

Preparing Local Governments in Sudur Paschim Province in Nepal on Small-Scale Renewable Energy Development

INTRODUCTION

Nepal's Constitution of 2015 espouses a federal system as the cornerstone of Nepal's political governance system. According to this new constitution, there will be three levels of governments: i) federal; ii) provincial; and iii) local. Within their areas of authority, these three levels can enact laws, prepare annual budgets, take decisions, and prepare and implement policies and plans. With respect to energy, local governments are mandated to act on local-level development projects, small hydropower projects and alternative energy sources, which include small-scale renewable energy (RE) sources with a capacity up to 1 MW. The law also stipulates that women, Dalits and marginalised groups need to be represented at the local level. Thus, the current centralised operation of the government system with regard to small-scale RE is in the process of being decentralised. Local governments are expected to be directly engaged in managing the implementation of RE promotion programmes. Suitable positions and departments should be created to lead and manage these efforts with adequate human and financial resources.



The Renewable Energy for Rural Areas (RERA) Programme is a technical support programme for the small-scale RE sector jointly supported by the Government of Nepal (GoN) and the German Federal Ministry for Economic Cooperation and Development. It was commissioned in 2016. The Programme is jointly implemented by the Alternative

Energy Promotion Centre (AEPC) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The over-arching vision of RERA is to **ensure the efficient and effective service delivery of small-scale RE through improved outreach and enhanced local cooperation in a federalised and decentralised Nepal**. Aligned with the RERA programme, technical assistance was provided by SNV over a period of 19 months, from February 2018 to September 2019. Province 1 and 7 were selected for the implementation of RERA. In Province 1, GIZ and the Programme Implementation Unit (PIU) of AEPC provided technical assistance. In Province 7 – later named Sudur Paschim (SP) – SNV Netherlands Development Organisation was appointed as a service provider to provide technical assistance in cooperation with the PIU of AEPC. SNV was specifically responsible for a) developing a

capacity development strategy, implementing capacity-development measures, and providing monitoring and evaluation support; b) orienting local bodies to and developing municipal energy plans (MEPs); c) raising awareness about and providing training in RE technologies; d) developing and implementing Gender Equality and Social Inclusion (GESI) guidelines; and e) providing technical support for accessing finance.

This learning brief presents the intervention approach adopted by SNV in SP, including the various capacity development activities it implemented and their results. It also presents the lessons learnt from and recommendations of the programme as well as the testimonies of stakeholders and an overview of key documents.

Intervention approach of RERA in Sudur Paschim

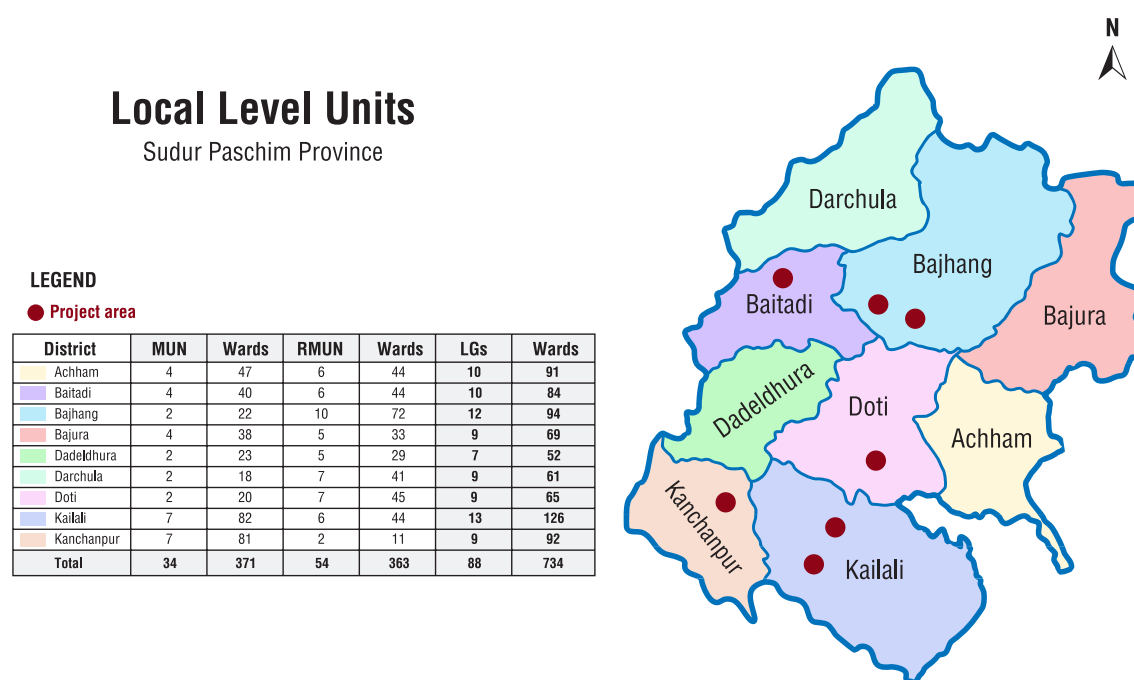
SP consists of nine districts that are among the remotest and poorest in Nepal. The Human Development Index (HDI) of the province is just 0.475, reflecting a low level of development,

while the HDI of the country as a whole is 0.574, a medium score. Using detailed feasibility studies, the AEPC and GIZ selected six local-level bodies, or partner municipalities (PMs) in five districts in SP. Among them, one, Shuklaphanta, is an urban municipality and five are rural municipalities. The table below lists the PMs and their districts and Map 1 shows their locations.

Table 1. Partner municipalities

SN	Name of partner municipality	Program district
1	Bitthadchir Rural Municipality	Bajhang
2	Kedarsyu Rural Municipality	
3	Dogada Kedar Rural Municipality	Baitadi
4	Badi Kedar Rural Municipality	Doti
5	Chure Rural Municipality	Kailali
6	Suklaphanta Municipality	Kanchanpur

Figure 1: Project Area



RERA-SP interventions

The main objective of RERA-SP was to strengthen the capacities of provincial and local PMs to deliver small-scale RE services efficiently and effectively by improving their ability to plan, providing them with outreach services, and enhancing their coordination with central government authorities. SNV designed a capacity-development strategy to strengthen the overall capacities of local and provincial governments. In line with the Pact framework, a capacity-development framework developed by a non-profit international development organisation named Pact and adopted by RERA-SP after reviewing various other frameworks, SNV focused its strategy on three levels: individuals, organisations, and societies. It strengthened the management, policies, organisational structures, and working procedures of organisations; and conducted interactive public education and awareness sessions so that it could both inform and get feedback from societies.

At the individual level, SNV identified promoters, champions, change agents, visionaries, leaders, and innovators capable

of inspiring transformational change and then enhanced their skills and competencies. Trainees learned about all aspects of service delivery, including the roles and responsibilities of the three tiers of government, RE technology, subsidies and other financial instruments, and monitoring and evaluation.

At the organisational level, five different types of stakeholders were identified. They included a) government institutions [the AEPC, ministries of physical infrastructure and development (MoPID), and PMs], b) civil society organisations, c) private-sector enterprises, d) training institutions, and e) financial institutions which are active at the local level and capable of financing RE installations. A sixth category, end-users, or beneficiaries, was also identified. Of these stakeholders, the AEPC, MoPID, and PMs were designated as primary, or key stakeholders; the others were considered secondary.

The key stakeholders were subjected to both an organisational development assessment and a capacity-needs assessment to identify gaps in their capacity and where improvement was needed. The methods used for the

assessment varied, but included the McKinsey 7S Model, Integrated Organisation Model, and Civil Society Mutual Accountability Project 2016 – 2021. The contents of the assessments depended on the nature of the stakeholder organisations, but included some or all of

the following elements: 1) governance; 2) organisational management; 3) program management; 4) human resource management and development; 5) financial management; 6) administration; 7) products and services delivery, and 8) external relations.

Figure 2: Types of stakeholders identified by RERA

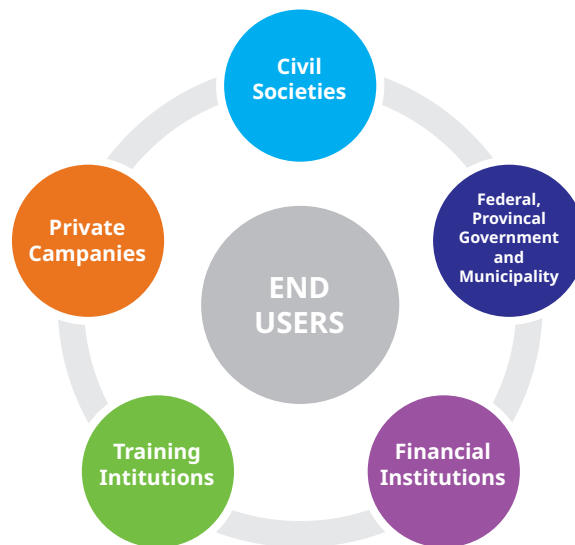


Figure 3: Selection of primary stakeholders in RERA-SP project area



The capacity-building initiatives undertaken by RERA-SP and the number of trainees in each initiative are detailed below. A total of 917 women and men were reached in which a total of 286 people participated in various activities to raise awareness and to increase demand for RE technologies (RETs). Some were oriented

to RETs and others were provided with training in GESI mainstreaming. In addition, RETs were promoted among civil society organisations and disadvantaged groups (DAGs) and women-led cooperatives were provided with training and exposure visits.

Table 2. Number of persons oriented to/trained in awareness-raising and demand creation

SN	Activities	Partner municipality							Total
		Shuklaphanta	Chure	Badikedar	Dogadakedar	Bithadchir	Kedarsyu	Other	
1	RET orientation	45	25	19	22	20	24	36	191
2	GESI mainstreaming training	10	8	8	7	9	8	-	50
3	RET promotion for civil society organisations & DAGs	5	5	5	4	3	3	-	25
4	Training and exposure visits for women- led cooperatives	6	2	2	4	2	4	-	20
Total		66	40	34	37	34	39	36	286

If PMs cannot mobilise sufficient financial and technical resources to meet the demand for RE services, then that demand will, in due course, decline. Realising this limitation, RERA-SP strengthened the capacities of PM executives and members to mobilise resources for RE along with its awareness-raising and demand-creation activities. PMs were taught

the procedures for accessing AEPC grants and subsidies for RETs and provided with guidelines to implement these procedures. Local financial institutions and private-sector service providers in SP were also trained in RETs and in the development of loan-financing products specifically for RETs. The activities undertaken in resource mobilisation are outlined in Table 3.

Table 3. Number of people/service providers trained to mobilise financial and technical resources

SN	Activity	Partner municipality							Total
		Shuklaphanta	Chure	Badikedar	Dagaodakedar	Bithadchir	Kedarsyu	Other	
1	Conditional grants operating guidelines training	2	2	2	2	2	2	164	176
2	RET financing for local financial institutions	12	20	13	14	12	16	-	87
3	RE loan product design for local financial institutions	2	2	2	2	2	2	-	12
5	Solar technician training	1	1	2	0	1	2	-	7
6	Biogas technician training	1	0	1	1	1	1	1	6
7	ICS promoters training	-	15	-	-	-	-	-	15
Total		18	40	20	19	18	23	165	303

RERA-SP's capacity-strengthening activities for PMs focused on identifying appropriate

RETs for women, the poor, DAGs and other needy people and on developing plans for

implementing, monitoring, and controlling the quality of RETs. PMs were encouraged to establish energy development sub-committees (EDSs) under their infrastructure development committees with the inclusion of women and

DAG members. Each EDS had between five and eleven members. Training and workshops were organised for PM executives and EDS members as outlined in Table 4.

Table 4. Number of people oriented to/trained in planning and monitoring

SN	Activity	Partner municipality							Total
		Shuklaphanta	Chure	Badikedar	Dagaodakedar	Bithadchir	Kedarsyu	Other	
1	Municipal energy plan workshop	37	35	28	34	51	34	85	304
2	Progress review workshops	4	3	3	3	6	5	-	24
Total		41	38	31	37	57	39	85	328

SNV carried out PM-wise GESI studies to identify the current GESI status of each PM as well as the challenges it faces in ensuring total inclusiveness and recommended measures for ensuring greater inclusiveness. In addition, SNV prepared GESI mainstreaming guidelines based on the training, studies and consultations with relevant stakeholders. Though these guidelines were prepared with insights from RERA-SP, they are applicable to all municipalities in the country.

In addition to providing training and developing guidelines, RERA-SP conducted business

opportunity assessments to identify RET-related economic opportunities. These assessments will be the basis for identifying and promoting local small and medium enterprises to use RETs productively.

As a result of the intensive capacity-strengthening process initiated by RERA-SP, PMs became more aware of the available options, identification and benefits of RE. They implemented over 1,500 different technologies to the benefit of nearly 20,000 beneficiaries (Table 5).



Table 5. Summary of RETs installed in PMs

RETs	Number installed	Remarks
Improved cook stoves (mud)	810	
Improved cook stoves (metal)	223	
Bio-digesters (biogas)	64	
Solar home systems	339	
Solar PV for religious places	28	
Solar PV for schools	6	
Solar PV for health centres	6	
Solar PV for offices	4	
Solar street lights	67	
Solar PV for lifting water	2	
Improved water mills	5	15 under construction
Micro hydropower project	1 (rehabilitation)	4 (pre-feasibility), 4 (detailed feasibility)
Total number of beneficiaries		19,955

All six PMs are now capable of planning, implementing and monitoring RET activities through their EDSs. In addition, they received support in accessing financial and

technical resources for RETs. With this support, the PMs were able to spend 99.53% of the GoN/MoEWRI/AEPC conditional grant in the FY 2075/76.

Table 6. RET budget mobilisation in PMs (FY 2075/76)

Contributions	Amount (NPR)	% Total budget
Federal		
AEPC regular subsidy	50,454,700	46
Conditional grant	9,227,800	8
Provincial government	482,000	4
Partner municipalities	22,835,421	20
Users	24,907,108	21
Other agencies (RVWPMP, NGOs)	1,621,764	1
Total	109,528,793	100

Planning for these RETs is part of the broader five-year municipal energy plan (MEP) which each PM made with RERA-SP's assistance using the nine-step participatory planning process

shown in Figure 5. Once these MEPs have been approved by the respective municipality councils, RETs will receive the attention they merit in the development activities of the PMs.

Figure 4. The nine-step participatory planning process for developing a municipal energy plan



RERA-SP and PMs both prioritise the inclusion of women and DAGs. The limitations PMs faced in realising inclusiveness did not stem from lack of will but lack of awareness about how to go about achieving it. Fortunately they are now able to use the results of the GESI and DAG studies which RERA-SP conducted as well as the GESI mainstreaming guidelines SNV developed to increase their inclusiveness.

RERA-SP also developed detailed procedures for introducing RETs. These procedures include step-by-step directions for conducting feasibility studies, making decisions, allocating budget, seeking approval, procuring materials, controlling quality, monitoring achievement, financing, securing subsidies, and providing services after a RET is introduced.

Impacts and results achieved

Decentralisation of powers: Because Nepal is just transitioning into federalism, decentralising RE still has a long way to go. Despite the training SNV provided, provincial ministries, including MoPIDs, still have limited technical and managerial expertise. As a result, their ability to oversee RET activities is also limited. They need to increase their ability to coordinate and collaborate with PMs in all sectors. At the local level, while PMs are closer to being able to implement RET activities, the 18 months of the RERA-SP was little time for them to be able

to identify, let alone address, the needs of their constituencies. They also need more training in monitoring and assessing the quality of RETs.

RET services: While RETs like micro-hydro installations and projects like street lighting did appeal to PMs, the RE sector as a whole got less priority than other sectors like roads. In addition, within the RE sector, it is domestic rather than productive applications that were prioritised. One disincentive to adopting RETs also emerged: there are not many private enterprises in SP and those that are there have limited ability to provide after-sales services.

PMs support for and continuation of RETs will depend upon the availability of national grid electricity and demand from locals as well as the availability of financial and other support. The sustainability of RETs, then, is not guaranteed but will depend on several variables, not just their capacity to implement RET in future.

GESI: While PMs now know that mainstreaming GESI is important, they still lack the technical and financial resources they need to mainstream it, not just in the RE sector, but in all sectors.

RERA-SP did have a significant impact in terms of spreading knowledge about RE among provincial and local governments and providing them with the motivation and foundational skills they need to provide RE services.

Lessons learnt and recommendations

Learning	Recommendation
Provinces and partner municipalities	
1) Since they are still in their incipient stages, provincial ministries lack sufficient technical and managerial expertise to carry out their designated functions. Thus, their present capacity to coordinate, plan, and monitor RET activities is severely limited.	Support is required to ensure that provinces assume an effective role in funding, quality control and monitoring. The AEPC's PIU should either be integrated into MoPID or collaborate closely with them.
2) Coordination and collaboration between provincial agencies such as MoPID and PMs needs to be improved to increase the efficiency and effectiveness of planning, implementation, monitoring and evaluation, and quality control in all sectors, including RE.	Establish a platform to facilitate coordination and collaboration among PMs and between MoPID and PMs to promote the more effective and efficient use of limited resources. Have the platform convened and chaired by MoPID and invite municipal chairs and vice-chairs to be members. Organise meetings bi-annually or as appropriate.
3) PMs have increased their awareness, experience, and capacities and are closer to providing RET services. However, 18 months of support is simply not enough. EDSs have not been able to raise awareness or identify or address the needs of their constituencies with regard to RETs.	Strengthen the capacity of wards to identify, implement and monitor RETs by, for example, establishing ward-level EDSs under the chairmanship of the ward chair.
4) The concepts of quality and quality control are still new to PMs. They are still at the stage where making goods and services available and accessible is sufficient achievement. They cannot yet assess the quality of RETs and thus find it difficult to monitor their performance.	To ensure that the RETs installed are both effective and efficient, PMs need to be made more aware of a good-quality RET with control and monitoring mechanisms in place
RET services	
5) In the energy sector, PMs prioritise grid connection and micro-hydro installations. They are attracted to highly visible interventions like street and temple lighting and solar water pumping. While awareness about RETs has increased, they are not considered as important as other sectors, like roads.	It is understandable that remote PMs prioritise the improvement of roads. There needs to be more awareness-raising and collaboration to preserve the momentum RERA-SP has achieved in promoting RETs.
6) PMs focus their RET efforts on domestic rather than productive applications. Once basic needs like lighting, charging and communication have been ensured the productive application of RET will need attention.	The productive application of RE, such as for irrigation and agro-processing, needs support. Tailored attention to enterprise and economic development may also be necessary.
7) The very few private-sector enterprises in SP have limited capacity in terms of entrepreneurship and accessing finance and are mostly located in urban areas in the plains. Since they lack service delivery points in PMs, they have limited ability to provide reliable after-sales services, a fact which discourages users from adopting RETs.	The private sector should get support to establish a network of service providers (last-mile entrepreneurs). They should get help in establishing efficient installations and providing after-sales services in and around PMs.
Relevance of GESI	
8) PMs and EDSs are now well aware of the importance of mainstreaming GESI but their capacity to implement their intentions is still weak. They are not yet fully equipped financially or technically to mainstream GESI in the RET or any other sector.	The executive committees, infrastructure development committees and EDSs of PMs require continuous coaching and backstopping to implement GESI and thereby translate their newfound sensitivity and willingness to act into concrete initiatives. They should get more training and assistance in implementing the GESI mainstreaming guidelines which SNV prepared.

Stories from the field

A. Solar street lights bring happiness

People in Khani Danda, Sahajpur and Phaltunde of Chure Rural Municipality are very pleased with the installation of solar street lights. Even though the Chure market lies on the Bhimdutta Highway, it lacked grid electricity. When darkness sets in, travellers and residents used to find it difficult to move around and theft and looting were a common occurrence.

Since solar street lamps were installed with financial support from AEPC/GoN and technical support from SNV/GIZ, the lives of shopkeepers, local residents and travellers have improved significantly. With the solar lights, the market now stays open till late and there is peace and harmony within the municipality.

Forty-five-year-old Dil Bahadur Khatri, a resident of Chure-3, is delighted. He says that the market is more vibrant than it used to be and that people are happy. He suggests that more solar lights need to be installed in other places so other locals can also feel happy.

B. Mission: Dazzling Dogadakedar

Dogadakedar Rural Municipality of Baitadi District is working relentlessly to bring light to Dogadakedar. It recently installed 17 street solar lamps in Khochlek and Silledanda areas with an investment of NPR 1.948 million. Highlighting the advantages of the lights, Municipal Chairperson Mr. Chakra Karki said that street lights had lifted local market places from the darkness and helped reduce criminal activities.

Dogadakedar also distributed about 1,000 solar panels free of cost to poor and needy Dalit households.

Acting Chief Administrator Mr. Sher Singh Bista said that, as part of the 'Dazzling Dogadakedar' project, street lamps had been installed and solar panels distributed. The action helped public places vibrant with people feeling safer

while walking around the municipality. Poor and needy Dalits who had not been able to afford solar lamps at home were provided with solar panels. They now have clean lights instead of kerosene-burning and polluting *tuki* and spend the nights in a productive manner. Mr. Bista explained that the free solar panel program would continue next year as well to achieve its mission to create 'Dazzling Dogadakedar.'

C. Happiness in Belmati due to Solar Energy

Widowed mother Belmati Kami from Dandadewal-2 of Bittadachir Rural Municipality in Bajhang District belongs to a poor community to which the municipality provided solar home systems. Ms. Kami received a 20 Wp solar system and a grant from the municipality. 'The happiness that system brought to Belmati and her family can be seen on her face and on the faces of her family members,' said Jay Lal Chunara, a member of the rural municipal council.

Remembering the dark old days, Ms. Kami said that children used to have to go to a neighbour's house to do homework as they only had *tuki*. She said cheerfully, sharing her gladness, 'Our children can read and write at home and there is no danger while going to the toilet at night either. We feel safer and more secure now that we have solar lights. They have lightened the future of our children and made our lives comfortable.' Ms. Kami, who is responsible for her son and daughter alone survives on the wages she earns from daily labour.

Authority and responsibility for RE was delegated to the local level (urban and rural municipalities) after state restructuring. With the technical support from RERA, municipalities in SP province, were able to explore and implement various RETs. 'Such programs directly benefited poor and disadvantaged local people,' said Vice-Chair Janaki Bohara.

RERA-SP on data

Key data

570	Days the project lasted
6	Municipalities in SP province
6	EDSs established, one in each PM
917	Women and men reached through capacity-building training.
286	People oriented to and provided knowledge on RET
303	People/ service providers trained to mobilise financial and technical resources
328	People oriented/ trained in planning and monitoring
19,955	People benefited
1555	RETs installed and/ or rehabilitated

Key inputs

1)	Knowledge-sharing about and awareness of RETs
2)	Technical support to access and explore the scope of RETs in municipalities
3)	Preparation of GESI and DAG mainstreaming guidelines
4)	Baseline surveys, GESI studies, organisational development and business opportunity assessments
5)	Facilitation of exploration of financial resources and implementation of RETs

Key documents

1)	GESI Studies Conducted, Scott Wilson, 2019 (English)
2)	GESI and DAGs Mainstreaming Guidelines, SNV, 2019 (English and Nepali)
3)	Business Opportunity Assessment Report of Suklaphanta Municipality, Kanchanpur, MinErgy 2019 (English and Nepali)
4)	Business Opportunity Assessment Report of Chure Rural Municipality, Kailali, MinErgy 2019 (English and Nepali)
5)	Business Opportunity Assessment Report of Badikedar Rural Municipality, Doti, MinErgy 2019 (English and Nepali)
6)	Business Opportunity Assessment Report of Kedarsyu Rural Municipality, Bajhang, MinErgy 2019 (English and Nepali)
7)	Business Opportunity Assessment Report of Bitthadchir Rural Municipality, Bajhang, MinErgy 2019 (English and Nepali)

8)	Business Opportunity Assessment Report of Dogadakedar Rural Municipality, Baitadi, MinErgy 2019 (English and Nepali)
9)	RET Installation Procedure and Guidelines, SNV, 2019 (Nepali)
10)	Organisational Development Assessment Reports (Baitadi, Bajhang, Doti & Kailali District), DeKMIS, October 2018 (English)
11)	Capacity Needs Assessment Reports (Baitadi, Bajhang, Doti & Kailali), DeKMIS October 2018 (English)
12)	Organisational Development and Capacity Needs Assessment of Key and Primary Stakeholders in Sudur Paschim Province (Bajhang & Kanchanpur District), Rupantaran Nepal, February 2019 (English)
13)	Capacity Development Strategy for the Promotion of Small-Scale Renewable Energy in Nepal SNV 2019 (English)
14)	Report on Energy Baseline Survey of Bithadchir Rural Municipality, Province 7, MinEnergy, October 2018 (Nepali and English)
15)	Report on Energy Baseline Survey of Kedarsyu Rural Municipality, Province 7, MinEnergy, October 2018 (Nepali and English)
16)	Report on Energy Baseline Survey of Dogadakedar Rural Municipality, Province 7, MinEnergy, October 2018 (Nepali and English)
17)	Report on Energy Baseline Survey of Shuklaphanta Municipality, Province 7, MinEnergy, October 2018 (Nepali and English)
18)	Report on Energy Baseline Survey of Chure Rural Municipality, Province 7, Square One Research and Training, December 2018 (Nepali and English)
19)	Report on Energy Baseline Survey of Badikedar Rural Municipality, Province 7, Square One Research and Training, December 2018 (Nepali and English)
20)	IEC materials, SNV (English)
21)	Municipal Energy Plan (MEP) of Suklaphanta Municipality, Kanchanpur, SNV 2019 (Nepali)
22)	Municipal Energy Plan (MEP) of Chure Rural Municipality, Kailali, SNV 2019 (Nepali)
23)	Municipal Energy Plan (MEP) of Badikedar Rural Municipality, Doti, SNV 2019 (Nepali)
24)	Municipal Energy Plan (MEP) of Kedarsyu Rural Municipality, Bajhang, SNV 2019 (Nepali)
25)	Municipal Energy Plan (MEP) of Bitthadchir Rural Municipality, Bajhang, SNV 2019 (Nepali)
26)	Municipal Energy Plan (MEP) of Dogadakedar Rural Municipality, Baitadi, SNV 2019 (Nepali)



Mud ICS for Mid Hills of Nepal



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SNV Netherlands Development Organisation is a not-for-profit international development organisation. Founded in the Netherlands in 1965, we have a long-term, local presence in over 25 countries in Asia, Africa and Latin America. We provide practical know-how to make a lasting difference in the lives of people living in poverty by helping them to increase their incomes and to access basic services. We use our extensive on-the-ground track record to apply and adapt our expertise to local contexts. We constantly renew our expertise with innovative global knowledge and lessons learned from practice. This adds to our value proposition and distinguishes us from local service providers. SNV empowers local communities, businesses, and organisations by providing advisory services, knowledge networking, and supporting advocacy in three main sectors: agriculture, water, sanitation and hygiene (WASH), and renewable energy (RE).

SNV in Nepal

Since SNV opened its first Asia office in Nepal in 1980, we have been able to reach out to more than 4 million people in some of the poorest pockets in far-western Nepal. Our team operates in 34 districts through a country office in Kathmandu and various project offices across the districts. Starting from 2011, SNV has designed scalable and impact-oriented programmes within four sectors that are aligned with the Government of Nepal's development priorities. Aligned to SNV Global, the three key sectors SNV works in are Agriculture, Renewable Energy and Water, Sanitation and Hygiene.