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# Domestic Biogas Newsletter

**SNV**

Connecting People's Capacities

Issue 2 - January 2010

Dear reader,

**Happy New Year 2010. May it bring renewed energy, good health and happiness!**

**We are very pleased to present the second issue of our SNV Domestic Biogas Newsletter and we hope you will enjoy reading these brief reports.**

*In this issue:*

- Production rate of biogas plants up almost 50% in 2009
- International Workshop on Domestic Biogas in Nepal
- Indonesia Domestic Biogas Programme
- Mid-Term Review of the National Domestic Biogas Programme in Rwanda
- Financial and economic performance of domestic biogas
- International bio-slurry tour and training in Cambodia

## Production rate of biogas plants up almost 50% in 2009

*Cumulatively, 300.000 households benefit from SNV-supported programmes*

In 2009, more than 53,000 biogas plants were installed through the country programmes supported by SNV – an increase of almost 50% on 2008. The table below provides an overview of the unofficial numbers from 2009. The largest numbers were realised by the Biogas Programme (BPII) in Vietnam and the Biogas Support Programme (BSP) in Nepal. The National Domestic Biogas and Manure Programme (NDBMP) in Bangladesh has also been doing well, with more than 5,000 units installed.

In Lao PDR, very few households decided to construct a biogas plant in the first half of the year under the Biogas Pilot Programme (BPP). However, the BPP managed to put various measures in place, resulting in more than 700 units being installed by the end of 2009. New programmes started in Pakistan in cooperation with the Rural Support Programmes Network (RSPN) and Winrock International (WI), and in Indonesia (see below). The first plants were commissioned and prospects look good for acceleration in 2010.

Compared to Asia, biogas development in Africa has been pretty modest so far. New efforts are being made to establish biogas sectors in six African countries (Ethiopia, Tanzania,

| Country       | Programme took off in | 2008          | 2009          | Cumulative up to 2009 |
|---------------|-----------------------|---------------|---------------|-----------------------|
| <b>Asia</b>   |                       |               |               |                       |
| Nepal         | 1992                  | 14,002        | 18,902        | 205,762               |
| Vietnam       | 2003                  | 17,012        | 25,764        | 75,820                |
| Bangladesh    | 2006                  | 2,648         | 5,050         | 10,019                |
| Cambodia      | 2006                  | 2,340         | 2,616         | 6,402                 |
| Lao PDR       | 2006                  | 188           | 722           | 1,020                 |
| Indonesia     | 2009                  | -             | 50            | 50                    |
| Pakistan      | 2009                  | -             | 100           | 100                   |
| <b>Africa</b> |                       |               |               |                       |
| Rwanda        | 2007                  | 120           | 213           | 434                   |
| Ethiopia      | 2008                  | 98            | 30            | 128                   |
| Kenya         | 2008                  | -             | 3             | 3                     |
| Tanzania      | 2008                  | 3             | 103           | 106                   |
| Uganda        | 2008                  | -             | 40            | 40                    |
| Burkina Faso  | 2009                  | -             | 1             | 1                     |
| Cameroon      | 2009                  | -             | 23            | 23                    |
| <b>Total</b>  |                       | <b>36,411</b> | <b>53,617</b> | <b>299,908</b>        |

Kenya, Uganda, Burkina Faso and Senegal) through the Africa Biogas Partnership Programme (ABPP), which is co-financed by the Netherlands Directorate General for International Cooperation (DGIS) and SNV. Hivos, a Dutch NGO is acting as manager of the DGIS fund. Up-scaling in Rwanda proved to be difficult (see below). The Tanzania Domestic Biogas Programme (TDBP) installed over 100 units in 2009, and the first plants were also completed in Uganda, Kenya, Cameroon and Burkina Faso. The first plants in Senegal and Benin are targeted for 2010.

The total number of plants installed up to 2009 under SNV-supported programmes amounts to 300,000.

[back to top](#)

## International Workshop on Domestic Biogas in Nepal

*SNV calls for scaling-up biogas practices*

SNV and the Asian Development Bank (ADB) organised an International Workshop on Domestic Biogas in Kathmandu, Nepal, from 10-12 November 2009. A total of 170 representatives of private and civil society organisations, government institutions, knowledge centres, development agencies and international donors from 25 countries in Asia, Africa, North and Central America and Europe participated in the workshop. The programme of the Workshop included: an inaugural session, four plenary presentations, six parallel sessions on different topics related to dissemination of domestic biogas technology, a field visit to a rural biogas village, an exhibition of biogas products and services in a market place, plenary reporting and evaluation sessions, and a closing session. After the closing session on 12 November, a special ceremony was organised to celebrate the installation of the 200,000th biogas plant in Nepal under BSP in the presence of the President of Nepal, Dr Ram Baran Yadav.

During the event, the Working Group on Domestic Biogas under the Energy for All Partnership was officially launched. This Working Group aims to find innovative ways to equip an additional one million households in about 15 Asian countries with quality biogas plants by 2015/16. A series of activities are planned, ranging from feasibility studies to quality implementation. Through networking and joint learning, involving key stakeholders in Asia as well as experts around the world, supra-national synergies will be pursued to increase efficiency, effectiveness, innovation and accelerated growth of the sector.



For more information, [please click here to view the full Workshop report](#)

[back to top](#)

## Indonesia Domestic Biogas Programme

*Hivos, Government of Indonesia and SNV launch programme with Dutch financial support*

In 2008, SNV conducted a study on the feasibility of a national programme on domestic biogas in Indonesia. The study was commissioned by DGIS and the Embassy of the Kingdom of the Netherlands (EKN) in Jakarta at the request of the Directorate General for Electricity and Energy Utilisation (DGEEU) of the Government of Indonesia. Its conclusions were positive. The technical potential for biogas was assessed to be a minimum of one million units, while no significant technical, financial or social limitations were found. The country has a history in domestic biogas, with about 6,000 units constructed. Before the year 2000, mostly fixed dome digesters were applied, but in more recent years the plastic bag digester has become more popular. The technical life of a plastic bag digester is rather short – on average two years under normal field conditions.

With funding by EKN/Jakarta, Hivos started to implement the Indonesia Domestic Biogas Programme from May 2009 onwards with technical assistance by SNV and in close cooperation with DGEEU. The Programme aims to install 8,000 biogas plants, including 2,000 units outside of Java, by the end of 2012.

By the end of December 2009, 50 plants had been installed through partner organisations in Bandung, Garut, Pasuruan, Malang and Solo. In December, Bank Syariah Mandiri (BSM) in Malang made a first disbursement to Setia Kawan Cooperative in Pasuruan, East Java, to build 50 digesters. This fund was obtained from a Debt for Nature Swap programme under the Indonesian Ministry of Environment.



For further information, [please click here to view the programme flyer](#)

[back to top](#)

## Mid-Term Review of the National Domestic Biogas Programme in Rwanda

### *Barriers to sustainable biogas dissemination*

The National Domestic Biogas Programme (NDBP) in Rwanda was initiated in 2007 with a total production target of 15,000 units. The Rwandan Ministry of Infrastructure is responsible for implementing the programme, which is co-funded by its own resources and by the DGIS-financed EnDev programme managed by GTZ. Capacity building services to the programme are being provided by SNV and GTZ. In May 2009, a loan agreement was concluded between the 'Banque Populaire du Rwanda', the Ministry of Infrastructure and the Netherlands households with a credit facility. This facility became effective in October 2009.

By mid 2009, only several hundred biogas plants Development Finance Company (FMO) to support prospective biogas had been completed and so it was decided by the programme partners that a Mid-Term Review (MTR) of the NDBP should be conducted. The review team consisted of Mr. Andreas Michel (GTZ), Mr. Felix ter Heegde (SNV) and Mr. Antonie de Wilde (independent evaluator). The team concluded that the programme is being executed with highly committed and skilled programme staff, is imbedded in a conducive policy environment and is guided by a dedicated government. The main components of the NDBP (promotion & marketing, quality control and training) were found to be well designed, developed and executed. The main issues marring scaling-up, as per the mission's view, include the very high investment costs of the biogas installation; the delay in making the biogas loan product available, which should mitigate to some extent the above mentioned high up-front investment for the household, and; the delay in gearing the programme towards a truly dissemination and market focused organisation. The review generated several recommendations, including the marketing of a 4 m<sup>3</sup> biogas unit. The MTR report may be of interest for other countries, especially in Africa, which are in the process of setting up national biogas programmes.



For further information, [please click here to view the full Mid-Term Review report](#)

[back to top](#)

## Financial and economic performance of domestic biogas

### *"Irresistible attractions"*

In the opening session of the International Workshop on Domestic Biogas in Nepal, Mr. Felix ter Heegde gave a presentation on the financial and economic performance of domestic biogas plants in 12 Asian and African countries entitled "Irresistible attractions". The investment costs of an average-sized unit varies between EUR 300 and 800, with the most expensive units produced in the African countries and Indonesia. There are large variations in the cost of the plants in relation to GDP: in Vietnam they cost less than 20% of GDP, while those in Tanzania almost cost 120% of the GDP. The total biogas costs (TBC) have been compared with the financial as well as economic benefits expressed in biogas substitution values (BSV). The following benefit areas have been taken into account: energy, agriculture, environment, employment generation and health and sanitation. For all countries, the economic benefits have proved higher than the financial benefits, justifying the provision of investment subsidies to farmers.



For further information, [please click here to view the presentation slides](#)

[back to top](#)

## International bio-slurry tour and training in Cambodia

*Bio-slurry termed as "black gold"*

In December 2009, SNV organised a five-day international bio-slurry study tour and training session, in association with the National Biodigester Program (NBP) of Cambodia. A total of 15 participants from six countries in Asia and Africa exchanged knowledge and experiences. In his opening speech, His Excellency Mr. Nou Muth of the Cambodian Ministry of Agriculture, Forest and Fisheries labelled bio-slurry 'black gold' to express its potential benefits for agricultural production. Country papers presented the status of bio-slurry research and extension activities on bio-slurry, and highlighted successes and failures. A field trip exposed the participants to biogas plants including farm-level bio-slurry management, as well as field and home garden demonstrations in Takeo and Kampot provinces. Training topics included application rates for bio-slurry and extension methods.



[back to top](#)

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For more information on SNV, please visit our website: [www.snvworld.org](http://www.snvworld.org)

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We contribute to this by strengthening the capacity of local organisations.

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