

# **Strategy on Gender Equity and Social Inclusion For Biogas Support Programme**

**Prepared for  
Biogas Support Programme  
and  
Biogas Sector Partnership - Nepal**

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## **Abbreviation**

AEPC	: Alternative Energy Promotion Center
ASS	: After Sales Service
BSP	: Biogas Support Programme
BSP-N	: Biogas Support Partnership Nepal
CBO	: Community Based Organization
CDM	: Clean Development mechanism
Co	: Company
SR	: Social Responsibility
DDC	: District Development Committee
DGIS	: Directorate General for International Cooperation of Netherlands
DPMS	: District Poverty Mapping System
DWD	: Department of women development
FECOFUN	: Federation of Community Forest Users of Nepal
FUG	: Forest Users Groups
GoN	: Government of Nepal
I/NGO	: International Non-government Organization
ICS	: Improved Cook Stove
ICRC	: International Community for Red Cross
KFW	: Kreditanstalt feur Wiederaufbau (German Development Bank) of Germany
LPD	: Low Penetration District
MAP	: Multi Annual Plan
MDG	: Millennium Development Goal
MFI	: Micro Finance Institutions
MoEST	: Ministry for Environment, Science and Technology
MoF	: Ministry of Finance
NBPG	: Nepal Biogas Promotional Group
NCFUG	: Nepal Community Forest Users Group
NFE	: Non Formal Education
NEFCEUC	: Nepal Federation of Community Electrification Users Committee
NEFCUN	: National Association of Community Electricity Users-Nepal
NGO	: Non Government Organization
RESS	: Renewable Energy Sector Support
RBCC	: Regional Biogas coordination committees
SIGE	: Social Inclusion and Gender Equity
SNV/N	: Netherlands Development Organization/ Nepal
VDC	: Village Development Committee
WDO	: Women Development Office

## 1. Context

Biogas Support Programme (BSP) was started in July 1992 as a SNV/N programme until June 2003 with funding from Directorate General for International Cooperation (DGIS) of Netherlands government through Netherlands Development Organisation in Nepal (SNV/N) up to III Phase. During a crux of Phase III, other partners like Alternate Energy Promotion Centre (AEPC) from Government of Nepal (GoN) and Kreditanstalt fuer Wiederaufbau (KfW) from Government of Germany have also joined hands in the promotion of biogas in the country. The fund from KfW started flowing since March 1997.

Having experience of different working modality such as multiple partnership and ownerships during Phase III, BSP Phase IV (July 2003- June 2009) has designed for 6 years as a larger programme entitled "**Renewable Energy Sector Support (RESS)**" programme. The overall objective of the RESS programme is to improve the living condition of rural households and reduce environmental pollution through further development and dissemination of biogas, improved water mill and other renewable energy technology such as ICS, solar, etc. AEPC and SNV/N has made agreement to provide technical and financial support for Biogas Programme Phase IV whereas subsidy component has been co-funded by KfW, DGIS and GoN.

Since 2003, the biogas support program has been implemented by Biogas Sector Partnership- Nepal (BSP-Nepal, a local non government organisation). BSP-N is the implementing organisation and AEPC is executing organisation for BSP Phase-IV with technical and financial support from SNV/N.

Government of Nepal has also emphasized biogas and other energy options in the national development plan and policy such as

### **Government envisioned through policies and plans**

#### Rural energy policy 2006

- To reduce dependency on traditional energy and conserve environment by increasing access to clean and cost effective energy in the rural areas
- To increase employment and productivity through the development of rural energy resources
- To increase the living standard of the rural population by integrating rural energy with social and economic activities

### **Five Years Development Plan**

The programme is originally aimed to install 200,000 plants in the 10 the plan of the GoN.

### **Interim plan**

In 3 year interim plan 2007/8 to 2010/11, Government has a target of installation of 100,000 biogas plants including 50 community or institutional plants. It has recognised the benefit in terms of environment mitigation as well as enhances agricultural yields from bio-slurry. Hence plan envisages improving access of poor and disadvantaged families by providing additional financial support.

BSP, Multi Annual plan (MAP) (January 2006-June 2009) was prepared for phase IV in line with the Programme Proposal, Internal Assessment, Mid-Term Review and recommendations from stakeholders. BSP-MAP has tried to address cross cutting development issues like **poverty, social inclusion, gender and regional balance** in dissemination of the biogas technology to the rural households.

In 2006, target of phase IV was revised and set as 135,000 with cutting the edge of 200,000 plants due to conflict situation of the country. The approaches and strategies adopted for phase IV are carrot and stick, inter-linkages for synergy and complementarities, making BSP more holistic and inclusive and financial sustainability.

The expected outputs of the BSP Phase-IV are:

1. Quality biogas plants construction in rural areas scaled up and their proper operation ensured.
2. **Pro-poor orientation** and outreach of the programme enhanced through applied research and studies for optimised designs, operation and benefits of the biogas technology.
3. **Gender mainstreaming and social inclusion practices are applied in the programme.**
4. Systematic and sustainable progress made towards developing a commercially viable and market oriented biogas sector.
5. Sectoral players strengthened for sustainable development of the biogas sector.
6. Mechanisms and capability strengthened for availability of micro credit facility to farmers for credit financing biogas plants in rural Nepal.
7. Biogas CDM projects developed, promoted and implemented to meet fund gap in the Phase IV and beyond.

***Pro poor, Gender mainstreaming and social inclusion across the programme are considered as output of the Phase IV.***

Source: Multi Annual Plan

It has also envisaged sustainability of biogas programme through the following strategies:

- enhance quality assurance
- policies and designs for pro-poor schemes finalised and applied
- extend biogas services and product to deprived community such **as dalit and socially excluded people of rural areas**
- replacement of subsidy by credit in urban and high penetration areas and more transparent subsidy system in **rural and less penetration areas**
- bio-slurry is widely applied for income generation
- greater involvement of the local government for implementation considered as one of the function under energy promotional work in district development programme
- trade of CERs and VERs with at least 2 potential buyers processed
- increased **women owned plants and businesses**
- reflection of biogas as priority number one in the government's 3 year interim plan as well as preparation of inclusion in the coming five years development plan
- cheap and user's friendly as well as high altitude suitable biogas technology available for promotion linking energy and livelihood package
- **pros/cons points of the programme targeting to the biogas plant reaching to the potential people including women, marginal and poor** and
- Momentum gain on promotion, etc.

From these above mentioned strategies, we can say that BSP is keen to extend outreach to the women, poor, socially excluded families, rural and low penetration areas.

At the same time the programme implementor, BSP Nepal has developed its vision and mission in line with the proposal of BSP Phase IV.

## **Biogas Sector Partnership Nepal**

### **Vision**

Capable and successful in improving livelihood of communities through promotion of different environment friendly solution

### **Mission**

Promote environment –friendly and sustainable solution to people in partnership with other players in the sectors for improved livelihood and environment protection.

*It shows the livelihood enhancement with considering the environment consequences but for whom or target groups are not clear*

**Source: BSP Year Book 2007, April**

## **2. Progress**

So far 172,505 biogas plants have been constructed (see Table 1) of which larger part of the beneficiaries of the biogas users are from the upper class and caste of the society as Brahman, Thakuri, and Chhetris. It seems that Biogas has less penetration among Terai Upper Castes, Janjati, Dalit and others (see Table 2 & 3) (see annex 1). Female ownership is very few (17%) (Table 4) of total installed plants and concentrated in the urban and semi urban areas (map-Dec 2007). The coverage of programme to the potential biogas users (1.9 million) is just 10% so far. It means there is a huge market potential in this sector.

The programme has reached 67 districts (out of 75) and some 2,665 VDCs out of 3,913 VDCs till December 2007. Total constructed plants reached to 1, 57,669 house holds. During phase IV, 61,110 plants were constructed i.e 45.26% (until July 07) of the target (Phase IV).

*There is huge gap in the biogas ownership distribution among the social groups and gender wise as well as reaching to geographical areas- remote and urban areas.*

### **Institutional paradigm shift from donor owned programme to NGO**

At initial stage, biogas was promoted on project basis which was slowly shifted towards building ownership from the government and other partners. At present the programme is being implemented through the NGO called Biogas Support Partnership-Nepal (BSP-N). Exit strategy of SNV/Nepal is safely handed over to the Nepali owned organisation aiming to sustain the programme in the country. BSP-N took over the responsibility of implementation of biogas sector programme and further strengthening and expanding the sector. At the same time inter-linking efforts to be made in the issues of other development sectors like agriculture, forestry, livestock and women empowerment programme, etc.

## **Biogas promotion mechanism**

Biogas technology has been promoted through private sector in commercial and competitive environment by ensuring quality of the plant and services. BSP is also providing technical and financial support as well as assisting in creating an enabled environment for private companies to work in social sector matching subsidy in plant installation and finally monitoring and preparing database.

BSP provides guideline, instruction for quality maintenance, mentored by the professional team and enhanced capacity of private sector and promoters. BSP is also outsourcing its huge chunk of management work to Nepal Biogas Promotion Group in order to promote private companies in biogas construction. One of the strategies of BSP Phase IV is to promote biogas with its holistic approach.

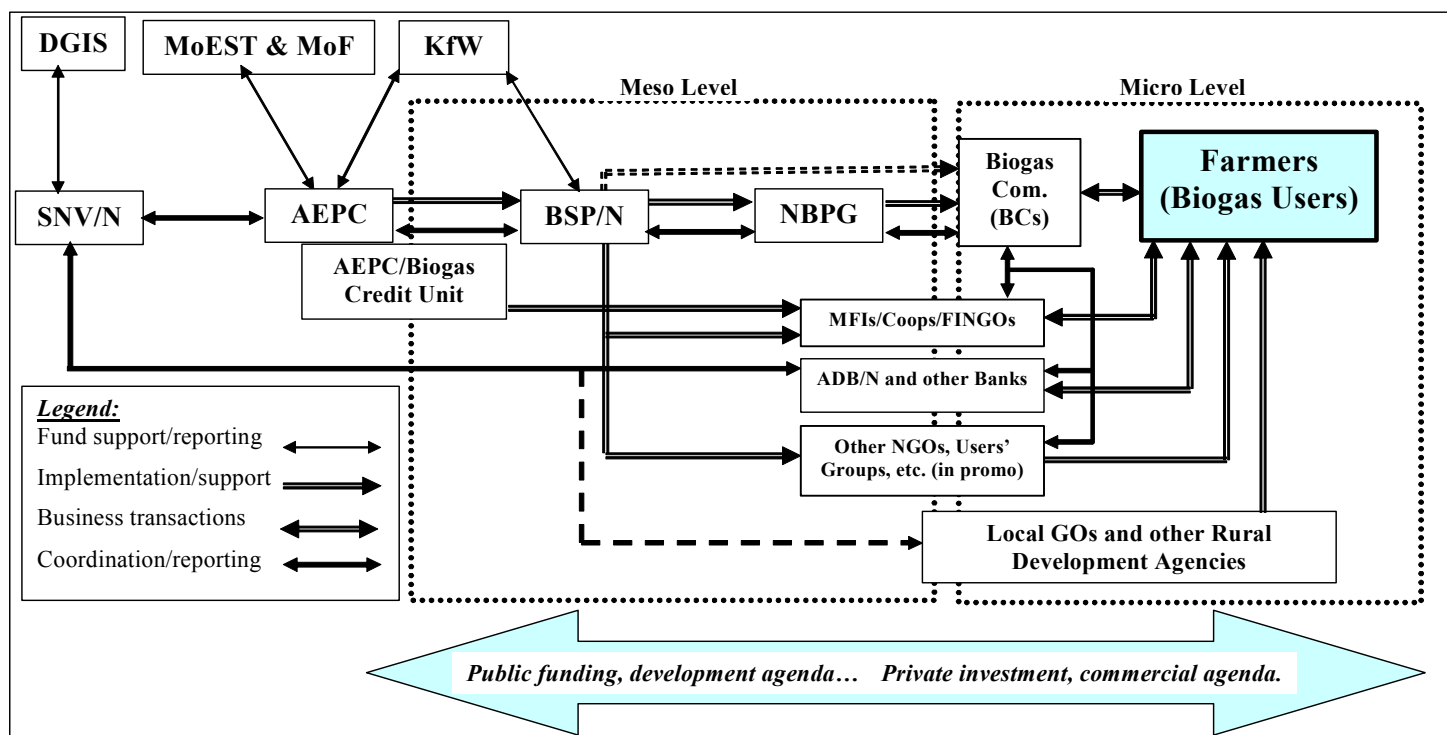
Altogether 70 biogas companies are involving in promotion and plant construction work, of which six (8.5%) private companies are owned by female. Biogas related accessories and appliances are produced and supplied by 16 appliance/ accessory manufacturing workshops, most of them are owned by larger biogas companies non of them is owned by female. Over 3000 skilled masons (8 female) and around 800 trained supervisors (110 female), over 700 skilled after sales service (ASS) technicians (14 female) have been working under the programme; retention rate of them is round up 70%. BSP-N has established network with various national/International and regional institutions such as International Committee for Red Cross (ICRC), FECOFUN, NCFUG, NACEUN, I/NGOs, development programs/projects, DDCs / VDCs, etc. for the promotional activities. The networks further more expanded with Agricultural Development Bank Ltd. and Five Grameen Development Banks (established by Nepal Rastra Bank located in 5 Development regions); and over 150 micro finance institutions for credit support as well as many CBOs for awareness creation to potential biogas users.

To promote biogas plants in 18 Low Penetration Districts (LPDs) an additional subsidy of NRs.500/- per plant is being provided. Additional subsidy for the poor has been supported by KfW and DGIS/SNV on piloting basis to the members of 5 Grameen Development Banks.

Two CDM Projects of 19,396 plants constructed under BSP Phase-IV have been registered with and approved by the CDM Executive Board. The CDM fund is to be a good source for the financial sustainability of the biogas sector.

Actors in the promotion of biogas programme are

### Flow chart for implementation



Roles and responsibilities of different stakeholders under BSP Phase IV are clearly mentioned in MAP document. (see details in annex II)

### Contribution of Biogas Service in MDG/PRSP

MDG goal	BSP's contribution	Expected changes/ results
1. Reduce extreme Poverty and hunger by half	Reduced employment and increased agriculture yield	Reduce fuel wood energy consumption Open avenue to women for productive work Slurry for organic agro production address programme for poverty alleviation, food security Generate temporary employment for poor
2. Achieve universal Primary education	Reduced drudgery, especially girl child and education for children through provision of brighter light	Enrolment of girl child to the school- release Workload from grazing and fuel wood collection Lighting facilitates reading, education and other works
3. Promote Gender equality and empower women	Reduced drudgery of girls and women, cleaner indoor environment and through improved sanitation and health	Women involvement in biogas promotion chain likes promotion, user, productive use, etc More working hr for productive work for women (3hr saving/ every day)
4. Reduced child mortality	Improved maternal health and improved nutrition, etc	Reduce child mortality by reducing work drudgery of pregnant women, indoor air pollution and improve in hygiene, cleanliness, sanitation and income to give better child birth service
5. Improved maternal health	Reduced drudgery, improved indoor environment, etc	Reduce maternal health by reducing work drudgery of pregnant women, indoor air pollution, hygiene, sanitation and income to offer good TBA/ health service
6. Combat HIV/AIDs, malaria and other diseases	Reduced incidence of mainly respiratory and eye related diseases	Healthy and active family members for productive work
7. Ensure environmental sustainability	Saving trees, reduction in GHGs, etc	Reduce fuel wood consumption and grazing livestock, fresh water pollution and sanitation
8. Develop a global partnership for development	CDM, tech. dissemination through cooperation with private sectors, etc	Carbon trade

### 3. Importance of Pro poor, Gender and Social Inclusion Strategy

The objective of the BSP phase IV is to further develop and disseminate biogas plants as mainstreaming renewable energy solutions in rural areas while better addressing *poverty, gender, social inclusion and regional balance issues ensuring and enhancing commercialisation and sustainability of the sector.*

The envisaged outputs of BSP phase IV is pro-poor orientation and extends outreach of the programme by *addressing gender and social inclusion issues as well.*

While analysing the beneficiaries based on its objective & envisaged outputs of biogas programme, plant owners and structure of implementing strategy, there is a gap to reach and enhance access of socially deprived communities and women.

Hence BSP-N felt necessary to prepare and implement ***pro poor, gender and social inclusion strategy in this sector so as to enable reaching the unfortunate/ less financially capable households, less empowered, socially backward, and rural households*** to motivate, mobilise and installed biogas and obtain maximum benefit from the biogas plants contributing to the environment and alleviating poverty of the country.

### 4. Objective of the strategy

Improve working modality and extend network to increase access and render biogas related services to the rural (low penetration areas), poor, socially excluded people (caste wise- dalit, janjati and terai UC) and women.

### 5. Expected results

- 50% increased in the beneficiaries group from the priority social groups and women.
- 40 % increased in biogas promotion in LPD
- 10% increased in access of poor people (as per DPMS record)
- Partnership increased with different development organisations, government line agencies and local NGOs/ CBOs/ FUGs integrating biogas as alternative energy option aiming for holistic development of the target groups
- Increased network and coordination with 10 more financial institutions including micro finance banks and 10 FI NGOs and 100 CBOs/NGOs to increase accessibility of credit to the poor, social excluded groups and women.

Note: Low penetration districts (LPD) are 18 districts (75 districts) which are Achham, Dailekh, Okhaldunga, Rukum, Baglung, Baitadi, Dadeldhura, Doti, Panchthar, Rolpa, Salyanm Taplejung, Dhanusha, Mahotari, Parsa, Rauthat, Saptari, Sirha districts.

### 6. Areas to address gender and social inclusion

#### a) Organisation as such BSP-N & BSP

BSP-Nepal is a NGO established in 2003 to take over the responsibility of implementation of Biogas Support Programme Phase IV. BSP's vision and mission addresses the improving livelihood of the community through promotion of different environmental friendly solution. This vision and mission of BSP-N does not cover the gender, socially excluded group and poor. However, Objective has covered and aiming at better addressing poverty, social inclusion and regional balance. At the same time ensuring enhanced commercialisation and sustainability of the sector is also area of coverage

of the Organisation. The implementing strategy is focused on partnership, promotion, & marketing of environment friendly solution and institutional good governance with professionalism and transparency. BSP-N is positive towards the pro poor, gender and social inclusion and they are paying attention on it. Hence, to be more gender and social inclusion sensitive organisation following actions is recommended to take as measures.

#### **Recommended action points**

- *It is necessary to have addendum or rephrase the vision, mission and goal as promoting environment friendly technology means social product addressing to socially deprived community or who doesn't have access to those product rather than focusing on profit.*
- *It is necessary to prepare social responsibility strategy for biogas companies while promoting biogas as social product*

#### **b) Target groups**

There is huge gap in biogas plant ownership (caste and gender), geographical distribution (rural and urban, mountain, hill and terai) (table 3 and map). Normally biogas services are accessible to the socially higher caste people as shown in table no 2. Biogas installation and operation needs some resources like cattle for cow dung, piece of land and money for plant construction, these are the pre requisites for biogas installation. Hence the technology could not reach to the poor segment of the society whereas special provisions like credit and additional subsidy have been supplemented to improve access of poor households.

Biogas technology is women friendly technology, it reduces work drudgery of women and children as well as support to enrich environment reducing fuel wood consumption for cooking, grazing for fodder and kerosene for lighting, etc. it also helps to maintain hygiene and cleanliness inside the kitchen and indoor air pollution, resulted reduction in respiratory, eye, cough, diarrhoea, dysentery, headache and skin diseases. It also provides more hours at night for productive work and schooling to the children and women for education (NFE). The ratio of women owned biogas plants is just 17% where as 20% households are women headed household and more than 50% population are women (CBS census 2001).

Out of 70 biogas companies, 6 of them are owned and lead by women. There are a few female social mobilisers/promoters in the biogas companies.

***Though this technology is beneficial to women, we are still behind in changing positions of women in decision making and ownership.***

Private sector of biogas is working on commercial base with profit motives whereas subsidy is used for incentive/ motivation for promotion and eased marketing. Subsidy for biogas should be promoted in line to promote biogas for the people who are less fortune to install biogas or less access to biogas plant installation. Hence following actions is recommended to take as measures

#### **Recommended Action Points:**

- *Subsidy criteria, its mechanism and strategic incentives system should be in built, indorsed and apply specific to poor, LPD, Rural and women.*
- *Motivation mechanism for women positioning should be developed*
- *Outreach and network to the excluded groups, women and poor of the private companies need to be considered as an evaluation criteria while grading companies.*

## **c) Programme planning, implementation & monitoring**

*Biogas is a social product.* Private companies has also big role to reach rural, low penetration areas, deprived castes, marginal household, poor and women.

In promoting social product there is need of huge resources to establish net work, human resource development, in building social responsibility and establishing effective management system. Hence, BSP has been investing private companies to promote biogas as social product and spread up their network accessible to targeted groups and enhance capabilities of the promoters and technicians.

BSP has to establish binding agreement with the private sector contributing to society while promoting social product. It is also recommended that BSP prepare Social Responsibility (SR) for biogas product, assess and grade private sector including the score of SR. Strategy to mainstreaming gender, social inclusion and pro- poor doesn't count value to reach target groups unless and until there is inbuilt mechanism of incentives and monitoring to the private companies.

Many trainings and capacity enhancement plan in gender and social inclusion conducted to the staff and private companies and prepared action plan for integration, while analysing the impact areas, there is very little reflection of the inputs. Hence following actions is recommended to take as measures

### ***Recommended Action Points***

- *Involvement of private sector in the planning process and promote bottom up approach in the planning. Private public partnership is recommended for social product promotion.*
- *Support is needed for private sector to extend their outreach, establish and network.*
- *Promotion of local resource person for technicians, supervisors and promoters*
- *Strongly recommend for incorporating the score of SR and outreach towards our targeted areas and groups.*
- *Incentive mechanism for the targeted groups as well as private sector*
- *More coordination, network and partnership with other development programme/ projects who has network in the remote areas, to/ with the excluded people and women.*
- *Jointly work with the other organisations and promote biogas as alternative energy option of their programme (ownership and change programme implementation approach)*
- *More focus on partnership with micro financing institution to tie up credit facilities for the targeted groups.*
- *In built biogas component in the District Development Programme through DDC*

## 7. BSP strategy to mainstreaming gender and social inclusion

Target indicators	Strategy/ measures	Recommended activities
<p>Sensitive documentation in the Biogas Support Programme</p> <p>50% increased in the beneficiaries group from the priority social groups and</p>	<p>Documentation: Gender and social inclusion sensitive documents (vision, mission, goal, clear objectives and activities with budget).</p> <p>Mechanism to enforce social responsibility</p> <p>GSI Sensitive prospectus, promotional material, forms and formats and documents</p> <p>Promote sensitive human resources in the programme, company and partners on GSI</p> <p>Establish subsidy and additional support mechanism for Pro poor, pro-excluded groups, pro- women and pro-LPD</p> <p>Maintain transparency, accountability and responsiveness in the subsidy and additional support.</p> <p>Promotion of women in decision making position in the private companies</p> <p>Develop women entrepreneurship in biogas sector</p> <p>Incentives measures to the private companies in extending their outreach and services to the excluded groups, women, poor and LPD</p> <p>Promotion of participatory planning process</p>	<p>Review and addendum GSI reflection in vision, mission and goal, objective and programme with budget</p> <p>Prepare social responsibility strategy and disseminate to all private companies and partners for adoption</p> <p>Review and produce GSI sensitive documents, prospectus, promotional materials, forms and formats</p> <p>Capacity building programme for the staff of programme, company and partners on GSI and SR.</p> <p>Review subsidy and additional support mechanism to be more sensitive to pro poor, pro-excluded groups, pro- women and pro-LPD</p> <p>Subsidy and strategic incentives system should be indorsed and applied.</p> <p>Develop and implement capacity development programme for the women of private companies as motivation mechanism for women positioning</p> <p>Develop and organise women entrepreneurship training/ workshop with concessional schemes</p> <p>Enhance outreach and network of the private companies to the excluded groups, women and poor.</p> <p>Add score of SR and outreach in the evaluation criteria while Grading companies.</p> <p>Agreement with DDC through MLD and Alternative Energy</p>

<p>women (table 3 and 4)</p> <p>40% increased in biogas promotion in LPD (map)</p> <p>20% increased in access of poor people</p> <p>Partnership increased with different development organisations, government line agencies, INGOs and local NGO/ CBOs/ FUGs</p> <p>Increased network and coordination with 10 more financial institutions including micro finance Banks, 10 more FI NGOs, 100 CBOs/NGOs</p>	<p>Promote of Public private partnership approach</p> <p>Promote biogas as fully commercialise social product by using network of non profit organisations for promotion</p> <p>Promote of Local resource persons through partner organisations</p> <p>Support measures to the private sector to extend their networks and outreach establishment</p> <p>Develop incentive mechanism for the targeted groups (socially excluded groups, women and poor) to improve their access and control over biogas</p> <p>Extend partnership with financial organisations- Banks, MFI, cooperatives, NGos, CBOs</p> <p>Extend AEPC biogas credit fund to Banks, MFI, cooperatives, NGos, CBOs</p>	<p>Promotion Centre (AEPC) under larger agreement of SNV to get scope of biogas component in the District development programme.</p> <p>Agreement with WDD for partnership programme</p> <p>Involvement of private sector in the planning process and promote bottom up approach in the planning</p> <p>Extend networks and working partnership with different line agencies and programme CBO/NGO/FECFUN /FUGs. etc.</p> <p>Produce working paper to welcome different stakeholders for partnership (criteria)</p> <p>Arrange partnership agreement with the development organisations and promote biogas as alternative energy option of their programme (Adding chain in programme implementation approach)</p> <p>Linking target groups with local NGOs/CBOs/ FECOFUN/ FUGs/ NEFCUN / WDOs</p> <p>Promotion of local resource persons for technician, supervisor and promoter.</p> <p>Review incentive package and prepare additional incentive mechanism to private sector in extending their outreach establishment and network.</p> <p>Clear and transparent benefits mechanism with additional incentive specific to the targeted groups</p> <p>Additional facilitation process to match credit from financial institutions: development bank, micro finance bank, I/NGOs and CBOs</p> <p>Formal joint programme with financial organisation to promote</p>
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	their credit services and tie up credit facilities for the targeted groups.
	Facilitate process to get AEPC biogas credit fund address the issue of social inclusion and gender balance

## 8. Conclusion

Biogas plant is acceptable technology in the community. Government of Nepal has also considered biogas technology as one of the best technology intervention for conservation of forest resources (fodder and fuel wood) whereby supporting to maintain cleanliness and hygiene at the household level as well as relief work drudgery of women. This programme has already been able to receive lot of appreciation awards and fund from CDM programme. AEPC and BSP are working hard to achieve expected outcomes of BSP Phase IV and ensure envisioned sustainability by addressing poor, women, socially excluded groups, remote and hill areas.

To accelerate the process in accordance with the goal and objectives of BSP, the strategy on gender and social inclusion is prepared. Further, to materialise and implement recommended activities the provision for taking lead by the respective organisations has also been envisaged. Therefore it is recommended to take lead by following agencies.

<b>Recommended activities</b>	<b>Lead by</b>	<b>Remarks</b>
1. Review and addendum GSI reflection in vision, mission and goal, objective and programme with budget	BSP-N/BSP	Referring to Roles and responsibility in annex II
2. Prepare social responsibility strategy and disseminate to all private companies and partners for adoption	AEPC/BSP-N / NBPG	
3. Review and produce GSI sensitive documents, prospectus, promotional materials, forms and formats	BSP	
4. Capacity building programme for the staff of programme, company and partners on GSI and SR.	BSP/NBPG	
5. Review subsidy and additional support mechanism to be more sensitive to pro poor, pro-excluded groups, pro- women and pro-LPD	AEPC/BSP-N	
6. Subsidy and strategic incentives system should be indorsed and applied.	"	
7. Develop and implement capacity development programme for the women of private companies as motivation mechanism for women positioning/entrepreneurship development	BSP/NBPG	
1. Enhance outreach and network of the private companies to the excluded groups, women and poor.	NBPG/ BSP-	
2. Add score of SR and outreach in the evaluation criteria while grading companies.	AEPC/BSP	
3. Agreement with DDC through MLD and AEPC under larger agreement of SNV to get scope of biogas component in the District development programme.	SNV/AEPC	
4. Agreement with WDD for partnership programme	BSP	

<ol style="list-style-type: none"> <li>5. Involvement of private sector in the planning process and promote bottom up approach in the planning</li> <li>6. Extend networks and working partnership with different line agencies and programme CBO/NGO/FECFUN /FUGs, etc</li> <li>7. Produce working paper to welcome different stakeholders for partnership (criteria)</li> <li>8. Arrange partnership agreement with the development organisations and promote biogas as alternative energy option of their programme (ownership and change programme implementation approach)</li> <li>9. Linking target groups with local NGOs/CBOs/ FECOFUN/ FUGs/ NEFCUN / WDOs</li> <li>10. Promotion of local resource persons for technician, supervisor and promoter.</li> <li>11. Review incentive package and prepare additional incentive mechanism to private sector in extending their outreach establishment and network.</li> <li>12. Clear and transparent benefits mechanism with additional incentive specific to the targeted groups</li> <li>13. Additional facilitation process to match credit from financial institutions: development bank, micro finance bank, I/NGOs and CBOs</li> <li>14. Formal joint programme with financial organisation to promote their credit services and tie up credit facilities for the targeted groups.</li> <li>15. Facilitate process to get AEPC biogas credit fund address the issue of social inclusion and gender balance</li> </ol>	<p>BSP</p> <p>BSP</p> <p>BSP</p> <p>BSP</p> <p>BSP</p> <p>BSP</p> <p>AEPC/BSP</p> <p>AEPC/BSP</p> <p>AEPC/BSP</p> <p>AEPC/BSP</p> <p>AEPC/BSP</p>	
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\* Referring to the roles and responsibility of stakeholders in annex II

**Table no 1: Biogas construction during different phases**

Time frame	Total plant constructed	Cumulative Total plants	Total plant in operation
I Phase	6,824	6,824	96.2 % are in operation as per BUS 2006/07
II Phase	13,375	20,199	
III Phase	91,196	111,395	
IV Phase	61,110 (till July '07)	172,505	

**Table no 2. Biogas Plant Ownership by Ethnicity**

Total Population As per 2001 Census 22,736,834	Caste/Ethnic Group	Fiscal Year 2063/064	Fiscal Year 2062/063	Average % of Biogas Users in FY 2062/063 and 2063/064	% of Ethnicity as per National Census 2001	Difference in % Distribution of National Census and Biogas Users Ethnic Groups
		% of Biogas Users	% of Biogas Users			
	Brahman	41.17%	36.80%	38.99%	12.74%	26.25%
	Chhetri	21.18%	20.40%	20.79%	15.80%	4.99%
	Advanced Janajati	5.34%	6.07%	5.71%	5.53%	0.18%
	Disadvantaged Janajati	7.98%	8.95%	8.47%	14.73%	-6.26%
	Marginalized Janajati	9.88%	9.58%	9.73%	16.79%	-7.06%
	Highly marginalised and Endangered Janajati	0.02%	0.03%	0.02%	0.07%	-0.04%
	Backward (Hill Dalit)	4.71%	2.61%	3.66%	6.46%	-2.80%
	Thakuri	3.23%	5.24%	4.24%	1.98%	2.26%
	Sanyasi	0.46%	1.05%	0.76%	0.88%	-0.12%
	Terai Upper	3.60%	6.20%	4.90%	12.32%	-7.42%
	Terai Backward	0.66%	0.67%	0.66%	5.53%	-4.87%
	Muslim	0.13%	0.07%	0.10%	4.27%	-4.17%
	Others	1.63%	2.31%	1.97%	3.01%	-1.04%
	<b>Grand Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>0%</b>

**Table 3. Priority Table for Ethnic Group**

S.N.	Caste/Ethnic Group	Average Gap
1	Terai Upper	-7.42%
2	Marginalized Janajati	-7.06%
3	Disadvantaged Janajati	-6.26%
4	Terai Backward	-4.87%
5	Muslim	-4.17%
6	Backward (Hill Dalit)	-2.80%
7	Others	-1.04%
8	Sanyasi	-0.12%
9	Highly marginalised and Endangered Janajati	-0.04%
10	Advanced Janajati	0.18%
11	Thakuri	2.26%
12	Chhetri	4.99%
13	Brahman	26.25%

**Note: Highly marginal and endangered groups are grouped into one**

**Table no 4: Women Ownership on biogas plant**

Time frame	Total plant	Male owned	Female owned
2055-2064	120550	99, 812	20738
Percentage	100	82.79	17.2

Source: MIS unit, BSP

## **Annex1**

### **a) Categorization of Janjati caste**

#### **1. Advantaged group**

Newar and Thakali

#### **2. Disadvantaged group**

Gurung, Magar, rai, Limbu, chairotan, Tangbe, Tingaule thakali, Barha gaule, Marphali thali, sherpa, Yakkha,

#### **3. Marginalised group**

Sunuwar, tharu, Tamang, Bhujal, Kumal, Rajbanshi, gangai, Dhimal, Bhote, Darai, Tappuriya, Pahari, Topkegoloa, Dolpo, Fri, Mugal, Large, Lhopa, dura, Walung

#### **4. Highly marginalised**

Maji, Siyar, Lhomi, thudam, Dhanuk, Chapang, satar, thami, Jhagad, Bhote, Danuwar, baramu

#### **5. Endangered group**

Kusunda, Bankariya, raute, surel, Hayu, Raji, Kisan, Lepcha, meche, kushwadiya

Source: NFDIN, 2005

### **b) Terai Upper Caste**

Badhae, Baniya, barae, Bhediyar/Gaderi, Bin/Binida, Brahman (terai), dhunia, Hajam/ Thakur, Haluwai, Kahar, Kalwar, Kamar, Kanu, kayastha, Kewat, Koiri, Kumhar, Kurmi, Lodha, Lohar, mali, Mallah, Nuniya, Nurang, Rajbhar, Rajput, sonar, Sudhi, Teli, Yadav.

### **c) Terai Dalit**

Bantar, chamar/harijan/Ram, Chidimar, Dhanuk, dhobi, Dom, dusadh/ Pasi/ Paswan, Halkhor, Khatwqe, Musahar, Tatma,

### **d) Hill Dalit**

Gandarb (gaine); Pariyar (damai, darji, suchikar, Nagarchi, Dholi, Hudke, Badhi); Biswakarma (kami, Lohar, Sunar, Od, chunera, Parki, Tamata); sarki (Mizar, Charmakar, Bhul)

Source: Nepal Atlas of ethnic and caste groups, NFDIN, 2006

## **Annex II**

### **Roles and responsibilities of stakeholders**

The main responsibilities of the BSP partners in implementation are as follows:

#### **a) Alternative Energy Promotion Centre**

- The AEPC is responsible for overall coordination and the execution of the BSP-IV through BSP/N.
- The AEPC provides feedbacks to HMG/N for policy formulation and executes the policies.
- The AEPC is responsible for overall monitoring and evaluation together with SNV/N and other development partners). This also includes endorsing new modalities e.g. the modality to be developed to target the poor.
- The AEPC is responsible for carrying out Annual Biogas Users' Survey that is also in line with the requirements of the CDM Projects.
- The AEPC administrates subsidy and biogas credit fund as per developed guidelines and procedures and also explores possibilities to flow credit fund through other institutions beside the MFIs.
- The AEPC is responsible for coordination with national level financial institutions (e.g. ADB/N, RBB, etc.) and other government agencies relevant for promotion of biogas technology.
- The AEPC advocates and promotes biogas programme at macro level.

#### **b) Netherlands Development Organization in Nepal**

- The SNV/N provides advisory services to organizations of the biogas sector. The advisory services will be provided on a demand-driven basis from the partners in technical; promotion; marketing; poverty linkage; gender and social inclusion; capacity strengthening, etc.
- The SNV/N administrates financial support for the BSP Phase-IV to BSP/N based on approved plans and budgets, on behalf of the DGIS.
- The SNV/N is responsible for overall monitoring and evaluation together with the AEPC and other development partners). This also includes endorsing new modalities e.g. the modality to be developed to target the poor.
- The SNV/N together with the AEPC and BSP/N facilitates to seek donors beyond 2009, in case of fund gap due to insufficient CDM fund generation.

#### **c) Kreditanstalt fur Wiederaufbau of Germany**

- The KfW continues to provide financial support for subsidy to households constructing biogas plants under the BSP Phase-IV.
- The KfW is responsible for overall monitoring and evaluation together with the AEPC and other development partners). This also includes endorsing new modalities e.g. the modality to be developed to target the poor.
- The KfW together with the AEPC and BSP/N facilitates to seek donors beyond 2009, in case of fund gap due to insufficient CDM fund generation.

#### **d) Biogas Support Partnership - Nepal**

- The BSP/N as an implementing agency facilitates backstops, promotes as well as regulates to develop the sector.

- The BSP/N with the involvement of the NBPG and others is responsible to implement BSP-IV as per agreement signed among the AEPC, SNV/N, and BSP/N.
- The BSP/N is responsible for R&D for optimization of biogas plant operation and new designs.
- The BSP/N facilitates and provides technical assistance to the NBPG and BCs.
- The BSP/N processes the subsidy applications and recommends to AEPC for subsidy reimbursement to the users through the BCs.
- The BSP/N also assists the AEPC in finding appropriate modalities or organizations for credit fund flow.
- The BSP/N is responsible for quality control and regular monitoring of the subsidised biogas plants, including company qualification, performance evaluation, grading, penalty, bonus, disqualification as well as for provision of after-sales services and warranty.
- The BSP/N together with the NBPG (and the AEPC, when participation fee is used) develops skill enhancement package and implements it for BCs.
- The BSP/N co-ordinates with other development partners for the biogas promotion at macro and meso levels.
- The BSP/N acts as a secretariat for BCC and CST.
- The BSP/N is also responsible for the overall market development of the sector through various promotion activities.
- BSP/N is responsible for carrying out all other activities and achieving the progress as defined by the indicators detailed in the Logical Framework Analysis in Annex - 3.
- BSP/N is responsible to present the any new modalities to be developed under the BSP Phase-IV for endorsement of the AEPC, SNV/N and KfW.

**e) Nepal Biogas Promotion Group**

- The NBPG advocates and promotes biogas programme at micro and meso levels and supports AEPC from the same at macro level.
- The NBPG executes skill enhancement packages for masons.
- The NBPG also executes slurry promotion and making organic compost. For this, NBPG has to develop its capacity with support from BSP/N and SNV/N advisory services. The handing over of the responsibility of slurry promotion from BSP/N to NBPG will therefore be a gradual one.
- The NBPG is responsible to provide business promotion services to BCs.
- The NBPG will promote interests of the BCs and self-regulate them through the code of conduct and other appropriate mechanisms. When necessary, NBPG seeks help from BSP/N and others for this purpose.
- The NBPG is responsible to arrange and supply biogas plant materials (kits), especially to BCs that have low business volume.
- The NBPG together with BSP/N and BCs coordinates with development partners at micro and meso levels.

**f) Biogas Companies, (BCs)**

- BCs are responsible to disseminate information on the programme, its benefits, the subsidy, credit, etc. verbally or distributing the materials from BSP/N and other partners.
- BCs are responsible to promote market and construct quality biogas plants.
- BCs are responsible to handover the Users' Manual and other information materials from BSP/N and train the users on operation and maintenance of the plants.
- BCs are responsible for training users on proper use of slurry, composting and use of it.
- BCs are responsible to complete documentation required for processing of subsidy, and for release of the after-sales service guarantee money and submit them to BSP/N in a timely manner.
- BCs are responsible to cooperate and accompany BSP/N personnel in the field for quality control and other verification purposes.
- BCs regularly visit households and deliver the promised after-sales service and other services fully respecting the promised guarantee. They continue providing these services perpetually even after expire of the guarantee period.
- BCs are responsible to expand their product lines by constructing plants within and outside the subsidy programme for improved commercialisation of the biogas industry.
- The BCs facilitate and coordinate with banks, MFIs and other CBOs/NGOs to ease credit flow to beneficiaries.
- BCs are responsible for other activities that help to promote the technology by linking it with other rural development agencies at the local level to better benefit the users improving their livelihood.

Source: Multi Annual Plan

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