Production rate of biogas plants increased

In the first half of 2012, more than 46,000 biogas plants were installed in various countries in Asia and Africa supported by SNV. The table provides an overview of the unofficial production numbers of biogas plants installed in the first half of 2012, as well as cumulative numbers:

<table>
<thead>
<tr>
<th>Country</th>
<th>Programme took off in</th>
<th>2011 (official)</th>
<th>1st half of 2012 (official)</th>
<th>Cumulative up to 1st half of 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nepal</td>
<td>1992</td>
<td>19,246</td>
<td>17,942</td>
<td>268,418</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2003</td>
<td>23,309</td>
<td>16,984</td>
<td>140,698</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2006</td>
<td>5,049</td>
<td>2,855</td>
<td>23,611</td>
</tr>
<tr>
<td>Cambodia</td>
<td>2006</td>
<td>4,826</td>
<td>2,475</td>
<td>17,450</td>
</tr>
<tr>
<td>Laos</td>
<td>2006</td>
<td>4,391</td>
<td>310</td>
<td>2,715</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2009</td>
<td>860</td>
<td>650</td>
<td>2,037</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2009</td>
<td>2,970</td>
<td>959</td>
<td>5,572</td>
</tr>
<tr>
<td>China</td>
<td>2011</td>
<td>40</td>
<td>115</td>
<td>155</td>
</tr>
<tr>
<td>Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rwanda</td>
<td>2007</td>
<td>785</td>
<td>325</td>
<td>2,171</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2008</td>
<td>1,641</td>
<td>732</td>
<td>3,232</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2008</td>
<td>1,444</td>
<td>763</td>
<td>3,334</td>
</tr>
<tr>
<td>Kenya</td>
<td>2009</td>
<td>2,399</td>
<td>1,678</td>
<td>4,917</td>
</tr>
<tr>
<td>Uganda</td>
<td>2009</td>
<td>1,276</td>
<td>423</td>
<td>2,375</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>2009</td>
<td>609</td>
<td>456</td>
<td>1,177</td>
</tr>
<tr>
<td>Cameroon</td>
<td>2009</td>
<td>33</td>
<td>6</td>
<td>111</td>
</tr>
<tr>
<td>Benin</td>
<td>2010</td>
<td>20</td>
<td>0</td>
<td>42</td>
</tr>
<tr>
<td>Senegal</td>
<td>2010</td>
<td>225</td>
<td>95</td>
<td>334</td>
</tr>
<tr>
<td>Total</td>
<td>65,171</td>
<td>46,771</td>
<td>479,359</td>
<td></td>
</tr>
</tbody>
</table>

1 Including plants financially supported by WCD between 2007 - 2011; total 7,925
2 Including plants under ADU and WCD supported programmes between 2010 - 2012: total 10,202

The longest running programmes, the Biogas Support Programme (BSP) in Nepal and the Biogas Programme (BPII) in Vietnam, are well on track to exceed by the end of 2012 the total number of installed plants from 2011.

In Bangladesh, Pakistan and Indonesia, the domestic biogas programmes perform in the first half of 2012 less than forecasted. Still, the Indonesia Domestic Biogas Programme managed by Hivos reach a milestone of 5,000 biodigesters in approximately three years of implementation.

The nine African biogas programmes have not witnessed the planned production rates in the first half of 2012 yet, although the country programmes in Ethiopia, Tanzania, Kenya and Burkina Faso are on track to match the successful production levels of last year. The Kenya Domestic Biogas Programme nearly reached its milestone of 5,000 biogas plants installed since inception in 2009.
Thus far, the countries supported by SNV have installed a total more than 475,000 plants. Financial support was provided by a wide spectrum of national and international organisations including the Netherlands Ministry of Foreign Affairs (DGIS); German Development Bank (KfW) for Nepal and Bangladesh; World Wildlife Fund for Nepal; Blue Moon Fund for Lao PDR, Asian Development Bank for Vietnam and Bhutan; the World Bank for Nepal and Vietnam; Hivos for Indonesia, Cambodia and ABPP countries; People in Need for Cambodia; the Netherlands Finance Development Company (FMO) for Cambodia; and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) for Cambodia and Rwanda.

The giant biogas countries China and India (April 2010 to March 2011) produced respectively 2.8 million and 150,000 biogas plants in 2011, arriving at impressive cumulative numbers of 42.8 million and 4.5 million units installed.

Feasibility studies for national programmes on domestic biogas have been conducted by SNV and partners for Sri Lanka, Myanmar, the Philippines, Peru, Bolivia and Honduras and Nicaragua. The programme in Nicaragua will soon start implementation activities, while the other countries are proceeding to secure programme financing.

### International workshop on domestic biogas in Asia

Asia is the centre of domestic biogas development, with the People’s Republic of China having installed more than 42 million units (by the end of 2011) and India about 4.4 million units (by the end of March 2011) based on strong government support.

With support by SNV Netherlands Development Organisation, market-based national programmes have started in eight Asian countries. By the end of 2011, more than 430,000 biogas plants were installed.

More than fifty different organisations currently cooperate in the Working Group on Domestic Biogas convened by SNV under the Energy for All Partnership (E4ALL) initiated by the Asian Development Bank (ADB). The objective of this group is the construction of one million domestic biogas plants across fifteen Asian countries by 2016, providing access to sustainable energy to five million people.

More recently, efforts on the generation of carbon credits from national biogas programmes have resulted in success for among others Cambodia, India, Nepal and China. The question is if and how carbon financing can be further increased in these countries, but also applied in other countries with a sizable programme.

Against this background, SNV and the Biogas Institute of the Ministry of Agriculture (BIOMA) of China, in cooperation with the ADB/E4ALL, are organising an International Workshop on Domestic Biogas in Chengdu, China.

Please click here to download the first announcement of the workshop
SNV and FAO release Myanmar biogas feasibility study

In rural areas of Myanmar, over 90% of the people depend on biomass fuels, like firewood, for cooking. Women and children especially are exposed to harmful fumes in their kitchens when cooking with these fuels. The costs of biomass fuels or the time spend on fuel collection are becoming a substantial burden. More than 80% of the rural population does not have access to electricity.

SNV and the UN Food and Agriculture Organization (FAO) have released a study assessing the feasibility of setting up and implementing a national biogas programme in Myanmar. Using animal manure as feedstock, Myanmar has a limited history in biogas: household plants providing fuel for cooking and basic lighting and community biogas plants generating electricity at village level. Practices lack proper standardisation and actors without proper coordination.

The study concluded that the technical potential of biogas plants amounts to a minimum of 600,000 units. Increasing prices of firewood for cooking together with a large cattle population provide an opportunity for biogas production, especially in the Dry Zone in Central Myanmar. There’s a will and interest among (potential) stakeholders to be engaged in a national programme.

The feasibility study provides a tentative outline for a national biogas programme, with a long-term vision to develop a commercial, sustainable biogas sector, including the production of 3,600 household and 300 community biogas plants in three potential divisions of Central Myanmar (Mandalay, Sagaing and Magway).

The households and villages (37%) and donor organisation(s) (63%) are the proposed investors/financiers of the programme, while it is recommended that the Government of the Republic of the Union of Myanmar (GoRUM) provides policy support. In addition, an earmarked credit fund for the financing of both household and community biogas plants will be required to tap the potential demand.

Click here to download the biogas feasibility study for Myanmar
Click here to download the brief proposal for a national biogas programme in Myanmar

Rwanda: charging your phone with cow dung

When one thinks of animal dung, one usually thinks: messy. Dutch research institute TNO has developed a prototype of a socket that turns biogas heat into electricity. Together with SNV and BoP Innovation Centre, students at Delft University of Technology visited Rwanda for TNO to test this new prototype in people's homes. Who could have ever imagined, that one day mobile phones would be charged with cow dung?

Students Anne Jansen (24) and Diana Alacron (32) spent six weeks in Rwanda's countryside, where they spoke with families to understand their specific needs when it comes to gas and electricity. "We noticed a need for gas for cooking, but also for electricity," says Diana. "Eighty per cent of the Rwandan population has no access to electricity." Meanwhile, according to their research, almost everyone owns a mobile phone - both parents and their children.

"When people don't have electricity, they walk every three days to the city where they leave the phones on little charging stations," explains Anne. "This means a lot of effort, time and money is spent on charging. Electricity would make them more independent".

Read the full story here
ISO certificate for Bangladesh biogas

The SNV-supported National Domestic Biogas and Manure Programme (NDBMP) of Bangladesh has achieved a milestone in the journey of quality. It has received an ISO 9001:2008 certificate reflecting the programme’s commitment to quality services.

The certificate covers subsidy, credit administration and management processes of the National Domestic Biogas and Manure Program. SNV has been working in Bangladesh since 2006, supporting the Government of Bangladesh to implement the National Domestic Biogas and Manure Programme (NDBMP).

The programme is being implemented by Infrastructure Development Company Limited (IDCOL), a government owned non-banking financial institution, in partnership with a range of other national and local partner organisations. ISO 9001 is the internationally recognised standard for the quality management of businesses, and is part of the ISO 9000 family.

Renewed online Renewable Energy library launched

SNV’s online Renewable Energy publications library (click here) has been redesigned. The library hosts a wide-range of publications related to the renewable energy sub-sectors SNV supports: domestic biogas, biofuels and improved water mills.

The library allows easy filtering to find your desired publication via sub-sectors, subjects, geographically per continent and/or country and types of publications. Each publication contains a brief summary and document details, which can be viewed before downloading a document. The publications library will be further enhanced with search engine features besides the current filter options.

Knowledge networking of domestic biogas in Asia

"Anyone without sufficient technical or biogas experience must take this training at day one of his/her work in the biogas sector," says Agi Safitri.

Ms. Safitri works for the Indonesia Domestic Biogas Programme in Jakarta, Indonesia. Along with 22 participants from nine different countries attended the five day training programme conducted in August 2012 for biogas professionals at the School of Environment, Resources and Development (SERD), Asian Institute of Technology (AIT).

Organised by AIT Bangkok, in partnership with SNV, the 'Biogas Design and Management' training programme enabled participants to acquire technical know-how on approaches and technologies for mass dissemination of domestic biogas. The training was sponsored by the Asian Development Bank (ADB) and Energy Environment Partnership- Mekong (EEP).

"The training provided in-depth technical knowledge on domestic biogas from highly experienced trainers. It also touched upon programmatic aspects such as financial analysis, bio-slurry utilisation and carbon financing. It was a very good opportunity to learn about biogas programmes in different countries", adds Ms. Safitri.

The training concluded with recommendations for AIT, and SNV to collaborate on future training courses for biogas professionals, to facilitate knowledge transfer for the promotion of biogas in various countries.
Pakistan Domestic Biogas Programme newsletter released

In Pakistan, rural households often depend on fuel wood for domestic use such as cooking and lighting, therefore exhausting forests and damaging the environment. The households often lack access to modern sources of energy or they cannot afford it.

Started in 2009, the goal of the five-year Pakistan Domestic Biogas Programme (PDBP) is to improve the livelihoods and quality of life of rural farmers through exploiting the market and non-market benefits of domestic biogas. The purpose of the programme is to develop a commercially viable domestic biogas sector.

The Rural Support Programme Network (RSPN) is engaged as the main implementing partner, supplemented by NGOs, farmers’ organisations and dairy organisations. SNV provides technical assistance. RSPN released the third edition of the Pakistan Domestic Biogas Programme newsletter.

Please click here to download the newsletter

Read more about RSPN

The Arusha Tale

Mr. and Mrs. Seleman are a couple with three children. They are farmers living in Arusha, Tanzania. For a long time, they had been using firewood, charcoal, purchased gas, electricity and kerosene as sources of energy for their household. Their misery can well be conceptualised considering the disadvantages associated with the named sources of energy: high costs, sickening smoke, scarcity, interruptions especially from electricity blackouts, hassle of obtaining them, especially firewood. The danger paused to the forest (environment) cannot be gainsaid; not to mention the carbon emissions.

The family acquires a biogas digester in April 2010. Since then, they cannot hold back their joy: “Biogas benefits us in many ways” they said in delight. "We no longer cut our trees for firewood, the bananas provide us with shades, we do not buy kerosene anymore for lighting...”

Among the immediate benefits is the financial savings for energy; cooking and lighting. The yearly savings amount to more than TZS 300,000 (€ 150)! Besides, income from their agricultural financial operations, has grown from TZS 260,000 (€ 130) to around TZS one million (€ 500).

Apart from the economic gains, Mrs. Seleman celebrates the cleanliness of her kitchen. Thanks to the smokeless biogas! The kitchen is more spescious due to absence of firewood. Mrs. Seleman now has more time than ever. The available time was otherwise used to collect firewood. This time is now diverted to other economic and social activities.

Besides the use of biogas as a source of energy, this household uses bio-slurry (a by-product in biogas production) as fertiliser for growing bananas, flowers, trees and vegetables. They also use slurry as pesticides for plants. The systematic and intensive use of slurry in all their agricultural activities has resulted in remarkable change in harvests and also significantly improved productivity. The excess slurry is dried and sold to the neighbours.

Read more on the Africa Biogas Partnership Programme
Biogas Programme for the Animal Husbandry Sector in Vietnam

Over 2011, more than 15,500 biogas units were installed in 48 provinces in Vietnam benefitting over 80,000 people with improved livelihoods and clean energy. Please watch the video to see a year of work summarised in a 14 minute video clip.

Watch video

Biodigester Programme wins first Energy for Life Award

The award was announced on 23rd December by Energy for Life, a three-year awareness raising campaign developed with the objective of promoting renewable energy as a tool towards poverty alleviation and sustainable development as to improve the quality of life in Europe and in developing countries.

Started in mid-2011, the competition allowed governmental, local non-governmental, and international not-for-profit organisations from the European Union or developing countries with activities in the five target countries including Lao PDR, Cambodia, Tanzania, Brazil and Bolivia to join. Sixteen qualified projects were evaluated and three winners were finally chosen.

Based on various criteria including the feasibility, sustainability and replicability (social, ecological, economical), number of beneficiaries, amount of savings (dollars, fossil fuel), amount of CO2 reduction, social and financial impacts, the Energy for Life Best Practice Award was granted to the best practice that stands out from others. It also considers added value which are environmental issues, gender equality, rights of minorities, indigenous peoples, persons with disabilities, equal opportunities...

All three prize winners will be officially announced at the Energy for Life International Conference “Bridge to the Future: The Power and Promise of Renewables to bridge the gap between rich and poor” to be held in Madrid on 15th- 16th March 2012.

National Biodigester Programme (NBP) is a joint programme between the Cambodia Ministry of Agriculture, Forestry and Fisheries (MAFF) and SNV Netherlands Development Organisation. This pilot phase runs from 2005 till December 2009 and the programme extended till 2012 and scaled-up to 12 provinces.

MAFF has nominated the Department of Animal Health and Production as the advisory and coordinating agency for the programme while SNV provides technical assistance to the programme. As of October 2011, nearly 14,400 plants have been installed and 95% of them are in operation. Over 15 thousands families with 71,000 people are directly benefited by biodigester plants.

Click here for more information on the Award
Innovative microcredits for Cambodian biogas users

A total of 5,800 households in 13 Cambodian provinces have benefited from biodigester loans amounting to USD 3 million with SNV’s assistance. The microfinance institution PRASAC and the SNV-supported National Biodigester Programme (NBP) in Cambodia have been collaborating since 2007 to provide loans to households willing to invest in a biodigester.

Speaking at the Asia-Pacific Rural and Agricultural Credit Association (APRACA) General Assembly in Siem Reap, President and CEO of PRASAC, Sim Senacheert said, "The institution is committed to providing and developing more green financing to the rural people for their livelihood improvement and environmental protection in particular."

The Netherlands Development Finance Company (FMO) financially assists PRASAC, and another national microfinance institution, AMRET, to tailor this biodigester construction credit for households. It is important for households who are willing to invest in a biodigester to have access to microcredits through a credit provider.

SNV supported the NBP in setting-up the credit scheme, which offers special loan conditions for biodigesters constructed under NBP. The conditions of the credit, 1.2% interest per month on outstanding principle and two years running time, are acceptable to most potential clients. The latest figures show that over 70% of new biodigester owners opt for this special investment credit.

More than 90% of the rural population in Cambodia relies on traditional energy sources for cooking. Women and children especially are exposed to harmful fumes when cooking with firewood.

Since 2005, SNV has worked with the Ministry of Agriculture, Forestry and Fisheries (MAFF) in Cambodia to develop a commercially-viable biogas sector. SNV provides technical assistance to the NBP, which celebrated its 15,000th biodigester earlier this year.

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