustainability by limiting the amount of manure dumping in local waterways, hereby preventing ground water contamination</p>	<p>As indicated by the participants 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.</p>	0
Soil condition	None necessary	<p><i>MDG 7: Ensure environmental sustainability</i></p> <p>The programme reduces the need for artificial fertilisers, which are more harmful to the environmental integrity than organic fertilisers.</p> <p><i>MDG 1: Eradicate extreme poverty and hunger</i></p> <p>Use of digester slurry generated under the programme on</p>	<p><u>Baseline:</u> 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.</p> <p><u>Parameter:</u> Application of final biodigester slurry on agricultural fields, collected through the annual Biogas User Survey.</p> <p><u>Explanation:</u> The application of sludge increases the organic content and fertility of soils, thereby increasing crop yields.</p>	+

		agricultural soils increases soil fertility and improves crop harvest. The additional yield can either be consumed or sold.		
Other pollutants	None necessary	No other pollutants are identified	No other pollutants are identified	0
Biodiversity	None necessary	<p><i>MDG 7: Ensure environmental sustainability</i></p> <p>The programme contributes to the containment of deforestation and forest degradation due to substitution of non-renewable biomass with renewable energy.</p>	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 directly and will therefore not be monitored as part of this programme.	0
Total Score:				+1
<i>Social Development</i>				
Quality of employment	None necessary	<p><i>MDG 1: Eradicate extreme poverty and hunger</i></p> <p>The programme provides quality training in line with IDBP quality standards, thereby generating quality employment helping to reduce poverty.</p>	<p><u>Baseline:</u> Limited training and employment opportunities.</p> <p><u>Parameter:</u> Number of employees attending vocational and Health and Safety training programs, as proven through issuance of a certificate to all constructors, collected by the IDBP database.</p> <p><u>Explanation:</u> Those attending the trainings will acquire technical skills and knowledge. Furthermore, participation in the Health and Safety training will ensure that the employment positions created secure safe working conditions, thereby ensuring a good quality of employment.</p>	+
Livelihood of the poor	None necessary	<i>MDG 1: Eradicate extreme poverty</i>	<u>Baseline:</u> Health issues related to respiratory diseases are	+

		<p><i>and hunger</i></p> <p>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.</p>	<p>occurring. Additionally, users, and especially women, experience limited available time due to the need to invest time in firewood collection and cooking.</p> <p><u>Parameter:</u> Improvement of living conditions in terms of health benefits, collected through the annual Biogas User Survey.</p> <p><u>Explanation:</u> Improved perceived health conditions by the users are an indication of improved livelihood of the poor.</p>	
Access to affordable and clean energy services	None necessary	<p><i>MDG 1; MDG 5; MDG 7:</i></p> <p>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.</p>	<p><u>Baseline:</u> 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.</p> <p><u>Parameter:</u> Number of biogas units installed, in use and operating, collected by the IDBP database.</p> <p><u>Explanation:</u> 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.</p>	+

Human and institutional capacity	None necessary	<p><i>MDG 3: Promote gender equality and empower women</i></p> <p>The programme offers training for women in marketing and monitoring the biodigesters. The programme will also make more time available for women as fuel will no longer need to be collected and cooking is faster.</p>	<p><u>Baseline:</u> Women spend much of their time collecting firewood and cooking, and have little spare time to undertake activities that stimulate personal and entrepreneurial development.</p> <p><u>Parameter:</u> Number of women attending trainings, collected through the annual Biogas User Survey.</p> <p><u>Explanation:</u> Training programmes will develop transferrable vocational skills, thereby allowing women to access better-paid employment. Certificates will be issued to all training attendees.</p>	+
Total Score:				+4
<i>Economic and technological development</i>				
Quantitative employment and income generation	None necessary	<p><i>MDG 1: 1B: Achieve decent employment for women, men and young people</i></p> <p>The programme creates employment opportunities and provides trainings, to date directly employing 53 persons while engaging another 475 certified constructors in the construction process. As the programme grows through time, the quantitative employment rate will increase.</p>	<p><u>Baseline:</u> Limited training and employment opportunities currently exist in the target regions outside of farming.</p> <p><u>Parameter:</u> Number of constructors employed, collected by the IDBP database.</p> <p><u>Explanation:</u> The number of jobs created through the programme indicates quantitative employment and income generation benefits.</p>	+
Balance of payments	None necessary	<i>MDG 8: Develop a global partnership</i>	As indicated by the participants of the LSC meeting, it is difficult	0

and investment		<p><i>for development</i></p> <p>The programme facilitates foreign investment in Indonesia through the integration of ODA finance.</p>	<p>to prove the positive impact of the programme on the balance of payments and investments. The impact is therefore assumed to be neutral.</p>	
Technology transfer and technical self-reliance	None necessary	<p><i>MDG 8: Develop a global partnership for development</i></p> <p>The programme promotes knowledge sharing to realise domestic implementation of quality standard biogas plants. Training provided to constructors builds on best case practices gathered from projects operational elsewhere in the world.</p>	<p><u>Baseline:</u> Limited training opportunities and transfer of technology in the biogas sector, both on the constructor and user levels.</p> <p><u>Parameter:</u> Number of constructors trained and users attending the operation and maintenance training, collected by the IDBP database. Furthermore, the number of general trainings given to entities outside of the programme will also be tracked by the IDBP.</p> <p><u>Explanation:</u> The programme builds vocational knowledge in the domestic biogas sector, which was previously absent. This increases technical self-reliance. Furthermore, offering training to entities outside of the programme is also an important step to promote knowledge sharing necessary to build a sustainable biogas market.</p>	+
Total Score:				+2
				+7
Justification choices, data source and provision of references				
Air quality	<p>In the baseline scenario the use of biomass and fossil fuels for user cooking leads to considerable contamination of the indoor environment with particulate matter and carbon monoxide (CO), causing respiratory health problems. This is confirmed by numerous sources¹¹. Resulting respiratory health problems are a serious issue on across the globe. Recent statistics indicate that in 2004, indoor air</p>			

¹¹ GTZ. Biogas Digest – Volume III. Available at: <http://www.gtz.de/de/dokumente/en-biogas-volume3.pdf>

	pollution resulting from the combustion of solid and fossil fuels was responsible for an estimated 2 million deaths worldwide ¹² . 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. ¹³ 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 ¹⁴ 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 ¹⁵ . The application of slurry to agricultural soils can therefore help to improve soil condition through increasing organic content.
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 ¹⁶ . 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 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 ¹⁷ . 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 several thousands of biodigesters and will

¹² 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

¹³ See for example: <http://www.mda.state.mn.us/protecting/conservation/practices/digester.aspx>

¹⁴ 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.

¹⁵ 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.

¹⁶ 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*

¹⁷ FAO (1997) Regional Study on Wood Energy Today and Tomorrow in Asia: Regional Wood Energy Development Programme in Asia.

	require constructing and monitoring effort by local staff. Each VPA shall create quality job opportunities ¹⁸ . 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. Furthermore, as part of the trainings, all staff will undergo a Health and Safety training.
Livelihood of the poor	<p>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 930,000 (EUR 80) on cooking fuels per year or an average of 20 hours collecting firewood per week¹⁹. This is particularly relevant for women, whose role it is traditionally to collect firewood²⁰. Additionally, since women tend to constitute the larger percentage of those living in poverty²¹, 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.</p> <p>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.</p>
Access to affordable and clean energy services	Each VPA shall improve user's access to safe and affordable energy. ²² 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 their experiential expertise will be particularly beneficial to the success of the programme as a whole. ²³ 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 and income generation	The overall development objective of the programme is to promote and disseminate domestic biodigesters as a local, sustainable energy

¹⁸ See: Feasibility of a national programme on domestic biogas in Indonesia. SNV. (2009)

¹⁹ IDBP Baseline Survey (2012).

²⁰ WHO (2006) Fuel for Life: Household Energy and Health: Section 2, p.19. Available at: <http://www.who.int/indoorair/publications/fflsection2.pdf>

²¹ UN Women. Women, Poverty and Economics. Available at: http://www.unifem.org/gender_issues/women_poverty_economics/

²² See: <http://www.snvworld.org/en/sectors/renewable-energy/about-us/potential-of-domestic-biogas>

²³ See: Feasibility of a national programme on domestic biogas in Indonesia. SNV. (2009)

	<p>source through the development of a commercial sector that focuses its implementation through a multi-stakeholder sectoral development approach.</p> <p>The construction and maintenance of biodigesters in each VPA shall result in the creation of employment opportunities nationwide.²⁴ By stimulating this new business sector, each VPA will therefore also create opportunities for entrepreneurs to enter the market.</p>
Balance of payments and investment	Each VPA will contribute to the establishment of a long-term market 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 technological self-reliance	<p>Currently, the application of biogas for cooking purposes is a relatively 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.²⁵ 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.</p> <p>Each VPA will hire and train local contractors and constructors, 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.</p>

SECTION G. Sustainability Monitoring Plan²⁶

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

No	GS-03
Indicator	Soil condition
Mitigation measure	<i>n/a</i>
Chosen parameter	Number of users applying the final biodigester slurry on agricultural land.

²⁴ See: Feasibility of a national programme on domestic biogas in Indonesia. SNV. (2009)

²⁵ See: Feasibility of a national programme on domestic biogas in Indonesia. SNV. (2009)

²⁶ In case, DNH/SD assessment is done at the Programme level, SD monitoring parameters pertaining to SD aspects, safeguarding principles per technology/practice shall be provided.

Current situation of parameter		No slurry is used as fertiliser on agricultural land.
Estimation of baseline situation of parameter		No slurry remains used as fertiliser on agricultural land.
Future target for parameter		A portion of the users apply biodigester slurry on agricultural land.
Way of monitoring	How	Collected through the annual Biogas User Survey.
	When	Annually
	By who	External consultant specialised in surveying

No		GS-06
Indicator		Quality of employment
Mitigation measure		<i>n/a</i>
Chosen parameter		Quality of employment refers to changes compared to the baseline in the qualitative value of employment, such as whether the jobs resulting from the project activity are highly or poorly qualified, temporary or permanent. The proportion of employees attending vocational training programs, as proven through issuance of a certificate to all constructors, will be monitored.
Current situation of parameter		A historical lack of demand for biogas systems has meant that few constructors have the knowledge required to adequately build, market and maintain a reliable system.
Estimation of baseline situation of parameter		Limited training and employment opportunities continue to exist.
Future target for parameter		New certificates issued by the programme as implementation figures grow. The proportion of employees attending vocational training and Health and Safety programs, as proven through issuance of a certificate to all constructors, will be monitored.
Way of monitoring	How	Collected through by the IDBP Database. All vocational training and Health and Safety training attendees will be issued with a certificate proving their attendance, and a record of their names, contact details and gender, will be kept as part of the CME's consolidated monitoring database.
	When	Annually
	By who	IDBP staff

No		GS-07
Indicator		Livelihood of the poor
Mitigation measure		<i>n/a</i>
Chosen parameter		Livelihood of the poor refers to changes compared to the baseline in living conditions, access to healthcare services including affordability and poverty alleviation. To indicate improvement, as part of the Biogas User Survey users will be asked whether they have perceived an improvement in their living conditions after the installation of the biodigester.
Current situation of parameter		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. Overall, current livelihood of the poor is

		inadequate and can be enhanced.
Estimation of baseline situation of parameter		Health issues related to respiratory diseases continue to occur. Additionally, users, and especially women, continue to experience limited available time due to the need to invest time in firewood collection and cooking. Livelihood of the poor will remain unchanged.
Future target for parameter		Householders perceive an improvement in living conditions as a result of the installation of biogas digesters.
Way of monitoring	How	Collected through the annual Biogas User Survey. To indicate improvement, as part of the Biogas User Survey the following questions will be included: "Do you feel that your living conditions have a) improved, b) stayed the same, c) worsened; since the installation of the biogas digester?" and "To what activities do you allocate the spare time created after the installation of the biogas digester?"
	When	Annually
	By who	External consultant specialised in surveying

No		GS-08
Indicator		Access to affordable and clean energy services
Mitigation measure		<i>n/a</i>
Chosen parameter		Access to energy services refer to changes in unsustainable energy use. This will be monitored through the number of biogas units commissioned.
Current situation of parameter		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.
Estimation of baseline situation of parameter		Combustion of LPG, kerosene and firewood continues to lead to particulate matter and carbon monoxide pollution and deforestation, and therefore fails to provide clean energy services. Also, prices of all fuels continue to increase, presenting a rising financial burden to users.
Future target for parameter		The commissioning of several thousands of biodigesters per project activity.
Way of monitoring	How	Collected through by the IDBP Database. The unique serial number of each installation will be recorded upon commissioning and entered into the electronic database, with clear divisions between VPAs. This will allow a count of the number of systems commissioned.
	When	Annually
	By who	IDBP staff

No		GS-09
Indicator		Human and institutional capacity
Mitigation measure		<i>n/a</i>
Chosen parameter		Changes compared to the baseline in education and skills, gender equality and empowerment. Women spend much of

		their time collecting firewood and cooking, and have little spare time to undertake activities that stimulate personal and entrepreneurial development. The number of women attending the Operation and Maintenance training as well as the bio-slurry utilization training will be monitored.
Current situation of parameter		Women spend much of their time collecting firewood and cooking, and have little spare time to undertake activities that stimulate personal and entrepreneurial development.
Estimation of baseline situation of parameter		Women continue to spend much of their time collecting firewood and cooking, and remain with little spare time to undertake activities that stimulate personal and entrepreneurial development.
Future target for parameter		New women receiving training as the programme grows. The number of women attending trainings will be monitored.
Way of monitoring	How	Either confirmed through the IDBP Database or carried out as part of the annual Biogas User Survey conducted by the IDBP.
	When	Annually
	By who	External consultant specialised in surveying; IDBP staff

No		GS-10
Indicator		Quantitative employment and income generation
Mitigation measure		<i>n/a</i>
Chosen parameter		The number of jobs generated by within the IDBP as well as the number of constructors employed will be monitored. To evidence income generation, the amount of users selling biodigester slurry on the market will be monitored.
Current situation of parameter		Limited training and employment opportunities currently exist in the target regions outside of farming. Also, farmers have low income generation capacity from farming activities alone.
Estimation of baseline situation of parameter		Limited training and employment opportunities as well as income generation capacity continue to exist in the target regions outside of farming.
Future target for parameter		New jobs created through the programme as implementation figures grow, as well as a growing amount of farmers selling biodigester slurry on the market.
Way of monitoring	How	Employment records and through the IDBP Database; Biogas User Survey. Through the Biogas User Survey, the amount of users selling biodigester slurry on the market will be monitored.
	When	Annually
	By who	External consultant specialised in surveying; IDBP staff

No		GS-12
Indicator		Technology transfer and technological self-reliance
Mitigation measure		<i>n/a</i>
Chosen parameter		Refers to changes compared to the baseline in activities that build usable and sustainable know-how in a region/country for a technology, where know-how was previously lacking. The number of constructors trained and users attending the operation and maintenance training will be monitored.

Current situation of parameter		Limited training opportunities and transfer of technology in the biogas sector, both on the constructors and user levels.
Estimation of baseline situation of parameter		Limited training opportunities and transfer of technology in the biogas sector continues, both on the constructors and user levels.
Future target for parameter		New jobs created and trainings organised through the programme as implementation figures grow.
Way of monitoring	How	Records will be kept of all staff and their attendance at the vocational training programmes, including general training extended to entities outside of the programme. All attendees will be issued with a certificate proving attendance and skills gained. Monitoring of this parameter will be combined with the monitoring of GS- 10. A record of all training held, and attendees, will be kept in the IDBP Database.
	When	Annually
	By who	External consultant specialised in surveying; IDBP staff

Additional remarks monitoring

All monitoring scheduled to be conducted on an annual basis will be carried out following statistically sound sampling methods laid out in the 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption - 11/04/2011' methodology.

SECTION H. Additionality, conservativeness, inclusion criteria and other deviations²⁷



This section is only applicable if the section on additionality and/or your choice of baseline does not follow Gold Standard guidance

H.1. Additionality

Gold Standard guidance is followed.

Additionality is demonstrated on VPA-level. Each VPA has to determine additionality depending on characteristics. To this end, the VPAs are classified into retroactive- and regular- small-scale projects. Additionality is demonstrated on the project activity level following the Guidelines on the Demonstration of Additionality of Small-Scale Project Activities' (EB68 Annex 27, version 09.0). , as outlined in more detail in section E.5.1. of the PoA-DD.

²⁷ Only for CDM PoAs

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H.2. Conservativeness

<p>Gold Standard guidance is followed.</p>
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<p>Please refer to the PoA-DD for details of the baseline calculations.</p>

H.3 Inclusion criteria

<p>Gold Standard guidance is followed.</p>
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<p>Please refer to the PoA-DD for details of the VPA inclusion criteria.</p>
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H.4 Other deviations from CDM documentation (if applicable)
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<p>Not applicable.</p>

ANNEX 1 ODA declaration

Date: 17 January 2012
Project reference: Gold Standard PoA Indonesia Domestic Biogas
To: Gold Standard Foundation

Declaration of Non-Use of Official Development Assistance by Project Owner**Humanist Institute for Co-operation with Developing Countries, Hivos**

As Project Owner of the above-referenced project, acting on behalf of all project participants, I now make the following representations:

Ben Witjes, Director Programmes & Projects

I hereby declare that I am duly and fully authorised by the project owner of the above referenced project, acting on behalf of all project participants, to make the following representations on Project Proponent's behalf:

I. Gold Standard Documentation

I am familiar with the provisions of Gold Standard Documentation relevant to Official Development Assistance (ODA). I understand that the above-referenced project is not eligible for Gold Standard registration if the project receives or benefits from Official Development Assistance under the condition that some or all credits coming out of the project are transferred to the ODA donor country. I now expressly declare that no financing provided in connection with the above-referenced project has come from or will come from ODA that has been or will be provided under the condition, whether express or implied, that any or all of the credits [CERs, ERUs or VERs] issued as a result of the project's operation will be transferred directly or indirectly to the country of origin of the ODA.

II. Duty to Notify Upon Discovery.

If I learn or if I am given any reason to believe at any stage of project design or implementation that ODA has been used to support the development or implementation of the project, or that an entity providing ODA to the host country may at some point in the future benefit directly or indirectly from the credits generated from the project as a condition of investment, I will make this known to the Gold Standard immediately.

II. Duty to Notify Upon Discovery.

If I learn or if I am given any reason to believe at any stage of project design or implementation that ODA has been used to support the development or implementation of the project, or that an entity providing ODA to the host country may at some point in the future benefit directly or indirectly from the credits generated from the project as a condition of investment, I will make this known to the Gold Standard immediately.

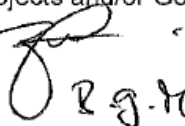
III. Sanctions. I am fully aware that under Section 10 of the Gold Standard Terms and Conditions sanctions and damages may be incurred for the provision of false information related to Projects and/or Gold Standard credits.

Signed:

Name:

Title:

On behalf of:



R. G. M. Wijger

Director Programmes & Projects

Hivos

Humanistisch Instituut voor Ontwikkelingssamenwerking
Humanist Institute for Co-operation with Developing Countries
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