GOLD STANDARD PASSPORT

GOLD STANDARD PASSPORT

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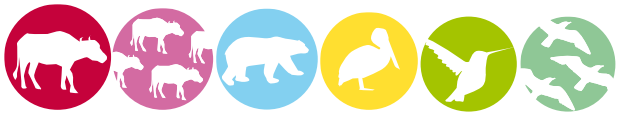

GOLD STANDARD PASSPORT

SECTION A. Project Title

[See Toolkit 1.6]
Project title: Biogas Program for the Animal Husbandry Sector of Vietnam
Acronym: BP
Version of the Gold Standard Passport: V3.1
Date of completion: 25 September 2012

SECTION B. Project description

[See Toolkit 1.6]

Start date of the program: 19/July/2006

Biogas Program for the Animal Husbandry sector of Vietnam (BP)

Project "Biogas Program for the Animal Husbandry Sector in Vietnam" is implemented by Livestock Production Department the Biogas Project Division (BPD) (under MARD) in cooperation with Netherlands Development Organisation – SNV. Overall objectives of project are (i) exploiting effectively biogas technology and developing a commercial viable biogas sector in Vietnam; and (ii) contributing to rural development and environmental protection via provision of clean and affordable energy to rural households, improvement of community's sanitation and rural people's health, creation of job for rural labour and reduction of greenhouse gas emission.

The scenario existing prior to the project activity

Before the onset of the project activities, most households with the technical potential for a biodigester depended predominantly on wood and coal for their thermal energy demand for cooking and kerosene for lighting. The reliance on these fuels cause substantial indoor air pollution (with related health hazards) and are predominantly of non-renewable origin. A substantial part of wood is collected, which is both a drudgery and a significant time expenditure for especially women. Fuels that are bought are a burden on the limited household's revenues. Unhygienic animal waste management practices and the lack of access to basic sanitation result in pollution, foul odour, methane emissions and a relatively high prevalence of hygiene related diseases, such as diarrhoea.

The purpose of BP

The purpose of the project activity is to (further) develop the commercial and structural deployment of domestic biogas in Vietnam. To that extent, the project will:

- Promote the long-term utilization of renewable energy produced in an environmentally compatible and economically viable way;
- Increase the awareness of prospective livestock smallholder households and extension workers on the full extent of the potential costs and benefits of domestic biogas installations;
- Strengthen the supporting capacity of involved Biogas Construction Teams (BCTs) and (non-)

Government officials regarding all aspects of marketing, construction, after sales service and quality management of domestic biogas installations;

- Support the development of a commercially viable, market oriented domestic biogas sector in Vietnam;
- Strengthen the institutional infrastructure for coordination and implementation of sustained dissemination of domestic biogas at national, provincial and district level.

The project will build on the achievements of the "Support Project to the Biogas Programme for the Animal Husbandry Sector in some Provinces of Vietnam" (BP I). Phase II of the project will cover 57 out of Vietnam's 63 provinces, supporting the construction of over domestic biogas installations over the period January 2007 – December 2012. Phase III will built on phase II and starts in 2013. Concrete targets for phase III have not been set due to lack of funding. Carbon finance is sought to enable BP top achieve the BP II targets and to finance phase III.

With implementation of this Project, greenhouse gas (GHGs) emissions will be reduced not only through the displacement of biomass and fossil fuels currently used in stoves with clean and efficient biogas technology, but also by introducing a proper animal waste management system (AWMS).

Emission reductions resulting from the project activities

Domestic household digesters are in this document referred to as 'biodigesters'. In the digester a consortia of microbes breakdown manure, a product of this process is biogas. The released biogas is captured in the gasholder in the digester and destroyed for energy services. In each contracted household, a biodigester, an overflow pit, a number of biogas lamps, a number of biogas stoves, a toilet (unless the farmer already has a toilet or if they're not interested) and the necessary piping will be installed.

GHG emission reductions: The technology reduces GHG emission through three pathways:

1. The displacement of non-renewable cooking and lighting fuel by a renewable fuel: biogas;
2. The avoidance of methane emissions from the animal waste management system by capturing and destroying methane in an energy service device;
3. The displacement of chemical fertilizers by bio-slurry. The production of chemical fertilizers results is energy intensive and the application to the soil result in N_2O.emissions.

The emission reductions are realized by installing biodigester. The biodigesters have a digester size, of between 4 to 50 m3 depending on the amount of manure available at household level.

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SECTION C. Proof of project eligibility

C.1. Scale of the Project

[See Toolkit 1.2.a]

Please tick where applicable:

Project Type	Large	Small
	☐	☐
	☐	☐
	☐	☐
	x	☐
	☐	☐

	☐

C.2. Host Country

[See Toolkit 1.2.b]

Viet Nam

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C.3. Project Type

[See Toolkit 1.2.c and Toolkit Annex C]

Please tick where applicable:

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	x	☐
Does your project activity classify as an End-use Energy Efficiency Improvement project?	☐	x

Please justify the eligibility of your project activity:

Project activities and the Gold Standard aim:

Gold Standard Aim: The overriding aim of the Gold Standard is to promote investments in energy technologies and energy management techniques that mitigate climate change, promote (local) sustainable development and are directed towards a transition to non-fossil energy systems.

The activities of BP conform to this aim, since:

- *Biogas from animals and human waste is a renewable energy source, which mitigates GHG emission by displacing fossil and non-renewable cooking and lighting fuels;*
- *Capturing methane emission in a biodigester and destroying it for the above mentioned energy services will avoid the methane emission to the atmosphere from animal waste management system of the baseline situation;*
- *The deployment of biodigesters as an indigenous sustainable technology results in an substantial investment in this renewable energy technology;*
- *Local sustainable development is ensured by the creation of job opportunities in finance, the construction sector (technicians, masons) and the establishment of licensed biodigester construction enterprises.*
- *Environmental integrity is ensured, the treatment of waste in a biodigester, reduces pathogen count, improves sanitation and hygiene, avoids indoor air pollution and deforestation;*
- *The GS requires in Annex C that 65% of the biogas is utilized by showing that systems are in place to maximise the utilization ratio. All household have installed a stove and all household use biogas for cooking. Some households have other equipment installed such as biogas lamps, biogas heaters, biogas water heaters, biogas rice cookers and biogas generators. The programs provides training to all biogas users on how to use all the biogas and how to use all of the biogas by investing in biogas appliances. BP confirm that much more than 65% of the biogas is used.*

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The project activity involves a large amount of small, distributed cooking generation devices using biogas from anaerobic digestion of animal waste. Biogas from animal waste is by definition renewable.

Pre Announcement	Yes	No
Was your project previously announced?	☐	x

Explain your statement on pre-announcement

The programme has announced that it seeks carbon finance already during phase I, see http://www.noccop.org.vn/Data/profile/Airvariable_Projects_75233Tong%20hop%20PIN.pdf

Or a copy of the webpage below.

DANH SÁCH PIN ĐÃ ĐƯỢC DNA VIỆT NAM XÁC NHẬN

STT	Tên Dự án		Địa điểm	Tổng tiềm năng giảm phát thải (tCO_2)	Xác nhận
	Tên tiếng Việt	Tên tiếng Anh			
1.	Khu liên hợp xử lý chất thải Nghi Yên	Nghi Yen waste treatment complex	Tỉnh Nghệ An	2.176.000 - 2.676.000 / 10 năm	Số 2368/BTNMT-HTQT ngày 05/7/2005
2.	Phát triển dầu dừa diesel sinh học	Model Coconut Biodiesel Development	Tỉnh Bình Định	614.700 / 10 năm	Số 3115/BTNMT-HTQT ngày 03/8/2005
3.	Phát triển ứng dụng của LPG cho các phương tiện giao thông đường bộ	Expand the use of LPG, a Clean Fuel, for Road Vehicle	TP. Hà Nội, Hồ Chí Minh, Đà Nẵng	42.980 / 10 năm	Số 3657/BTNMT-HTQT ngày 14/9/2005
4.	Nhà máy phong điện xã Nhơn Châu (Cù Lao Xanh)	Commune Nhon Chau (Cu Lao Xanh) wind farm	Tỉnh Bình Định	12.000 / 10 năm	Số 4291/BTNMT-HTQT ngày 31/10/2005
5.	Chương trình Carbon và tái trồng "Rừng Vàng"	"Rung Vang" Reforestation and Carbon Programme	Tỉnh Thừa Thiên Huế	508.000 (2007 - 2012)	Số 2264/BTNMT-HTQT ngày 05/6/2006
6.	Chương trình khí sinh học cho ngành chăn nuôi Việt Nam giai đoạn 2003-2005	Biogas Programme for the Animal Husbandry Sector of Viet Nam, Phase 2003-2005	Tại 12 tỉnh	306.000 - 765.000 / 10 năm	Số 4184/BTNMT-HTQT ngày 28/9/2006

The PDD details the pre-consideration of carbon finance.

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C.4. Greenhouse gas

[See Toolkit 1.2.d]

Greenhouse Gas	
Carbon dioxide	X
Methane	X
Nitrous oxide	X

C.5. Project Registration Type

[See Toolkit 1.2.f]

Project Registration Type	
Regular	☐

Pre-feasibility assessment	Retroactive projects (T.2.5.1)	Preliminary evaluation (eg: Large Hydro or palm oil-related project) (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
	x	☐	☐

If Retroactive, please indicate Start Date of Construction dd/mm/yyyy: 19/July/ 2006

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SECTION D. Unique project identification

D.1. GPS-coordinates of project location

[See Toolkit 1.6]

	Coordinates
Latitude	16º00´ North of the Equator
Longitude	106º00´ East of Greenwich

Explain given coordinates

The GPS coordinates are the latitude and longitude for the country Viet Nam. This is considered appropriate as the project area covers most of the provinces in Vietnam. Due to the sheer number of biodigesters it is impossible to provide the coordinates of each unit.

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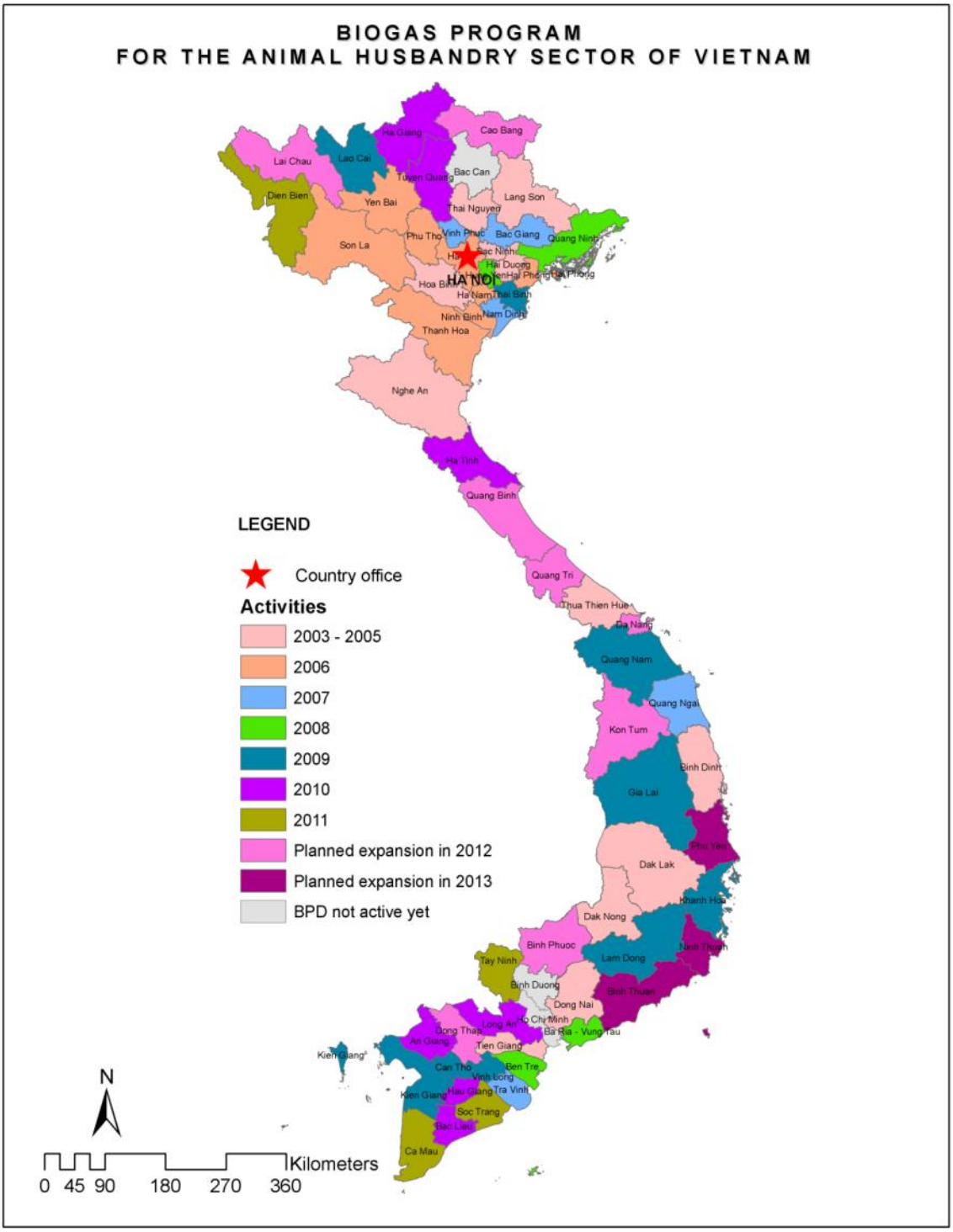
D.2. Map

[See Toolkit 1.6]



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SECTION E. Outcome stakeholder consultation process

E.1. Assessment of stakeholder comments

[See Toolkit Annex J]

[See Local Stakeholder Consultation Report B.5 and insert table from ii Assessment of comments. Insert a summary of alterations based on comments]

Stakeholder Comment	Assessment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
Air quality: Group 1: some complaint about a bad smell when turning on the gas first time in the morning Group 2: Good, no more eye disease, better smell, Group 3: Air quality improved, better smell, no gas leakage due to well-managed oversupply Group 4: One complaint about air pollution caused by factories nearby that affects the air improved by biogas plant	Different opinions were expressed in 2 groups when commenting on the quality of air There are opinions on pollutants but not caused by biogas plants, they come from fertilizer factories and paper mills in the vicinity	yes	Bad smell can be reduced by sealing off the tank, using the gas more often. Using a filter is too expensive for most.
Water quality *Group 1: Water in streams is obviously cleaner. Less discharge into the water streams.* *Group 2: Surface water is less polluted comparing to before biogas* installation Group 3&4: *Surface water in locality is obviously cleaner, the colour change from black to grey. Less discharge into the water streams, less urine penetrating to underground water*	All groups have same opinion on this indicator	no	All comments were positive. Clear instructions necessary to avoid feeding too much, and too short retention time. Only if dung is not fully disintegrated a bad smell results.
Soil quality: Group 1 and 2 - Visible change in colour is observed prior (black colour) and after having	Not only biogas user but also non biogas user know about this benefit	yes	Bio-slurry cannot be used in concentrated ratio, better to dilute it

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biogas plant (brown); - The soil became softer - Nutrition stays longer in the soil, thus significantly improved, very good for crops Group 3: Soil quality improved, Some households give slurry away, as they have no crops and no market for bio slurry. One complained that bio slurry causes his vegetables to die Group 4: The soil became softer. Nutrition stays longer in the soil, thus significantly improved, very good for vegetables, tea and orchard.	by observing the utilization of bio-slurry by neighbours		and use as fertilizer directly applied to the soil. Training materials are provided to the users on that
Other pollutants *Group 1:* - No other pollutant, as soon as there is leakage with methane gas in the biogas plant, the household fixes immediately reacts by filling water into the digester neck, turning on biogas cook stove to reduce gas pressure; using gas pressure meter. *Group 2:* - Bad smell when turning on cooking stove - Sometimes surplus of gas creates strong pressure *Group 3:* - No other pollutant, if there is oversupply at night, farmer has to get up and boil water or turn on stove to reduce gas pressure. *Group 4:* *Gas leakage due to the fact that pipes or valves are poor*	There are opinions on pollutants but not considered as big problem	yes	Provide proper instruction in operation manual, make pressure meter compulsory. That way households know how much gas they have. Bad smell from the stove is an advantage as it only appears when gas is leaking. A burning stove does not smell. Oversupply is being mitigated by training users to boil water, invest in equipment or share to the neighbours. Provide safety leaflet to users
Biodiversity All groups: Reduced use of fire woods for domestic energy Improved soil quality contributing to improved plantation productivity (e.g. increased sales of Vietnamese traditional sticky rice leaves) Reduced use of fire woods, char coal, farmers don't know where the wood comes from (from natural forest or production forest) Improved soil quality contributing to improved plantation productivity	This indicator is difficult for farmer to assess as they see no direct relationship to biogas.	no	Not applicable
Quality of employment **Group 1 and 2:** - Free women and children from	Assessment is more exact in villages where	no	Only positive comments

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wood/rice straw collection for other social or schooling activities - Higher income for biogas masons in comparison with other types of construction works Group 3: Biodigesters free women and children from dirty, hard works such as manure collection, selling or processing. Free time used for other social or schooling activities. Group 4: Higher income for biogas masons in comparison with other types of construction works, less dangerous work since biogas plant place underground.	farmers pursue secondary jobs in biodigester construction		
Livelihood of the poor Group 1: Biogas contributes to reducing workload of family members: men have more time (2 hours) for sport activities, women more time for social and other income generation activities (e.g. embroidery). Group 2: Poor people cannot afford biogas digester or they do not have animals. Group 3 and 4 Biogas contributes to reducing workload of family members Poor people cannot afford biogas digester or they do not have animals. One women in group 1 plans to borrow money to finance biogas digester since she has to cover her son's university fee with her saving.	Farmers participated in workshops are not poor people	yes	The programme does not target the poorest of the poor, as they do not have enough animals and manure to feed the smallest biodigester. Nevertheless, some biogas users can be considered poor and their livelihood will improve and the program creates employment opportunities that can benefit the poor.
Access to affordable and clean energy services: Group 1 and 2 - The upfront investment is high and poor HH without animal husbandry activities can not afford - Poor households with few pigs can invest by borrowing money from friends and relatives to invest in biogas plants - Non -smoke and cleaner kitchen more appropriate for modern kitchen appliances Group 3 and 4 - The upfront investment is high including paper work to get support by project and subsidy rate is low. - Poor households with few pigs can invest by borrowing money from friends and relatives to invest in biogas plants In general biogas is clean energy and affordable for local people	Opinions are contrary	yes	Biogas users will have access to a cheap source of energy as manure is available for free to the farmers.
Human and institutional capacity **Group 1 and 2:** - Increased knowledge on biogas technology and biogas -related knowledge (global warming, CDM, climate change)	Very few comment on this indicator	yes	Training for users is very important, the programme will continue with this

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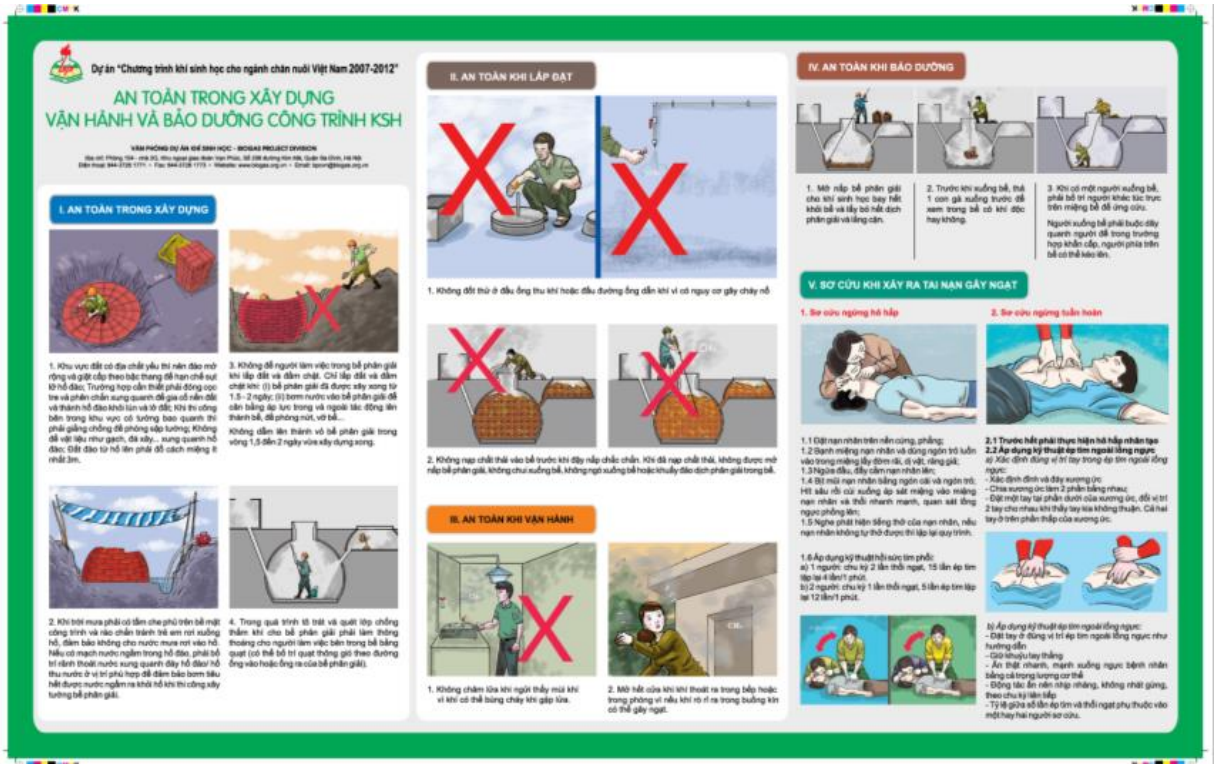
- Increased free time from household workload allowing male and female farmers to participate in other community activities or economic activities Group 3 and 4 - Increased knowledge on biogas technology and biogas -related knowledge (global warming, CDM, climate change) - Improved gender-balance in locality, more women take part in training, meeting, WS with their own opinions – Increased familiarity with new technology; more time for other family economic activities,			
Quantitative employment and income generation **Group 1 and 2:** - Women and children have more free time to engage in other income generation activities (embroidery, gardening) - Higher income for biogas masons (compared to other civil construction jobs); - Current mason teams are potential to become SMEs - Less money spent on conventional domestic energy sources Group 3 and 4 - Income generation from higher productivity crops - Saving up to 300,000 per month - Higher income for biogas masons (compared to other civil construction jobs); Current mason teams have potential to become SMEs	Farmers know about benefits of biogas technology	no	All comments are positive and shared
Balance of payments and investment **Group 1 and 2:** Difficult to calculate due to low opportunity costs for agricultural residues used as conventional energy source Group 3 and 4 Difficult to calculate due to costing use of rice straw and agricultural biomass used for conventional energy source	Many comments are very general about benefits	no	Difficult to relate the activities with this indicator
Technology transfer and technological self-reliance **All groups:** - Simple operation and maintenance after being trained - Easy to train and expand mason teams - Technology transfer is appropriate as construction materials are locally available.	Farmers understand biogas technology very well	yes	Instructions and manual should be developed more attractive and simple. This is done regularly with the training manual
Do-no-Harm Indicators:			
***Labour condition*:** **Group 1 and 2:**	People have the same comments	yes	Hot working conditions can be

Tough working conditions for masons whose work is dependent on weather conditions (very hot during summer time, rainy season) **Group 3 and 4** Group 3: Hard working conditions for masons whose work is dependent on weather conditions (very hot during summer time) In rain season, some works are destroyed due to heavy rain and need to be done again Group 4: work safer compared with other construction works	on working conditions of mason		mitigated with the use of ventilators, a custom in the south. A cover over the biodigester will protect the construction side
Financing transparency **All groups:** Clear and simple procedure Nobody asked for any pick back at the post office or elsewhere Complaint about delay in subsidy delivery (about 6 months already)	Although in the group discussion no problems are indicated, the answer could be different if this issue was discussed in person and not in group/public.	yes	The programme checks proper transfer by random sample telephone interviews
Poor piping and gas leakages	Comment that require serious attention	Yes	BP has improved quality standards and has included in the quality control manual standards on piping in order to prevent breaking and consequent leakages. The quality control (QC) is performed by district technicians after completion of the biogas plant by an independent mason and around 10% QC on QC is performed.by provincial staff or BP staff.
Delay in subsidy delivery	Comment that require serious attention	yes	BP has addressed this comment. The subsidy payment is currently around 2 weeks. The improvements started in 2009

The project regularly updates leaflets and training manuals to make them more understandable. An example is shown hereunder on working conditions and safety



E.2. Stakeholder Feedback Round

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

[See Toolkit 2.11]

The feedback round consisted of:

1. National announcement of VGS in 2 national newspapers on 2 different dates (11 and 12 November 2011)
2. Letter to LSC participants (12 November 2011)
3. Email to GS supporters (12 November 2011)
4. Publication of GS documents on the BP website (www.biogas.org.vn) (7 November 2011)

The feedback round was open for 2 months and was closed on 15/01/2012

1. Newspaper announcement scans

BPD published 2 advertisements in 2 national newspapers on two different dates. The announcement was the Vietnamese translation of the following English text:

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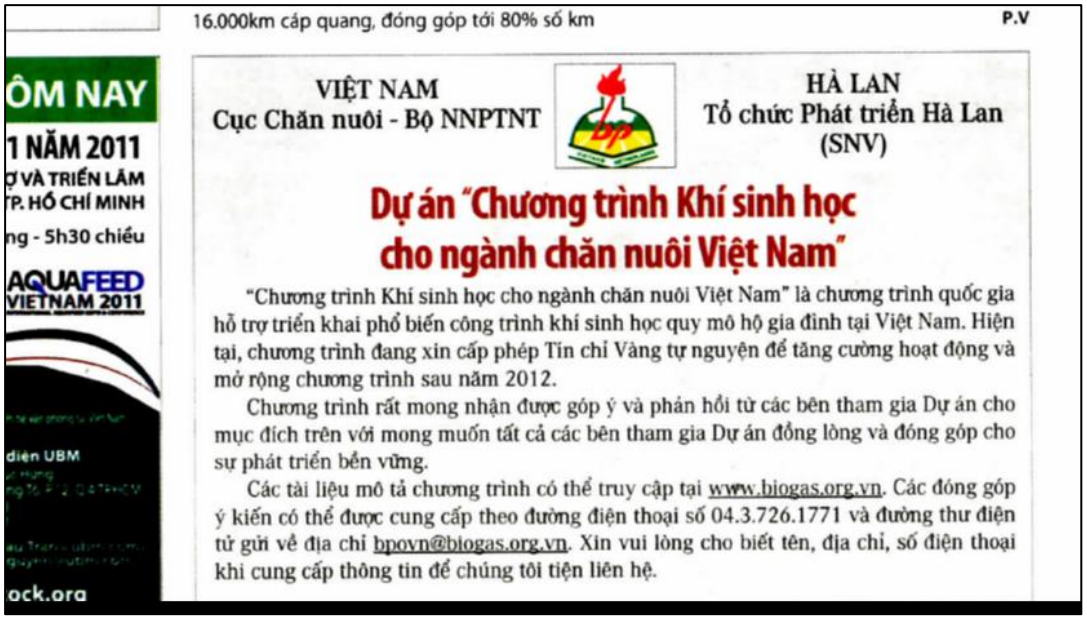
Biogas Programme for the Animal Husbandry Sector of Vietnam is a national programme that supports the implementation of household biogas digesters throughout Vietnam. The programme is applying for Voluntary Gold Standard approval in order to strengthen and to extend the programme beyond 2012. The programme cordially invites stakeholder to provide feedback for this purpose with the objective to ascertain that all stakeholders approve the programme and its contribution to sustainable development.

Programme description documents are available online on www.biogas.org.vn . Feedback can be provided by telephone [04.3.726.1771] and by email [bpovn@biogas.org.vn]. Please include your contact details, i.e. telephone number for follow up.

Hereunder the evidences:

On 10-11-2011 in Nong Thon (Agricultural News)



16.000km cáp quang, đóng góp tới 80% số km P.V

ÔM NAY
1 NĂM 2011
Ợ VÀ TRIỂN LÃM
TP. HỒ CHÍ MINH
ng - 5h30 chiều
AQUAFEED
VIETNAM 2011
diện UBM
ock.ora

VIỆT NAM
Cục Chăn nuôi - Bộ NNPTNT

HÀ LAN
Tổ chức Phát triển Hà Lan (SNV)

Dự án "Chương trình Khí sinh học cho ngành chăn nuôi Việt Nam"

"Chương trình Khí sinh học cho ngành chăn nuôi Việt Nam" là chương trình quốc gia hỗ trợ triển khai phổ biến công trình khí sinh học quy mô hộ gia đình tại Việt Nam. Hiện tại, chương trình đang xin cấp phép Tín chỉ Vàng tự nguyện để tăng cường hoạt động và mở rộng chương trình sau năm 2012.

Chương trình rất mong nhận được góp ý và phản hồi từ các bên tham gia Dự án cho mục đích trên với mong muốn tất cả các bên tham gia Dự án đồng lòng và đóng góp cho sự phát triển bền vững.

Các tài liệu mô tả chương trình có thể truy cập tại www.biogas.org.vn. Các đóng góp ý kiến có thể được cung cấp theo đường điện thoại số 04.3.726.1771 và đường thư điện tử gửi về địa chỉ bpovn@biogas.org.vn. Xin vui lòng cho biết tên, địa chỉ, số điện thoại khi cung cấp thông tin để chúng tôi tiện liên hệ.

and on 11/11/2011

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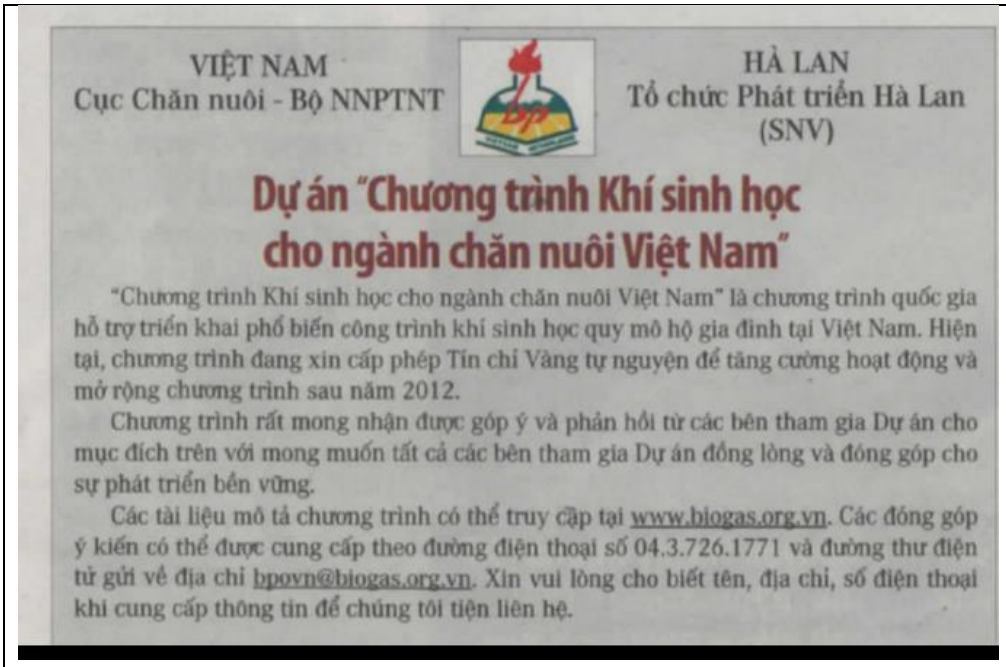

VIỆT NAM
Cục Chăn nuôi - Bộ NNPTNT

HÀ LAN
Tổ chức Phát triển Hà Lan (SNV)

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On 10-11 in Nong Nghiep (Rural Today news)

VIỆT NAM
Cục Chăn nuôi – BỘ NN & PTNT

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Tổ chức Phát triển Hà Lan (SNV)

Dự án "Chương trình Khí sinh học cho ngành chăn nuôi Việt Nam"

Chương trình khí sinh học cho ngành chăn nuôi Việt Nam là chương trình quốc gia hỗ trợ triển khai phổ biến công trình khí sinh học quy mô hộ gia đình tại Việt Nam. Hiện tại, chương trình đang xin cấp phép Tín chỉ Vàng tự nguyện để tăng cường hoạt động và mở rộng chương trình sau năm 2012.

Chương trình rất mong nhận được góp ý và phản hồi từ các bên tham gia Dự án cho mục đích trên với mong muốn tất cả các bên tham gia Dự án đồng lòng và đóng góp cho sự phát triển bền vững.

Các tài liệu mô tả chương trình có thể truy cập tại www.biogas.org.vn . Các đóng góp ý kiến có thể được cung cấp theo đường điện thoại số 04.3.726.1771 và đường thư điện tử gửi về địa chỉ bpovn@biogas.org.vn . Xin vui lòng cho biết tên, địa chỉ, số điện thoại khi cung cấp thông tin để chúng tôi tiện liên hệ.

2. Letter to LSC participants on 15/11/2011

In total 25 households in Pho Tho and 30 household in Nghe Anh that participated in the LSC workshop in 2009 received a letter in Vietnamese with the following content:

1. Introduction to feedback round and programme
2. Non-technical summary of the programme
3. Description of contribution to sustainable development
4. Minutes of the Local stakeholder consultation workshop
5. Summary of the sustainability assessment
6. Feedback form

The letter is contains 15 pages and is for that reasons not attached. The letter is available at request and provided to the DOE during validation.

3. Email to GS NGO supporters

An email was sent to the GS supporters on 07/11/2011, with the following content:

This message was sent with High importance.

From: Eric Buysman <ericishier@gmail.com> Sent: Mon 07/11/2011 11:13

To: Trine Glue Doan (trine.gluedoan@wwfgreatermekong.org); 'sano.stec@gmail.com'; 'helio@helio-international.org'; Roscher Bella (Bella.Roscher@wwf.ch); 'dmcintosh@uk.mercycorps.org'; 'katrin.harvey@reeep.org'; 'Saoleng'; 'Lam, Jan'; 'supporter.services.int@greenpeace.org'

Cc: Tommy.Lo@hk.chn.tuv.com; Ellen (ellen@cdmgoldstandard.org); Nguyen Thi Minh Nguyet (nguyetntm@biogas.org.vn); Zwebe, Dagmar (DZwebe@snvworld.org); Samuel Bryan (s.bryan@nexus-c4d.org); 'm.verles@nexus-c4d.org'; Dung.Truong@vn.tuv.com

Subject: Gold Standard Feedback Round - Biogas Program for the Animal Husbandry Sector of Vietnam

Dear NGO supporters,

The Biogas Program for the Animal Husbandry Sector of Vietnam (BP) is a national programme that supports the implementation of household biogas digesters throughout Vietnam. The programme is applying for Voluntary Gold Standard approval in order to strengthen and to extend the programme beyond 2012. The programme cordially invites you to provide feedback for this purpose with the objective to ascertain that all stakeholders approve the programme and its contribution to sustainable development. The feedback round is open for comments until 07/01/2012.

The website of BP details the program in detail: http://210.245.92.22/English/Home.aspx . Program documents (PDD, GS passport and the Local Stakeholder Consultation report can be found here: http://210.245.92.22/english/Tin-tuc-Su-kien/Tin-hoat-dong/Biogas-Programme-for-the-Animal-Husbandry-Sector-of-Vietnam-is-a-national-programme-that-supports-the-implementation-of-household-biogas-digesters-throughout-Vietnam.aspx

In addition to contacting you, the program publishes announcements in national newspapers and approaches local stakeholder participants for the feedback round.

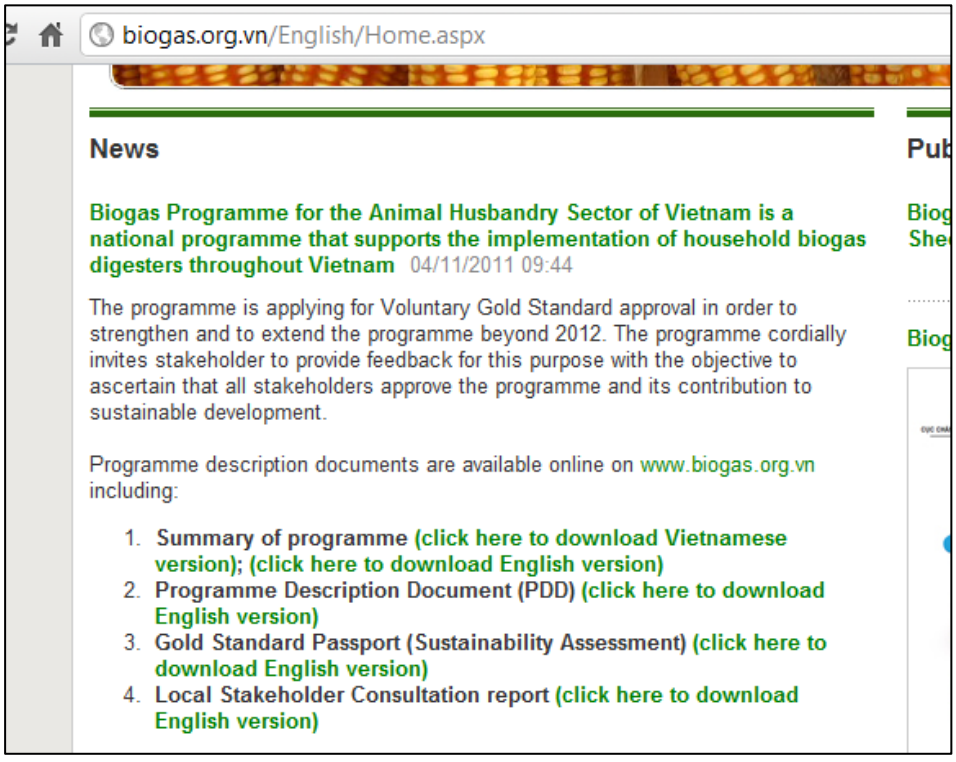
With kind regards,

Eric Buysman,

On behalf of the Biogas Program

4. Publication of documents on website

Both in English and in Vietnamese (from 7/11/2011)



Received feedback:
The biogas program received feedback from 4 persons by post. No comments were received through by email or telephone.

All comments were positive and therefore changes in the program were not deemed necessary.

Hereunder the comments and the replies by BPD to the comments.

Comment	Reply

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Joining the Biogas Project, we are always interested in biogas sector due to its benefit not only for livestock households but also for the whole community, etc as stipulated in the document. I agree with all information attached in the letter you sent to me because it reflected almost all long-term objectives of the project. However, regarding section 4 (Assessment of stakeholders) concerning Air quality and Water quality; I would like to add some comments as following: This issue must be basically improved much more once technology standard is unified. The farmers operate and manage bio-digester unmethodically. The connection between the volume of digester and number of animal is not taken in consideration by the farmers, it will be get out of digester after 3-4 day from charging. As a result, it continues to be digested and digested more effectively. This is a weak point of frabricated technology. With above-mentioned problem, the air quality and water quality will be influenced by the increasing scale of livestock.	The comment refers to a technology not implemented by the BPD, namely the composite biogas plant. The main disadvantage of that biogas plant is that it is only available in 3 different sizes. It is recognized that if the amount of dung input exceeds the volume of digester it will reduce the functioning of the digester, and subsequently influences quality of air and water source of the household site. For this reason, the BPD project implements digester models of various sizes, 4 to 50 cubic meter, to ensure that for each small scale farm an appropriate model is available. This is very important to ensure that waste is treated properly.
Thank to the aid of the Netherlands' Government for livestock famers to construct bio-digester, we were supported to build 1 plant. After several years, we relize the biogas benefits as follow: - Reduce environmental pollution - Biogas for cooking - Bio-slurry for crops, improve soil and soil nutrition - Improve the livelihood BPD is kindly requested to continue to support other households.	Thanks for the positive feedback. That will bring big chance for the program to receive revenue from carbon financing. With VGS money, the program will start phase III and continous to help the rural farmers installing domestic biogas digesters. The farmer should follow program guidances on biogas plant operation and maintenance (safety leaflet, biogas user handbook, technology leaflet) strictly. If there are any matters related to the plant operation and maintenance incurred, the farmer should contact the mason/ technician/provincial biogas office/central office for further advises, contact details are in the materials delivered by BPII to the farmer.

GOLD STANDARD PASSPORT

Thank to Netherlands biogas project in Nghi Thuan town, I have attended in the SWC in April 2009. Up to now, biogas plants in Nghi Thuan town work really well. Biogas plant helps big livestock farmers to reduce environmental pollution and generate biogas for cooking and those plants seem durable so far. I would like to propose that related agencies and the Netherlands Government create more favourable condition to prolong the project to support other people.	Thanks for the feedback. The farmer's plant is working well. Its life is about 15 to 20 years so the farmer should follow program guidances on biogas plant operation and maintenance. If there are any matters related to the plant operation and maintenance that the farmer doesn't understand or know, please contact the mason or technician or contact the provincial project office/ central project office for proper advice. The contact details are available in the leaftlets, brochures delivered to the farmer.
When SNV support Vietnam through biogas program for the animal husbandry sector Vietnam, our family was supported to construct a bio-digester in 2007. Till now, we relize the benefits of biogas as bellow: - Save 1.000.000 Vnd/year for fuel - Save 300.000 VND/year for lighting - Reduce the environmental pollution for water and surrounding area Therefore, we will highly appreciate if the Government of the Netherlands to continue to assist biogas project in Vietnam with a view to supporting more household to build biogas plant. Our family would like to keep in touch to share experience especially in case of accident to resolve. Thank you very much.	Thanks for the positive feedback. That will bring big chance for the program to receive revenue from carbon financing. With VGS money, the program will start phase III and continous to help the rural farmers installing domestic biogas digesters. The farmer should follow program guidances on biogas plant operation and maintenance (safety leaflet, biogas user handbook, technology leaflet) strictly. If there are any matters related to the plant operation and maintenance incurred, the farmer should contact the mason/ technician/provincial biogas office/central office for further advises, contact details are in the materials delivered by BPII to the farmer.

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SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

[See Toolkit 2.4.1 and Toolkit Annex H]

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium /high)	Mitigation measure
Human rights			
1.The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Rights abuses.	The project is energy demand oriented and the households that are included in the project participate voluntary. The project is not complicit in human rights abuses	None	Not required
2. The project does not involve and is not complicit in involuntary resettlement.	The biogas digester is constructed at the premises of the household involved in the project and will not result in relocation of persons or households	low	Not required
3. The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage	The biogas digester is constructed at the premises of the household where no critical cultural heritage is to be found	low	Not required
Labour standards			
4. The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights	The design and construction of the digesters are executed by qualified technicians and masons who are willing to work for the project against a market conform payment. Households are open to	low	The programme complies with the Vietnamese Labor Law

	contact several masons, as well as other biogas technology suppliers.		
5. The project does not involve and is not complicit in any form of forced or compulsory labour	Masons and technicians volunteer to be trained by the project to become officially qualified, the masons are free to work and provide services to farmer households and others on market price basis. Masons work independently of the program and are free to put their knowledge into practice outside the program as well	low	The programme complies with the Vietnamese Labor Law
6. The project does not employ and is not complicit in any form of child labour	All masons involved in the project are certified by the ministry of agriculture and rural development (MARD). MARD only certifies experienced masons above 18 years of age and therefore excludes children.	Low	The programme complies with the Vietnamese Labor Law
7. The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.	Everybody is eligible to work for the project provided that they are experienced, trained and certified by MARD. MARD does not exclude anybody from the training regardless of gender, race, religion, sexual orientation or any other basis. The program tries to actively motivate especially women to take part in the program and benefit from the training and potential income generating activities	Low	The programme complies with the Vietnamese Labor Law. The programme further has an expressed positive gender recruitment policy
8. The project provides workers with a safe and healthy work environment	The design and construction of the digesters are conducted by qualified	Low	The programme complies with the Vietnamese Labor

and is not complicit in exposing workers to unsafe or unhealthy work environments.	masons who are certified by MARD. The technology applied is mature. The working environment is safe and healthy, masons are never alone on site. Furthermore to safeguard the safety of both masons and users the biogas user handbook and safety leaflet are distributed to all users. Safety issues is also an important part of the training for masons and technicians, as well as the training for the end user.		Law. In addition, construction and operation manuals explicitly mention safety precautions.
Environmental Protection			
9. The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle.	The construction of household biogas digesters has obvious positive benefits on the local environment and is encouraged by local governments. There is no environmental threat. In addition, the project takes a precautionary approach by certifying masons, quality control of the construction etc.	low	Not required
10. The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high	Not applicable: biogas installations are constructed on the farm-site. The project has a positive impact on the natural habitat and therefore does not, in any way; result in degradation or conversion of natural habitat.	Low	Not required

conservation value, or (d) recognized as protected by traditional local communities.			
Anti-Corruption			
11. The project does not involve and is not complicit in corruption.	The cost of construction and implementation will be paid by household farmers on market price basis. Households pay directly to the supplier of construction material. Furthermore a subsidy is only given by the project to households that really installed and took into operation the biogas unit. A throughout quality control and monitoring system is used to check these requirements. Furthermore subsidies are paid through the post-office system in Vietnam only directly to the owner of the biogas unit whose ID number is on the application. All data on household are entered in to the project database. If the entry by the provincial biogas project division is wrong that cause miss direction for subsidy transfer then the PBPDs will be fully responsible for extra money transfer charge and the delay in transfer process. Any fraud will be reported to relevant authorities for suitable legal action	Low	Not required
Additional relevant critical issues for my project type	Description of relevance to my project	Assessment of relevance	Mitigation measure

		to my project (low/medium/ high)	
No additional relevant issues identified			

F.2. Sustainable Development matrix

[See Toolkit 2.4.2 and Toolkit Annex I]

Insert table in section D3 from your Stakeholder Consultation report (Sustainable Development matrix).

Indicator	**Mitigation measure**	**Relevance to achieving MDG**	**Chosen parameter and explanation**	**Preliminary score**
Gold Standard indicators of sustainable development.	**If relevant copy mitigation measure from "do no harm" –table, or include mitigation measure used to neutralise a score of '–'**	Check **www.undp.org/mdg** and **www.mdgmonitor.org** **Describe how your indicator is related to local MDG goals**	**Defined by project developer**	'
Air quality		Applies to MDG target 4 (4.1, 4.2), & 5. Clean indoor air will reduce under-five mortality rate (4.1) and infant mortality rate and the disease burden due to indoor air pollution	**Parameter:** Compared to the baseline the project reduces wood and coal consumption for cooking and kerosene consumption for lighting. **Explanation:** Substituting traditional cooking fuels, biogas virtually eliminates indoor air pollution	+

			resulting from incomplete combustion of agricultural residue, coal and / or firewood. Using biogas instead of coal will eliminate the emission of SPM (Solid Particle Matter) and CO emission is around 2084% higher with coal compared to biogas. See the justification for the impact on the other fuels.	
Water quality and quantity		Applies to MDG target 7 (7.8, 7.9). Proportion of population using an improved water source and improved sanitation facility.	**Explanation:** Domestic biogas plants requires a fair amount of process water on a daily basis and this may impact water quantity. No impact on water quality is expected. Water availability however is not critical in most provinces of Vietnam	0
Soil condition		Applies to MDG target 7B: Reduce biodiversity loss	**Parameter:** Usage of bio-slurry as green fertilizer **Explanation:** The application of bio-slurry instead of chemical fertilizers will balance nutrient inflow and outflows, which closes the nutrient loops. Furthermore using bio-slurry instead of fresh manure can improved yields as nutrients are better accessible for	+

			absorption by the plant roots.	
Other pollutants		Not applicable to MDG	No other pollutant sources identified	0
Biodiversity		Applies to MDG 7; target 7B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss:	**Explanation**: The installation of a bio-digester will reduce fuel wood demand and thereby reducing destruction of leaving forests and natural habitat. **Parameter:** Cumulative amount of wood saved due to the fuel switch to biogas	+
Quality of employment		Applies for MDG, target 1 (1.b). Achieve full and productive employment and decent work for all, including women and young people.	**Explanation:** Construction and quality control requires well skilled mason and technicians. **Parameter**: Number of trained masons and technicians trained	+
Livelihood of the poor		MDG, 1.1, 3.4, 4.5	**Explanation**: Proper disposal of waste will improve sanitation and therefore the livelihood of the poor . **Parameter:** Access to sanitation. Cumulative number of people that have access to an improved waste management system	+
Access to affordable and clean energy services		MDG 7: Ensure environment sustainability.	**Parameter:** Total amount of energy replaced by biogas **Explanation:** Domestic	+

			biogas installations produce clean energy. The displacement of energy from traditional fuel by biogas reflects access to a clean energy technology.	
Human and institutional capacity		not applicable	**Explanation:** It is not expected that human and institutional capacity will improve considerably by the project. Although the project has helped to improve the advanced provincial officers capacity through training of project management (monitoring and evaluation), also advanced masons through business start-up and marketing skill courses.	0
Economic and technological development				
Quantitative employment and income generation		Applies for MDG, target 1 (1.b).	**Explanation:** A biogas plant saves expenditure and will indirectly contribute to income generation. The biogas digester however does not generate income. The installation of biodigester will result in employment opportunities of local masons. The program does not keep track of the number of masons employed, only of how many are trained, see	0

			indicator quality of employment. The score on this indicator is therefore not included.	
Balance of payments and investment		Not applicable	No impacts is expected on this parameter.	0
Technology transfer and technological self-reliance		Applied to MDG 8: Target 8f: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	**Parameter:** Number of biodigesters built **Explanation:** The programme is using an indigenous MARD recognized technology which is virtually maintenance free and built by using locally available materials. Construction and after sales services are provided by local artisans**.** The implementation of the project is a clear example technological self-reliance.	+
Justification choices, data source and provision of references				
Air quality	The indoor air quality will improve significantly, since biogas is a clean fuel which does not emit hazardous pollutants (respirable suspended particulate matter, eye irritating smoke) when combusted (Rehfuess, Mehta et al. 2006)[1] An independent company measured the impact on IAP of biogas compared to other fuels. (EPRO (2011) assessment of biogas effects on decreasing air pollution around cooking place). The study showed that biogas caused by far the least amount of IAP compared to coal, wood and agricultural residue. The next table shows the incremental increase in the amount of pollutants in the indoor air of various fuels. **Table 1: Incremental changes in IAP***			

[1] Rehfuess, E., S. Mehta, et al. (2006). "Assessing Household Solid Fuel Use: Multiple Implications for the Millennium Development Goals." Environmental Health Perspectives **114**(3): 373-378.

Parameter	Biogas (HH)	Coal	Wood	Crop residue
SPM	0	0.03	2.99	3.51
CO	0.19	4.15	1.75	1.17
SO2	0.01	0.01	0.01	0.01
HCs	0.15	0.34	0.48	0.38
H2S	0	0	0.02	0.01

** concentration of pollutants after cooking – before cooking*

The parameters in the table shows that the use of biogas deteriorate the indoor air the least. The next table shows the relative increases of pollutions compared to biogas

Table 2: Relative increase of IAP compared to the use of biogas

Parameter	Coal	Wood	Crop residue
SPM	*	*	*
CO	2184%	921%	616%
SO2	100%	100%	100%
HCs	227%	320%	253%
H2S	*	*	*

** Impossible to calculate the relative increase as biogas did not increase the pollutions after cooking (incremental change = 0). The other fuels however did show an increase, and although impossible to calculate, the increase compared to biogas is enormous (see table 1).*

The study shows that biogas is a much cleaner fuel compared to the other fuels. The decrease of the use of solids fuels is used as a proxy for the improvement in IAP in the monitoring plan.

Water quality and quantity	Unsafe water and lack of sanitation ranks number 6 of the top 10 disease factors according to the WHO[2]. A biodigester treats waste, removes pathogens and coliforms. However as bio-slurry contains the same amount of nutrients as manure, it is not expected that the water quality will decrease or improve considerably.
Soil condition	The literature shows that bio-slurry has similar characteristics as chemical fertilizer (Srinivasan 2008)[3], and can therefore displace chemical fertilizers and amend the soil.

[2] WHO (2002). World Health Report: Reducing Risks, Promoting Healthy Life. Geneva.
[3] Srinivasan, S. (2008). "Positive externalities of domestic biogas initiatives: Implications for

Other pollutants	Biogas generation does not result in other pollutants and therefore this indicator is scored neutral, see http://www.snvworld.org/sites/www.snvworld.org/files/publications/snv_domestic_biogas_leaflet.pdf,
Biodiversity	Biogas plants help to conserve natural habitat according to a WWF report: http://www.worldwildlife.org/what/howwedoit/conservationfinance/Approaches%20to%20Financing%20Conservation.html
Quality of employment	Training of masons will lead to the creation of skills. With these skills masons can work with biodigester or in other construction works[4]
Livelihood of the poor	The installation of a bio digester will improve sanitation, make the yard cleaner and will properly treat waste (UNEP: http://www.unep.org/ietc/Portals/136/Other%20documents/Other%20projects/Ecological%20sanitation%20-%20Philippines/Case%20studies%20from%20Cambodia/08%20KH_SNV_NBP_Project_Case_Study.pdf
Access to affordable and clean energy services	The only costs of biogas are the opportunity costs involved in the daily operation and maintenance of the biogas plant. However, since the time involved in collection fuel wood, tendering the wood fire, cleaning the sooth from the pans is much higher than the total time expenditure of operating the biodigester (ESMAP 2004 ; Dutta, Rehman et al, 1997) ; GTZ, 1999 ; Biogas, being a clean fuel, will reduce the reliance of fuels that are bought, and hence the energy costs will decrease.
Human and institutional capacity	The program trains workings and builds capacity; this is measured with the parameter quality of employment. Although this parameters is related, no other measureable parameters could be identified showing a positive impact on human and institutional capacity. Therefore this parameter is scored 0, see http://www.thepowerofhow.org/uploads/wysiwyg/documents/other_resources/snv/Building_viable_domestic_biogas_programmes.pdf
Quantitative employment and income generation	The main workers are masons. As masons operate independently, it is not possible to measure directly the amount of jobs created. A biogas plant saves fuel, and will not generate income. Therefore this parameter is scored 0. See http://www.thepowerofhow.org/uploads/wysiwyg/documents/other_resources/snv/Building_viable_domestic_biogas_programmes.pdf
Balance of payments and investment	No significant additional impact on payment and investments is expected, the parameter is therefore scored 0, see http://www.thepowerofhow.org/uploads/wysiwyg/documents/other_resources/snv/Building_viable_domestic_biogas_programmes.pdf
Technology transfer and	The use of an in-country developed digester is a clear example of technological self-reliance. The KT1 biogas model has its roots in the

financing." Renewable and Sustainable Energy Reviews 12(5): 1476-1484.

[4] http://www.snvworld.org/en/Documents/Biogas_training_manual_for_mason_a_guide_for_trainer_Nepal_1994.pdf

technological self-reliance	Chinese fixed dome digester. The Vietnamese institute of Energy (IE) was already working on modifying the model before the BP initiative started. SNV and MARD, partnered together in BP, have used this as a starting point and IE was part of the hereafter technical improvements. The KT model is even named after one of the Vietnamese founding fathers. It is open source technology, and designs are available for the market. Therefore this is an example of technological transfer and the self-reliance can be shown by the development of KT2 (a modified KT1 biodigester for high water table areas). The number of masons trainings, including refreshment courses, on biodigester construction is used as indicator. Before the onset of the program, biogas activities were small, scattered and lacked proper quality control as described in the PDD B.5 (technological barriers).

SECTION G. Sustainability Monitoring Plan

[See Toolkit 2.4.3 and Toolkit Annex I]

Copy Table for each indicator

No	1
Indicator	Air Quality
Mitigation measure	not applicable
Repeat for each parameter	
Chosen parameter	Reduction in fuel (wood, agricultural residues, kerosene and coal) consumption (kg of fuel reduced/year)
Current situation of parameter	According to the biogas user survey 2011, the average biogas household uses
Estimation of baseline situation of parameter	

Fuel *i*	Average per household (kg/year)
Charcoal	0.0
Coal	0.0
Firewood	142.4
Agriculture residues	84.6
Kerosene	0.0

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		<table><tr><td>Fuel *i*</td><td>Average per household (kg/year)</td></tr><tr><td>Charcoal</td><td>93.2</td></tr><tr><td>Coal</td><td>362.8</td></tr><tr><td>Firewood</td><td>1855.6</td></tr><tr><td>Agriculture residues</td><td>556.5</td></tr><tr><td>Kerosene</td><td>0.7</td></tr></table>
Future target for parameter		Significant reduction realized by the provision of a clean and sustainable fuel: biogas
Way of monitoring	How	Monitoring survey
	When	Updated for every 2 years or more frequently
	By who	BPD or an external consultant

No		2
Indicator		Soil condition
Mitigation measure		Not applicable
Repeat for each parameter		
Chosen parameter		Usage of bio-slurry
Current situation of parameter		Not available
Estimation of baseline situation of parameter		Bio-slurry is not used as farmers do not have a biodigester
Future target for parameter		Most household use bio-slurry as fertilizers
Way of monitoring	How	Monitoring survey
	When	Updated for every 2 years or more frequently
	By who	BPD or an external consultant

No	3
Indicator	Biodiversity
Mitigation measure	
Repeat for each parameter	
Chosen	Cumulative savings of wood

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parameter		Calculation is as follows: average consumption of fuel wood per household ($P_{h,y}$) in the baseline - average consumption of fuelwood in the project is the reduction of fuelwood per average household, that times the number of biodigesters (N_p) and times the percentage of units in use (**$U_{p,y}$**) **$RE_{fuel} = (\sum P_{h,y} - \sum P_{h,y}) \times N_p \times U_{p,y}$**
Current situation of parameter		Not available
Estimation of baseline situation of parameter		No savings
Future target for parameter		Significant reduction of wood demand realized by the provision of a clean and sustainable fuel: biogas
Way of monitoring	How	Monitoring survey
	When	Updated for every 2 years or more frequently
	By who	BPD or an external consultant

No		4
Indicator		Quality of employment
Mitigation measure		not applicable
Repeat for each parameter		
Chosen parameter		Number of masons and technicians participating in the trainings
Current situation of parameter		as of 13/9/2011, 622 technicians and 922 masons participated in the trainings (Training records of the trainings)
Estimation of baseline situation of parameter		0, no masons and technicians are trained prior to the project activity
Future target for parameter		At least 2 district biogas technicians and 2 biogas masons per district provided with training
Way of monitoring	How	Training reports of the trainings
	When	compiled by the PBDP and sent to BPD biannually or annually
	By who	BPD staff, PBPD staff (Provincial BPD staff)

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No		5
Indicator		Livelihood of the poor
Mitigation measure		not applicable
Repeat for each parameter		
Chosen parameter		Number of people having access to an improved waste management system
Current situation of parameter		As of 30/04/2011 around 80,964 units are built, with an average household size of 4.9 (BUS 2011), around 396734 people benefit from the improved waste management system
Estimation of baseline situation of parameter		
Future target for parameter		Significant reduction in traditional fuel consumption by biogas
Way of monitoring	How	Monitoring survey
	When	Updated for every 2 years or more frequently
	By who	BPD or an external consultant

No	6
Indicator	Access to affordable and clean energy services
Mitigation measure	not applicable
Repeat for each parameter	
Chosen parameter	Total amount of energy replaced by biogas
Current situation of parameter	

Fuel i	Baseline (MJ/year)	MJ/year	MJ displaced by biogas
LPG	840	104	736.31
Charcoal	2749	0	2748.54
Coal	9359	1757	7601.66
Firewood	28944	2222	26722.12
Agriculture residues	6454	982	5472.58
Kerosene	29	0	29.20
Total	**48375**	**5064**	**43310**

Source: BUS 2011 and VGS database

Estimation of baseline situation of parameter	energy requirement of around 48375 MJ/year

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Future target for parameter		Reduction of around 43310 MJ/year by biogas
Way of monitoring	How	Data on fuel use is collected during the application for a biogas unit using form 03 and subsequently multiplied with the NCV that is used in the PDD of the respective fuels. The remaining fuel use is obtained using the carbon monitoring survey and multiplied with the NCV that is used in the PDD for the respective fuels.
	When	Updated for every 2 years or more frequently
	By who	BPD or an external consultant

No		7
Indicator		Technology transfer and technological self-reliance
Mitigation measure		not applicable
Repeat for each parameter		
Chosen parameter		**Number of masons trained in the construction of KT1 or KT2 bio-digesters**
Current situation of parameter		922
Estimation of baseline situation of parameter		0
Future target for parameter		At least 2 2 biogas masons per district provided with training
Way of monitoring	How	Training reports of the trainings
	When	compiled by the PBDP and sent to BPD biannually or annually
	By who	BPD staff, PBPD staff (Provincial BPD staff)

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Additional remarks monitoring

The monitoring will be part of the carbon monitoring survey (CMS), see the PDD for QC/QA, monitoring plan and implementation.

SECTION H. Additionality and conservativeness

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

[See Toolkit 2.3] Additionality follows GS guidance. The PDD details the additionality assessment.

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H.2. Conservativeness

[See Toolkit 2.2]

Conservativeness in emission claims:

1. 10% of the total captured and destroyed methane will be considered as leakage, this is conservative, since the retention time in the biodigester is relatively long and consequently most biodegradable VS is converted into biogas.
2. The GS-VER methodology assumes that 2% of the biogas is not combusted due to combustion inefficiencies. Laboratory testing of the stoves however have not detected methane release from the stoves. The 2% not combusted is therefore conservative.
3. Emission reductions from electricity savings by using biogas lamps instead of electricity or other appliances that save electricity (i.e. biogas rice cookers, biogas water heaters, biogas generators, biogas heaters) is not accounted for.
4. The GWP of methane used is 21, more recent assessments by the IPCC put the GWP of methane at 25
5. The emission reductions from the reduction of chemical fertilizers are not included, which amount to 0,08 tCO2/year. The reduction of N_2O emission from the application of chemical fertilizers, a very potent greenhouse gas, with a GWP of 310, are not claimed, the total emission claims are therefore conservative.

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ANNEX 1 ODA declaration

[See Toolkit Annex D]

DEPARTMENT OF LIVESTOCK PRODUCTION
MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT OF S.R. VIET NAM
Address: 2 Ngoc Ha Street, Ba Dinh District, Hanoi – Vietnam.
Tel: (84-4) 3734.5443
Fax: (84-4) 3734.5444
http://www.mard.gov.vn
MARD

Date: Hanoi, 30 August 2011

Project reference: The Project "Biogas Program for the Animal Husbandry sector of Vietnam"
To: Gold Standard Foundation
Declaration of Non-Use of Official Development Assistance by Project Owner

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

I hereby declare that I am duly and fully authorized 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.

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: Hoang Kim Giao
Title: Program Director