Annual Report 2021/22

FY 2078/79

ग्रामिण प्रविधि केन्द्र

Centre for Rural Technology, Nepal (CRT/N)

Towards Action for Development ... Since 1989

Annual Report 2021/22

Prepared by
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Cover Photo: From EVD-4 Project in Bhalumara, Sindhuli

Message from the Chairperson

Dr. Ananda Shova Tamrakar
Chairperson

Countries across the globe had sufferd from COVID-19 pandemic The pandemic disrupted most of the activities planned by CRT/N like all other development organizations in Nepal. However, we are trying our best to accomplish possible tasks with the support of our management, consortium partners and other stakeholders.

CRT/N has completed 33 years in serving local communities by developing and promoting rural appropriate technologies. It has been dedicatedly working in the area of Gender Equality and Social Inclusion (GESI) in the energy sector; energy access, indoor air quality and climate change (mitigation and adaptation).

CRT/N is working in various districts accross the country through different types projects. Since its establishment, it had promoted more than 3.300 women entrepreneurs, carried out advocacy and lobby activities from central level to local level on green and inclusive energy, implemented eco-village development projects, provided awareness about renewable energy, climate change, and environment-friendly technologies to around 5,000,000 people, constructed and promoted more than 3,50,000 ICSs (Mud and Metallic), built 9,000 Improved Water Mill (IWMs), 43 Improved Water Mill Electrification (IWME), 41 pico and mciro hydro systems and 31 Hydraulic Ramp Pumps in the past 33 years.

One of our big achievements is that many of the rural municipalities are now giving space to green energy programmes and eco-village development programmes & also promoting women economic empowerment activities in their policy and programmes.
On behalf of CRT/N Board of Directors, I am thankful to the Government of Nepal (Central, Provincial, and Local), our national and international development partners and communities for the continued support and cooperation.
We look forward to delivering quality services to local communities for improving their livelihood.

Foreword from the Executive Director

"CRT/N is advancing to promote the climate resilient and environment friendly technologies in the rural communities of Nepal and link them to build entrepreneurship, ultimately to enhance the livelihood of rural communities. We are determined to generate impact through implementation of projects based on needs of rural communities within the priority areas of the Government."

Dr. Purushottam Shrestha
Executive Director

In reflecting back on the past years the fact that we're still facing with uncertainties related to COVID-19 and other pandemic, however with the support from all the stakeholders CRT/N could move towards meeting its goal. Therefore, first of all I would like to express sincere gratitude to everyone who supported us through this difficult pandemic situation.

CRT/N, since its establishment in 1989, has been engaged in developing and promoting appropriate rural/ renewable energy technologies effective in meeting the basic needs and improving livelihood of rural communities. By realizing the importance of mainstreaming gender in the energy programmes, CRT/N has dedicatedly integrated gender issues in its programmes since 2004.

This report highlights major milestones of the year and achievements of CRT/N on Gender Equality and Social Inclusion (GESI) in Energy Sector, promoting women entrepreneurship through capacity building and promoting energy efficient technology, productive use of energy, eco village and climate change issues contributing to achieve Government of Nepal's National Goal on Sustainable Development Goals (SDGs), Nationally Determined Contribution (NDC), United Nation's Sustainable Energy for All (SE4ALL) and 15th Periodic Plan 2019/20-2023/24. Another important achievement of CRT/N is that after Eco-Village Development in Bethanchowk, Kavre District, we are now scaling up this concept in other areas of Kavre, Sindhuli, Sindhupalchowk, Kathmandu districts and other parts of the country.

CRT/N has continued to be actively engaged in the implementation of programmes supported by International and National Developmment Partners viz. , South Asia Sub-Regional Economic Cooperation Power Transmission And Distribution System Strengthening Project (SASEC) Implementation Support for Gender Equality and Social Inclusion TA-6526 NEP in Madhes Pradesh, Bharatpur and Pokhara, Next Generation Low Carbon, Climate-resilient Eco-Village Development in South Asia in Sindhuli, Self-help Eco-Village Development Project in Kathmandu and Sindhupalchowk, Supporting Indigenous Practices and Entrepreneurship through Promotion of Renewable Energy Technology in the Indigenous Community of Bardiya, Improving Access to Drinking Water through Solar Water Lifting Project" at Bhalumara Village, Sindhuli and Gender, Energy and Water Network (GEWNet). Aforementioned past and ongoing projects have supported the rural communities in enhacing their livelyhood through awareness, leadership building, income generating opportunities and employment.

Besides, CRT/N has been contributing in Global and National Social Business Day Forum organised by CSD in association with Yunus Forum Bangladesh. This initiative consists of setting up the global chain of

3ZERO Clubs of young people committed to creating a world of three zeros. “Three Zero Club is an initiative towards achieving the Nobel Peace Laureate Professor Muhumad Yunus’s vision creating a world of 3 zeros– zero net carbon emission, zero wealth concentration for ending poverty and zero unemployment by unleashing entrepreneurship in all”

Finally, we would like to take this opportunity to express our sincere gratitude to all the Government organizations, sponsors, collaborators, development partners and well-wishers for their continuous cooperation, support and encouragement especially to National Planning Commission, Ministry of Population and Environment, Ministry of Energy, Water Resources and Irrigation, Alternative Energy Promotion Centre, Social Welfare Council, Nepal Electricity Authority, ENERGIA/ Hivos, Asian Development Bank GEF/SGP/UNDP, WWF, CISU, DIB, INforSE, Siemenpuu Foundation and EKO energy, WWF, CECI, the World Bank, EnDev/GIZ, Clean Cooking Alliance, University of Illinois, Care Nepal and Renewable World.

Similarly, we are grateful to Agricultural Development Bank Ltd., Centre for Self-Help Development (CSD), Manushi Nepal, Manushi Laghu Bitta Biitiya Sanstha Limited, Mahila Sahayogi Bachat tatha Rin Sahakari Sanstha Limited, PRC, NACEUN, PAC, NEFEJ, , PA, RECoN, IAPHF, FNCSI, Kathmandu University, Federal Government, Provincial Government, NARMIN, Marin Rural Municipalities, Khanikhola Rural Municipality, Bethanchowk Rural Municipality, Rajapur Municipality, Unique Nepal, National and Local Partner Organizations, Community Rural Electrification Entity (CREE), Local Communities and Community Based Organizations (CBOs), Civil Society Organizations (CSOs) and Private Sector Organizations. Last but not the least we are thankful to the organizations who are directly or indirectly involved in contributing towards sustainable growth of the CRT/N.

We are obliged to the CRT/N’s General Assembly and Governing Board for continuous cooperation and support and sincere appreciation to all the staff members and consultants for their cooperation, hard work and dedication.

Introduction to CRT/N

Background

Centre for Rural Technology, Nepal (CRT/N) is a professional non-governmental organization engaged in developing and promoting appropriate rural technologies effective in meeting the basic needs and improving livelihood of rural people. Established in August 1989 under the Company Act, CRT/N has been re-registered with Government of Nepal (GoN) under the Social Organization. Registration Act 1977 (2034 B.S.) since October 1998. The organization is actively engaged in upgrading traditional technologies as well as developing new technologies with diversified and versatile applications to meet rural needs.

Vision

CRT/N as a professional / innovative organization and knowledge centre in renewable energy /appropriate technology delivering quality services to local communities for improving their livelihoods.

Mission

Develop, promote and disseminate environmentally sound rural / appropriate technologies and strengthen capability of rural communities in creating better opportunities through mobilization of local resources to improve their livelihood conditions.

Objectives

01 Promote and disseminate rural/appropriate technologies to meet the basic needs of the people and improve their quality of life

02 Conduct adaptive and action-oriented research on indigenous and improved rural / appropriate technologies

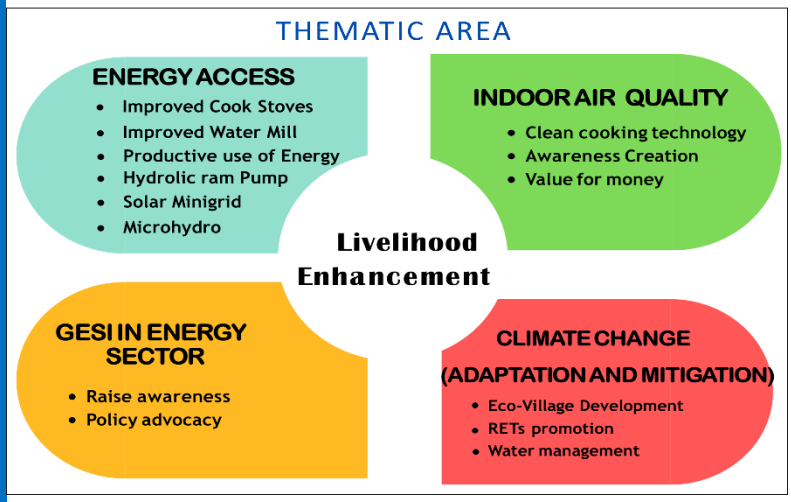
03 Train and transfer technical information and know-how on production, installation and management of rural/appropriate technologies

04 Assist in development of technical and institutional capabilities for sustainable development

05 Provide Technical support and consulting services in the field of rural energy and environment conservation and climate change

Area of Specialization

Development and promotion of rural /appropriate and Renewable Energy Technologies (RETs):
Household, commercial and Institutional Improved Cookstoves (ICSs) (fixed type, prefabricated portable rocket stoves, metallic stoves);
Briquette, pellet and charcoal;
Improved Water Mill (IWM) with diversified end uses including electrification; Hydraulic ram pump;
Solar cookers / dryers; other appropriate and rural technologies



Regional / International Activities

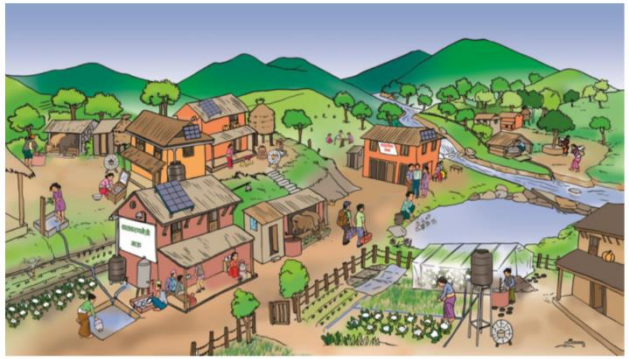
- CRT/N has been involved at the regional and international level activities through the following networks, extension of technical supports and services
- International Network on Gender and Sustainable Energy (ENERGIA), the Netherlands: ENERGIA links individuals and groups concerned with energy, sustainable development and gender;
- Gender, Energy and Water Network (GEWNet): In the capacity of the National Focal Point of ENERGIA for Nepal, CRT/N has been managing the GEWNet since 2002;
- International Network for Sustainable Energy (INforSE), Denmark: CRT/N is the National Focal Point for Nepal since 2005;
- Clean Cooking Alliance formarlly know as Global Alliance for Clean Cookstoves (GACC)
- Climate Action Network South Asia (CANSA)

Membership

- Energy for All Partnership
- Gender and Water Alliance (GWA), the Netherlands
- Clean Cooking Alliance, USA
- Nepal Alliance for Clean Cookstoves (NACC) Nepal
- Global Village Energy Partnership (GVEP), UK
- International Union for Conservation of Nature (IUCN), Switzerland
- Partnership for Clean Indoor Air (PCIA), USA
- Solar Cookers International Association, USA
- World Council of Renewable Energy (WCRE), Germany
- Global Gender and Climate Alliance Nepal (GGCAN)
- Indoor Air Pollution and Health Forum, Nepal
- The Alliance of Civil Society Organizations for Clean Energy Access (ACCESS Coalition)

Achievements

Improved Water Mill: 9,000 units



Eco-village Development: 619 HHs

Renewable Energy based Curriculum and Text Book Development: 28 Schools

Pico & Micro Hydro: 41 systems

Women Entrepreneurs: 3,300

Solar Mini-grid + Lifting: 200 HHs

Improved Cook Stoves: 350,000 HHs

Hydraulic Ram Pump: 31 Units

Awareness and Advocacy: 500,000 person

Programmes/Projects

TA-9334 NEP: Strengthening the Capacity of the Energy Sector to Deliver Gender Equality and Social Inclusion Results

Background

The TA 9334-NEP entitled 'Strengthening the Capacity of Nepal's Energy Sector to Deliver Gender Equalityand Social Inclusion (GESI) Results' is piggy backed to the loan project, 'Loan 3542-NEP: Power Transmission and Distribution Efficiency Enhancement Project'. It is funded by Asian Development Bank (ADB) with support from the Japan Fund for Poverty Reduction (JFPR) to ensure GESI mainstreaming in the loan project. The scope of the project covers three key outputs:

- Strengthened capacity of the Nepal Electricity Authority (NEA), and National Association of Community Electricity Users-Nepal (NACEUN) in mainstreaming GESI in energy programmes and projects,

Output 1

- Productive use of clean energy technologies and services by poor and vulnerable households and,

Output 2

- Developed capacity of NEA staff in new energy technology applications

Output 3

Supported by: Asian Development Bank with support from the Japan Fund for Poverty Reduction (JFPR).

To ensure the effective and efficient execution of Output 2, the project received complementary funding from 'Empowering Women Engendering Energy' project supported by the Swedish International Development Agency (SIDA).

Project Budget: USD 1,894,985

International Partner: International Network on Gender and Sustainable Energy (ENERGIA)/ Hivos (People Unlimited)

Project Area: Dolakha, Ramechhap, Sindhupalchowk, Kavre, Lalitpur, Dhading, Chitwan and Sindhuli

Project Period: January 2019-December 2021

Partners: The output 2 of TA project is being implemented by a consortium the International Network on Gender and Sustainable Energy (ENERGIA)/ Hivos (People Unlimited), the lead, Centre for Rural Technology, Nepal (CRT/N), Practical Action Consulting (PAC) Nepal and National Association of Community Electricity Users Nepal (NACEUN) (Strategic Partner).

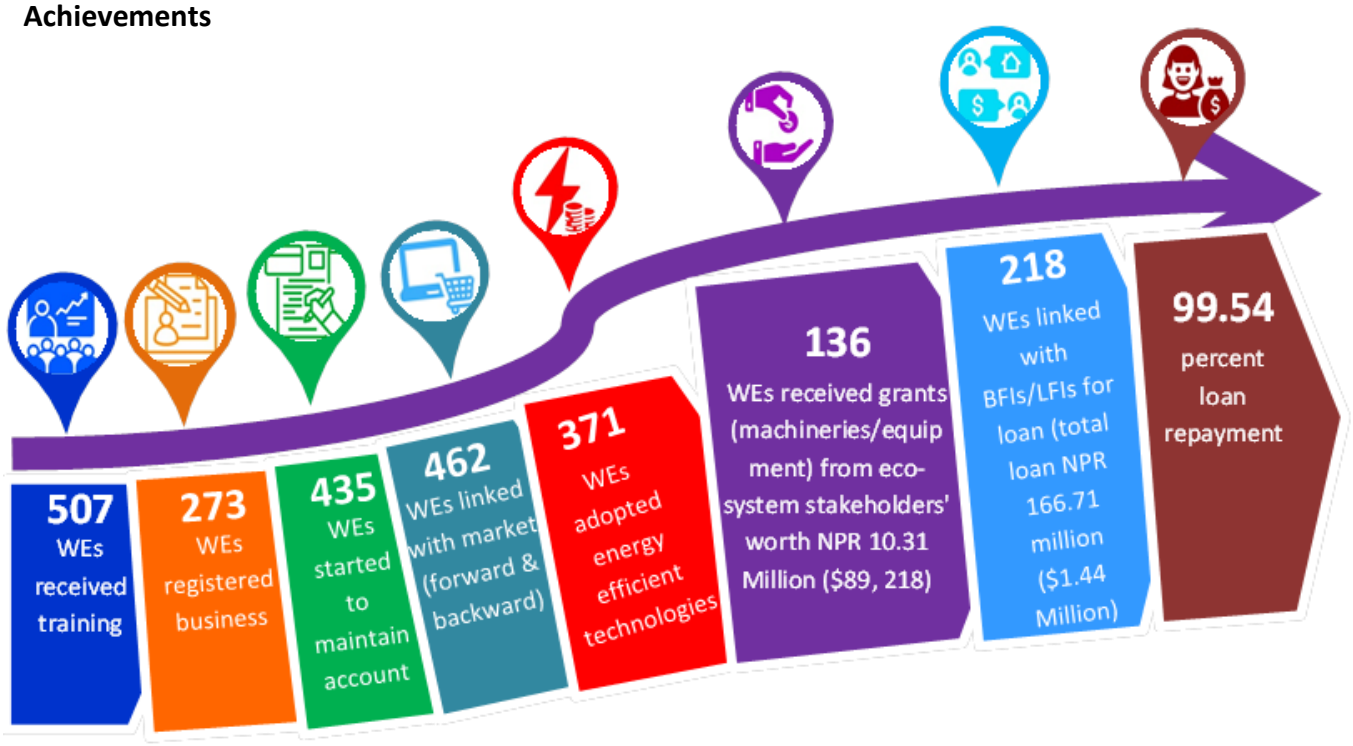
Project Objective

The objective of output 2 is to promote GESI in accessing and supporting productive use of clean energy technologies and services by women, the poor and vulnerable households of Electricity User Cooperatives (EUCs). Output 2 aids the women from poor and marginalized communities, in a holistic manner, in achieving their potentials of enterprise creation/ development through various livelihood and businesses opportunities. This encourages women to engage in productive use of energy thus increasing their electricity demand from EUCs and thereby enhancing their sustainability.

Key Activities/Targets

- Institutional capacity development of 15 EUCs from seven districts on Productive Use of Energy Promotion, Energy Efficiency and Electrical Safety;
- Provide entrepreneurship development, business management and technical skill training to 500 women from poor and marginalized groups;
- Provide post-training supports for accessing finance, market and appropriate technologies, and establishing linkages with eco-system

Achievements



Ms. Sarmila Tamang being awarded with Certificate of Honor from Honorable Prime Minister Mr. Sher Bahadur Deuba on the occasion of 6th International Women's Trade Expo 2022 for her contribution on Handy Craft sector

Bamboo crafts in Sharupa Digo Hastakala owned by Ms. Sharmila Tamang

ADB mission visit. In photo: Vice President (in the middle), ADB Country Director (most right) and Woman Entrepreneur in yellow dress (most left)

Ms. Bjorg Sandkjaer, State Secretary (Deputy Minister),Ministry of Foreign Affairs, Norway at the farm of Ms. Sanu Maya Shrestha

The Norwegian State Secretary (Deputy Minister) visited Lalitpur District to observe the impacts of TA 9334 and to observe the entrepreneurship development model going to be implemented in TA 6526 (Madhesh Pradesh). The Deputy Minister was accompanied by Senior Advisors, Ministry of Norwegian Foreign Affairs, Ambassador, Counsellor and Energy Advisor. The Team was accompanied by Nepal ADB Team and Mr. Tara Pradhan, Head, CRED.

Mr. Rajendra Ghimire, Officer of CRT/N who worked as Enterprise Development Coordinator under ADB TA 9334-NEP Project in Lalitpur district awarded with a letter of honor presented by Honorable Minister Ms. Pampha Bhusal for his outstanding performance to promote women-led enterprise in Lalitpur district. Mr. Ghimire facilitated the promotion of 17 different enterprises to 64 women enterpreneurs in four municipalities of Lalitpur district: Bagmati Rural Municipality, Konjyosom Rural Municipality, Mahankal Rural Municipality and Godawari Municipality.

Project at a Glance

ENERGIA Covid-19 Solidarity Fund for Women Entrepreneurs

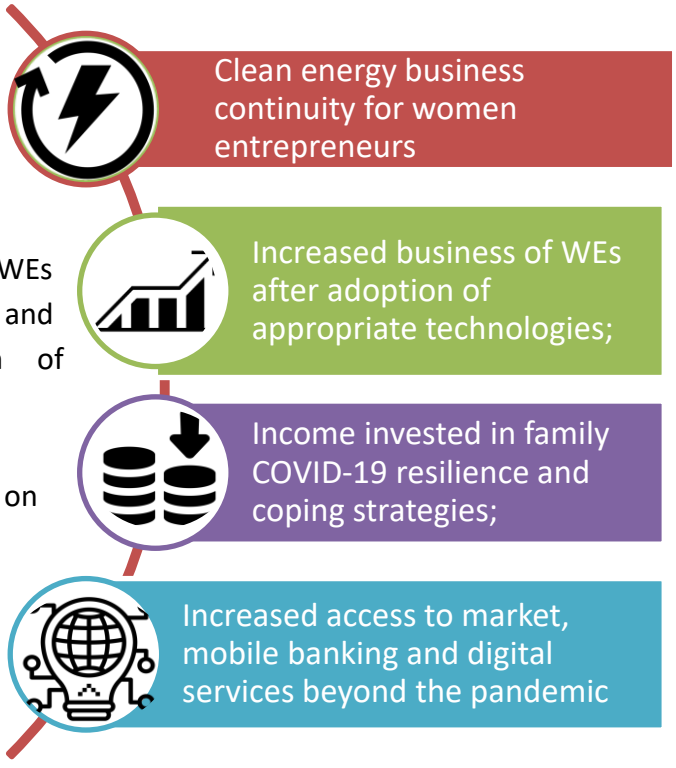
Background

PAC and CRT/N with Strategic Partner NACEUN and led by ENERGIA/Hivso has been implementing the TA 9334-NEP entitled "Strengthening the Capacity of Nepal's Energy Sector to Deliver Gender Equality and Social Inclusion (GESI) Results" project with the funding support by ADB and co-funding by SIDA. Output-2 of TA project is supporting 500 women members from marginalized groups in energy-based enterprises development in the above-mentioned areas. Due to COVID and lockdown these women entrepreneurs are highly affected. They are struggling to operate due to the lockdown, resulting in significant loss of income and limitations in last-mile communities' access to renewable energy products.

Women are disproportionately affected by economic shutdowns because they are more likely to run the smallest, most vulnerable businesses, especially as informal and self-employed workers. Informal sector and low-income, female-headed households and women living in rural and remote areas, are among the most vulnerable groups affected by social distancing and unemployment.

ENERGIA together with six of its implementing partners (i.e. Centre for Rural Technology Nepal, Practical Action Consulting Nepal, National Association of Community Electricity Users Nepal; Energy 4 Impact; Practical Action East Africa; and Solar Sister) wish to act now, to support the WEs engaged in the Empowering Women, Engendering Energy (EWEE) programme. This has been done through the ENERGIA COVID-19 Solidarity Fund for Women Entrepreneurs. The Fund aims to support 3,000 women entrepreneurs to recover from the crisis and build resilience.

Expected Outcome



Supported by: International Network on Gender and Sustainable Energy (ENERGIA)/ Hivos

Project Budget: 70,000 Euros

Project Duration: February-December 2021

Objectives:

The overall objective of the Solidarity Fund is to support WEs in recovering from the crisis brought upon by COVID-19 and building resilience for continuation and growth of enterprises.

The specific objectives are:

- To support WEs to continue their businesses based on clean energy;
- To support them to adopt appropriate technologies to increase future business success, income and growth;
- To enhance their access to market and facilitate their reach in mobile banking and digital services beyond the pandemic.

Project at a Glance

Mr. Guna Bahadur Bamjan, EUC Chairperson and team handing over the cereal hauling and grinding machine to Ms. Arati Bamjan (left) and Ms. Rama Khadka (Right) (Productive use of energy (PUE) in agro-processing entreprise)

Ms. Anjana Thing Bamjan supported with refrigerator to run a local hotel in the community (Productive use of energy in hotel)

Eco-Village Development through Integration of Renewable Energy Solutions and Climate Friendly Activities for Enhancing Livelihood of Rural Communities

Background

The impact of global emission resulting in climate change is affecting geographically and ecologically fragile landscapes and rural dwellers of Nepal where livelihoods are extremely sensitive to climate variances. The concept of "Eco-Village" is very pertinent when we envisage impacts of climate change in a small mountainous country like ours.

Ms. Surya Maya Tamang drying vegetables in solar dryer for her homestay guests.

An eco-village is a traditional or intentional community with the goal of becoming more socially, culturally, economically, and ecologically sustainable. It is consciously designed through locally owned resources, participatory processes to regenerate and restore its social and natural environments. It involves community through participatory design process for identification, planning and implementation of appropriate and affordable, renewable energy/climate friendly technology for enhancing livelihood-practices and capacity building activities for climate change adaptation and mitigation in villages. This project specially emphasis on ecological and social dimension of the existing community during the implementation.

The development of eco-village can address climate related vulnerabilities and rural development related issues as it incorporates both climate adaptation and mitigation measures. It provides a basket of sustainable solutions, which are decentralized, affordable, robust, low carbon and emphasize on the productive utilization of local resources to fulfill needs and wants of vulnerable communities. This concept brings the deprived communities, especially women, poor, and marginalized groups to the mainstream and enhance their capacity socially, environmentally and economically for the empowerment and also commit priority to equal gender participation. The bundle of EVD solutions includes mitigation measures like household biogas plants, improved cook stoves, solar PV, solar thermal, solar drying unit, improved water mills to generate electric power, stand-alone systems like Pico /micro-hydro power for rural electrification. It also includes adaptation measure such as organic farming, plastic tunnel farming, roof-rain water harvesting and water-lifting technologies like hydraulic ram pumps. The hydraulic ram pump earlier supported by GEF in Kavre district has positive impacts to the rural livelihoods integrating with improved water management practices resulting to improved agricultural / livestock production and improvement in sanitation and health. Hydraulic ram pumps are promoted wherever feasible.

An important part of EVD is planning of the appropriate solutions for each area and each village, to be chosen according to needs of community, climate, livelihood, and available resources. The EVD solutions are not limited to introducing a climate friendly technology; they also include the maintenance training and support for long-lasting use as well as other frameworks such as funding mechanisms in order to have a long-term progression of living standards in a sustainable way.

Ms. Nanimaya Tamang cooking food in Improved Cook Stove to improve indoor air quality, reduce carbon emission and optimum utilization of forest resources

Supported by: GEF/SGP/UNDP
Project Budget: NPR. 59,42,490
Project Period: December 2019 – April 2021
(Extended till April 2022) (Closed)
Project Area: Bethanchowk Rural Municipality,Bhangala-5 Kavre
Primary Objective: To develop eco-village by integrating eco-village development solutions with agro-based livelihood to enhance income of rural community of Kavre district. Specific Objectives are as follows:

- Creating enabling environment for local financial institutes to finance EVD solutions.
- To develop and demonstrate eco-village to district and national level line agencies.
- To integrate EVD solutions with agro-based livelihood for strengthening rural development to reduce poverty in ways that limit greenhouse gas emission and adapt climate change impacts.

Project Activities:

- Plantation of saplings of Avocado fruit and wallnut in each 100 household as planned.
- Mapping and MoU with MFIs/Saving and Cooperatives and beneficiary community Installation of Eco Village Technologies like Biogas, Improved Cook Stoves, Plastic Tunnels, Drip Irrigation System:
- Installation of EVD solutions like Biogas (10 HHs), Improved Cook Stoves 49 HHs, Plastic Tunnel and Drip Irrigation (47 HHs), repair and maintenance of Improved Water Mills (2 Nos)
- Trained 29 households (HHs) including 18 Women and 11 Men on biofertilizer/bio pesticides and bio composting through Jholmol and 36 households (HHs) including 28 Women and 8 Men, i.e. majority of participants were female members (78%) on Vermi composting: Activities planned to be completed in the extension period.
- Vegetable farming and agro-enterprise and farming in plastic tunnel, Solid Waste and Water Resource Management, Biogas Slurry Management Training
- Development of Eco Village Development Plan (EVDP)
- Development of knowledge products and publication and project documentary
- Capacity Building Training for the Operation, Management, and Maintenance of Eco-friendly Technologies
- Exchange Visit and Demonstration & Orientation to Stakeholders
- Learning and experience sharing workshop

Project at a Glance

emPOWER Collective Research Project Phase II

Background

Nepalese society is characterized by a social construct based on gender and caste-based hierarchy governed by patriarchal values and norms. With growing interest in creating a just and equitable society, a number of efforts are being made at different levels nationally and internationally to empower women and historically marginalized population. Historically, it is surmised that reservation policies and provision of resources (financial, educational, quota systems, property ownership, energy technologies etc.) results into contribute towards empowerment of women and excluded groups. However, emerging evidence suggests that gender and socially inclusive policies and access to opportunities and resources alone may not be sufficient to ensure marginalized group's participation in decision making at household or outside (Kabeer 2005; Shah et al. 2007; Heise 2011). In community development efforts, marginalized groups and women's participation is often labeled as silent or passive participation. This suggests a need for not just empowerment through access to resources but also from within (by sparking desire to change and voice concerns) for women and the excluded groups.

Supported by: Climate and Health Research Network (CHeRN), USA. This research project has been facilitated by Dr. Tami Bond (Colorado State University), Dr. Anita Shankar (John Hopkins University) and in joint collaboration with MinErgy.

Project Objective: This research project is designed to assess the impacts of a personal empowerment programmeme designed to increase rural community specially women's voice and agency as a means of improving rural development activities through making them capable for choosing the suitable renewable energy technologies to improve their livelihood. Changes and progress in individual and community action plans will be compared at end line.

Project Location: Chyasingkharka-5, Bethanchok Rural Municipality, Kavre

Project Duration: January 2020 – December 2021. (Extension till April 2022) (Closed)

Project Budget: 39765.USD

Project Target Groups:

Local women of Chyasingkharka, Bethanchok Rural Municipality, Kavre

Project Activities:

- Finalization of English version of the emPOWER training;
- Baseline study, and identification of emPOWER training participants;
- The emPOWER Training in Bethanchok Rural Municipality;
- Follow-up visit for personal agency session
- Tracking of progress in emPOWER Project.

An emPOWER mentor discussing limiting beliefs with emPOWER participants

A group performing a role-play to explain the concept of limiting beliefs at the training workshop

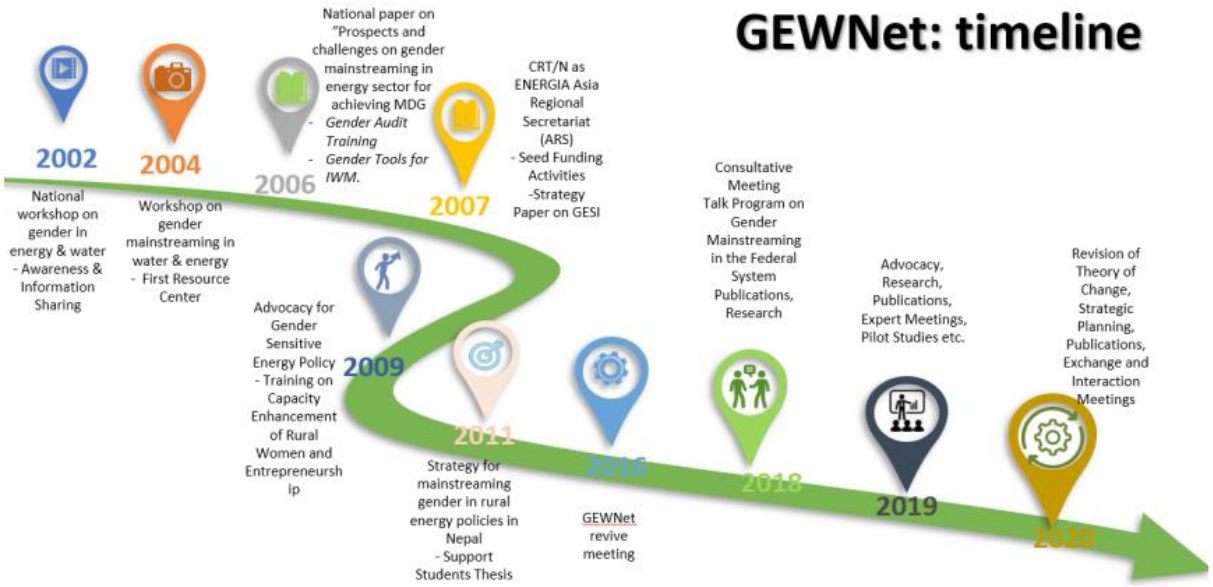
Gender, Energy and Water Network (GEWNet)

Background

The Gender Energy and Water Network (GEWNet) was established in Nepal as an output of the National Consultative Workshop held in August 2002 in Kathmandu. It was initiated with support from ENERGIA (International Network on Gender and Sustainable Energy). The network hosted by Centre for Rural Technology, Nepal (CRT/N) has been designated as a partner of Green and Inclusive Energy (GIE) Programmeme, which was financially supported by ENERGIA/Hivos. The network focuses on specific lobby and advocacy goals (influencing policies and practices of market and government actors) as well as on strengthening advocacy capacities of civil society actors. It will also contribute in increasing gender inclusive use of renewable energy and water including appropriate technologies which will complement and contribute to Government of Nepal's initiatives like Clean Cooking Solution for all by 2030, and Sustainable Development Goals (SDGs).

Objective:

- Create an effective network platform (for sharing of knowledge and information, promotion and collaboration);
- Achieve evidence to establish a firm evidence-based influential system for Gender inclusivity awareness/Action in energy and water sector;
- Sensitize and enhance capacity of network and network members and target groups on gender issues;
- Social and economic empowerment of women based on commercial and social enterprise development through supporting and initiating research, workshops and campaigns.
- Third party evaluation of the beneficiaries



International Network for Sustainable Energy (INFORSE)

Background

INFORSE is a global network of independent non-governmental organisations working for sustainable energy solutions to reduce poverty and protect the environment. INFORSE is a worldwide network consisting of 140 Non-Governmental Organizations working in about 60 countries to promote sustainable energy and social development.

The Network was established in Rio de Janeiro in 1992 to secure follow-up in the political decisions at the United Nations Conference on Environment and Development (UNCED). INFORSE is actively engaged in international awareness rising. INFORSE follows and influences sustainable energy issues in international negotiations and is accredited to the UN Economic and Social Council (ECOSOC) since 1998, and United Nations Framework Convention on Climate Change (UNFCCC) since 2002. As observer, INFORSE has been involved in participating at UN conferences. INFORSE also has organised side events and exhibitions at many of these conferences. CRT/N has been the member of the INFORSE Network since 2002 A.D.

Aims

INFORSE members have the following intermediate aims to fulfil the overall aims of the network:

Awareness Rising and Advocacy

- Communicate the experiences, know-how and visions of member organisations to the public and to international decision makers with the clear intention of influencing national and global energy development
- Promote greater participation among civil society organisations in the elaboration of energy strategies and policies and increase transparency in governmental and private sector energy activities
- Influence international institutions to strengthen activities to further renewable energy in sustainable development and creation of an international institution for sustainable energy

Capacity Building

- Enable politicians, government officials, NGOs, local communities and the business community to facilitate and utilise renewable energy options in particular through local solutions.
- Ensure local capacity in management, operation and control of energy services to facilitate a decentralisation of the energy sector.

Institutional Reform

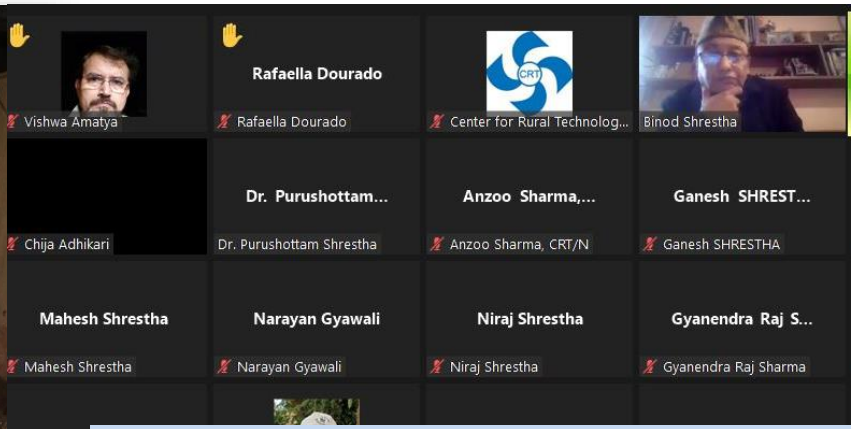
- Reform the regulatory framework and market conditions to ensure a level playing field for renewable energy options.
- Integration of social and environmental costs in prices of energy services.
- Mobilise investment via innovative funding arrangements.

Research and Development

- Redirect energy-related research and development towards renewable energy technology and upgrade traditional technology, knowledge and skills.
- Enhance transfer and development of technology in development co-operation and programmes.

Activities:

- Inforse Nepal Webinar Episode 1: Presentation on Mini/micro hydro: Means of sustainable energy and a path to climate change mitigation
- INFORSE Nepal Webinar Episode 2: Production of Refused Derived Fossil Fuel (RDF) from Municipal Solid Waste"
- INFORSE Nepal Webinar Episode 3: Municipal Energy Planning (MEP): Guidelines and Tool
- Mid-Term EVD Project Consortium Meeting
- Launch of Online Database of local climate Solutions for Eco-Village Development in South Asia
- Webinar on Eco-Village Development Achievements in South Asia.



Mr. Binod Shrestha, Deputy Chief Technical Advisor, REEEP/GIZ giving session Municipal Energy Planning (MEP): Guidelines and Tool

Mid-Term EVD Project Consortium Meeting and consortium partner's visit to EVD Site located in Bhalumara Village, Bethanchowk

Solar Electrification of a Remote Village and Promoting Energy Planning Based on Reliable Data Collection in Nepal

Background

Energy sector is one of the major pillars of development. In Nepal, there are some areas that are still dwelling in absence of electricity. In such areas, decentralized sources of electricity can provide access to electricity. This project has therefore aimed to provide access to electricity for a rural village that is deprived of electricity from national grid. The project is funded by Siemenpuu Foundation and EKOenergy, Finland. Furthermore, the concept of this project emerged as there was additional demand for community rural electrification put forward by Khanikhola Rural Municipality. In this context, the project introduces solar mini-grid for electrification of the village deprived of access to electricity.

Apart from installation of solar mini-grid, the project will support in advocacy Municipal Energy Planning (MEP) in Federal Context. The MEP tool is Geographic Information System (GIS) based MEP tool, developed by Renewable Energy for Rural Areas (RERA) programme jointly implemented by GIZ-Nepal and Alternative Energy Promotion Center (AEPC). The advocacy aspect of this project will emphasize on building capacity of the Local Government and energy professionals to develop robust energy plans and policies for their municipality. To facilitate evidence-based advocacy regarding need of energy plans and policies to improve rural access to sustainable energy sources, a planning document along with policy brief will be developed based on the results of MEP tool for the Local Government. Advocacy efforts will also aim at building capacity of the relevant stakeholders on the concept and importance of net metering and Multi-Tier Framework (MTF) developed by the World Bank and its adaptation in rural Nepal context to measure quality of electricity access.

Supported by: Siemenpuu Foundation and EKOenergy, Finland

Project Duration: July 2020 to November 2021 (Extended till May 2022) (Closed)

Project Budget: 86,238.10 Euro

Project Area: Saurya Bhangtarbesi village-3, Khanikhola Rural Municipality, Kavrepalanchowk district, Bagmati Province, Nepal

Project Objectives

- Installation of 10 kWp solar Mini-grid at Saurya Bhangtarbesi village-3, Khanikhola Rural Municipality, Kavrepalanchowk district, Province 3, Nepal to improve electricity access in the village.
- Capacity building of relevant stakeholder from Khanikhola Rural Municipality and energy sector stakeholders from local, provincial and national level on application of Municipal Energy Planning (MEP) Tool.
- Advocate on need and use MEP tool to develop energy plans and policies to relevant stakeholders representing local, provincial and national level Government CBOs/CSOs and private sector.

Major Project Activities

- Detail Feasibility Survey and installation of Solar Mini-grid system
- Sampling and data collection from all wards of the rural municipality to facilitate use of MEP tool
- Municipal Energy Planning (MEP) tool application and develop energy plan for Khanikhola Rural Municipality
- Capacity building of stakeholders and enumerators on use and application of MEP process and tool.
- Consultative workshop with energy sector stakeholders at all three levels of the Government to promote and advocate MEP process and tool.

Achievement

- To ensure transparency on the project, a Solar Electrification Program User Committee was formed and was taken on board since the beginning of the project. The budget allocated for the installation and commissioning of the Solar mini-grid was transferred to the committee's bank account, through which the entire procurement and payment were executed, on which CRT/N facilitated the committee in the procurement process and was responsible for quality check.
- 10 kWp Solar mini-grid system was handed over to the user committee on 24 November 2021 (Mangsir 8, 2078). However, for the testing purpose, the system was in operation since 20 March 2021.
- 96 households are connected to the mini-grid. Each household is provided with 4-LED bulbs (two units of 5 W and 7 W respectively) along with 5 LED street lights with 10 W capacity.
- One Poultry farm with the capacity to raise 100 chickens and a 3-HP dual-purpose hulling and grinding mill is connected to the mini-grid.
- The system has a 15 KVA grid-interactive inverter which can be synced with the national or any other grid system to enhance the supply capacity and reliability.
- One person from the beneficiary community has been employed as an operator of the Solar mini-grid and the mill.
- Development of Municipal Energy Plan for Khanikhola Rural Municipality. The plan was developed following series of meeting with the Khanikhola Rural Municipality.
- Trained 13 renewable energy sector professionals from the Government, Non-Government and private sectors on Municipal Energy Planning (MEP) Process and GIS-based MEP tool.
- Promotion and dissemination of the knowledge and experience about the MEP process and GIS-based MEP tool to the wider audience from local, national, regional and international levels through networks, webinars and workshops.
- Project impact video and stories
- Learning and experience sharing workshop

Project at a Glance

Assessing National Climate Policy Provisions and Understanding of Women on Climate Resilience Agriculture in Nepal

Background

Climate change around the global have already affected agriculture and will continue unabated if the current trend continues. Agriculture is highly sensitive to changes in precipitation and temperature. Impacts on arable crops are easily seen as biological changes such as changes in flowering and harvesting seasons, quality changes and the shifting of areas suitable for cultivation. It also affects the overall agricultural ecosystem through increased pest and disease attacks, and changes in biodiversity patterns.

Project Supported by: CECI, Canada

Project Duration: January – February 2022

Project Budget: NRS 10,00,000

Project Location: Ratna Nagar, Namobuddha and Chautara Sangachowkgadi Municipalities of Chitwan, Kavre and Sindhupalchowk districts respectively

Objectives

The main objective of the project is to collect and analyze the information on impact of climate change in agriculture from primary and secondary sources, to be able to plan the possible interventions and propose at least one innovative idea to equip the partner organization in the wake of climate change.

Achievement

- Review on national climate and agriculture policies and their implementation at local level
- Research on the impact of climate change on agriculture in the three geographical regions of Nepal
- Study on indigenous techniques adapted for Climate Resilient Agriculture (CRA)
- Training on vermicomposting to the lead farmers of three municipalities
- Training on good governance and climate change to the focal person of target Municipalities
- Presentation of the research findings among the stakeholders

Most appropriate Climate-resilient agriculture measures according to farmers

Next Generation Low Carbon, Climate-resilient Eco-Village Development in South Asia

Mr. Bimarsa Muktan, Chairperson-Marin RM and project beneficiaries planting Ashok plant on the occasion of World Environment Day (5 June 2022)

Background

Among the 1.6 billion people in the four South Asian countries Nepal, Sri Lanka, India and Bangladesh 2/3 are living in the rural areas, and that poverty is still widespread in many rural areas, even though total poverty in the region is decreasing. The region is also very climate vulnerable with Bangladesh being the most climate vulnerable country according to Climate Change Vulnerability Index (CCVI-2011) while Sri Lanka ranked second in the Climate Risk Index 2017 (by Germanwatch). All four countries are among the most climate vulnerable countries in the world. The environmental context is that in addition to climate change, there are deforestation in many area and lack of wood for cooking and other purposes. Much of the deforestation is caused by inefficient use of wood for cooking and village industries.

This intervention is being implemented in Nepal, Sri Lanka, India and Bangladesh on several levels. It will focus on development in those rural areas, where poverty is still widespread. Poverty is linked with many problems, including lack of energy and water, poor health and education, as well as migration out of the areas.

In Nepal, the local target area is Bhalumara, in the Marin Rural Municipality in the lower plain area of Nepal. The inhabitants have acute water scarcity problems and increasing temperatures, which affects their livelihood mainly with lack of water for irrigation and thereby lower harvests. The local water resources are quickly drying up due to climate change and remaining water resources are further away from the village area. Due to dwindling agricultural income, villagers are increasingly migrating away, in

particular younger men. Other problems include high wood consumption and indoor air pollution with inefficient cookstoves.

The current situation calls for interventions that enable villagers to adapt to climate change impacts and to improve agriculture and livelihood. A number of different opportunities exist for this, from improved water access over diversification of crops, to alternative income opportunities such as food processing and non-farming income. The firewood-based cookstoves can be improved significantly through the introduction of efficient and cleaner improved cook stoves. These interventions can contribute to improve lives and livelihoods, and thereby reducing migration. This will make the village a model village that can be used for learning and as a demonstration point for the local government.

Supported by: Civil Society in Development (CISU), Denmark
Project Budget: 596,335 DKK (NPR. 95, 41,360)
Local Partner: Collective Development Expedition Centre (CODEC Nepal), Sindhuli

Project Period: July 2020-December 2022
Project Area: Bhalumara-3, Marin Rural Municipality, Sindhuli district, Bagmati Province.

Objectives:

- Develop a model village adopting Eco-Village Development (EVD) Concept in all the project partner countries.
- Establish a Social Enterprise Modal (SEM) for at least one EVD solution to improve market access and introduce business opportunities for the local communities and stakeholders.
- Advocate and promote EVD concept at sub-national, national, regional and international level.

Expected Outcomes:

- The local communities have defined and presented their needs and asks for development in their community.
- The EVD model villages will be established in Marin Rural Municipality, Sindhuli and agreed on EVD indicators.
- Minimum one Social Enterprise Model (SEM) of EVD solution(s) will be developed and rolled out in three villages of Marin Rural Municipality, Sindhuli. Furthermore, it will provide additional market access and business opportunity to local stakeholders and community members.
- The partners will share their knowledge of EVD to other CSOs, local governments, other regional governments.
- The INFORSE South Asia, CAN South Asia will increase its membership and participation due to participation in project outreach.
- Stakeholders and networks will take up the EVD concept by including the EVD approach in their development plans and budget.
- Willingness of stakeholders will increase to provide matching funds or co-finance EVD concept.
- The EVD concept and the value of local initiatives will recognize as climate solutions by national and international climate bodies and negotiations.

Completed Activities

- Pre-feasibility study
- Provided co-funding worth NPR. 10,00,000 to solar drinking water project
- Plantation of ashoka plant on the occasion of World Environment Day, 5 June 2022
- Distribution of 110 high-value trees (Litchi and mango)
- Commercial vegetable farming training

Project at a Glance

Plantation of high-value trees (Mango and Litchi)

Project beneficiaries constructing a poly-house tunnel for commercial vegetable farming

Training on nursery bed preparation for tomato seedlings

Training on commercial vegetable cultivation

Installation of drinking water supply network in Bhalumara village (Co-funding for Solar Water Lifting Drinking Water Project)

Improving Access to Drinking Water through Solar Water Lifting Project" at Bhalumara Village Marin, Sindhuli

Project Background

The project proposes to introduce a solar lifting system to lift groundwater from the riverbank to approx. 30-35 meters elevation and distribute across 1 km radius area. The proposed project will demonstrate a diverse scope of renewable energy technology by contributing to developing a drinking water system that is powered by solar energy. Integration of renewable energy technology like solar water lifting will contribute to increase the share of renewables in the national energy mix. There are several international commitments of the Government of Nepal such as Sustainable Energy for All (SE4ALL) and Sustainable Development Goals (SDGs), in which the project can address for some extend.

The electricity in the area is being distributed by KalpabrikshyaSamudayikGraminBidhutikaranUpabhoktaSahakariSanstha Ltd. (community rural electrification entity: CREE) through 50 KVA transformer which is merely enough for domestic usage for more than 170 households. The available infrastructure does not permit use of small or a community scale water-lifting pump within the village. As many energy-based enterprises are being operated, there is a need for renewable energy technology intervention along with a filtration system to solve the drinking water scarcity issue of the Bhalumara residents.

Project Supported by: WWF
Project Duration: May– December 2022
Project Budget: NPR. 4, 937,707

Project Location: Bhalumara Village located in Marin Rural Municipality-3, Sindhuli District, Bagmati Province, Nepal.

Project Target Groups: 110 Households 507 inhabitants (256 male, 251 female).

Project Activities:

- Project information sharing at the Marin Rural Municipality Office
- Conduct Detailed Feasibility Study (DFS)
- Assessment of water table for construction of the well
- Procurement and Bidding Process
- Construction of well
- Water Sample test
- Installation of water lifting system
- Installation of the filtration system
- Bookkeeping, operation, repair and maintenance training
- Management of the drinking water supply system
- Installation of plastic tunnel house and micro-irrigation unit
- Demonstration visit
- Progress Report and Final Report

Completed Activities:

- Project information sharing at the Marin Rural Municipality Office
- Conduct Detailed Feasibility Study (DFS)
- Assessment of water table for construction of the well
- Procurement and Bidding Process
- Construction of well
- Water Sample test

Project at a Glance

Installation of solar pump to lift drinking water

Self-help Eco-Village Development Project

Background

On 13 August 2019, (28 Shrawan, 2076) Centre for Self-help Development (CSD) organized an interaction programmeme on "Current Challenges in Microfinance and Way Forward" where Centre for Rural Technology, Nepal (CRT/N) presented the concept of Eco-Village Development (EVD) model launched in various places of Bethanchowk Rural Municipality, Kavre. The discussion was held with the participants about materializing the concept by implementing the Self-help Eco-Village Development project. If we take in account of our present activities, the planet Earth is and will be harshly affected by climate change; the impacts might be a cataclysm. After deep discussion during the interaction programmeme, it was concluded that Self-help Eco-Village Development project is advantageous to rural areas where a happy life is defined by Energy, Food and Water, importantly agriculture and food security. Therefore, the Centre for Self-help Development (CSD) presented a proposal to organize such concept in five different rural villages of Nepal by granting a sum of Rs.5,00,000 for each village which makes Rs. 25, 00,000 of total financial support.

After the interaction programmeme CRT/N, CSD and Manushi Laghu Bitta Bittiya Sanstha Ltd, Banepa, Kavre discussed and reached to the decision that Manushi Laghu Bitta Bittiya Santha Ltd will act as first partner for organizing the Self-help Eco-Village Development project by signing the triparty agreement.

Supported by: Center for Self- Help Development (CSD)

Project Period: It is aimed to implement the project from August 2019 to February 2022.

Project Area: Presently, the project is organized in Barabise-3, Dharpa of Sindhupalchowk district

Project Objectives:

- To develop Eco-friendly concept as a best model for Sustainable Rural Development and for better quality of life,
- To coordinate with local microfinance institutions (MFIs) for convenient and appropriate investment in order to add and boost the Eco-friendly technologies and to improve income-oriented mechanism,
- To encourage to utilize the local resources and skills predominantly,
- To help for formulating plans and policies with local decision-making offices and microfinances institutions (MFIs) for discouraging foreign employment and for increasing the employment opportunities at a local level

Project Budget: NRS. 9,08,525

Project Goal: The primary goal of Self-help Eco-Village Development Project is to investigate the alternatives and solutions to enhance the eco-friendly situation in order to reduce the Green House Gases effect and to minimize the impacts of Climate Change for better quality of life.

Project Partners:

- Centre for Self-help Development (CSD), Kathmandu
- Centre for Rural Technology, Nepal (CRT/N), Kathmandu
- Manushi Laghu Bitta Bittiya Sanstha Ltd., Banepa, Kavre

Planned Activities:

- Capacity Building Training on improved cooking stove for five participants.
- Vegetable Farming Training for 25 participants.
- Waste & Water Management Training for 25 participants.
- Pesticides Free Farming Technique & Market Linkage Training for 25 Participants
- Plantation
- Develop ECO -Village Planning Document.
- Installation of EVD Solutions as per need of Community (financial support through loan linkage).
- Monitoring & follow up.
- Development of knowledge products.

Completed Activities in Dharpa

- Dialogue meetings with local community.
- Prepared questionnaire for baseline survey.
- Training for Social Mobilizer of Manushi Laghu Bitta Bittiya Sanstha Ltd.
- Developed Digital Survey System through the use of Mobile.
- Baseline Data Collection and Need Assessment in line with EVD Concept and Finalization of EVD Solutions
- Three Days Capacity Building Training on Vermi-Composting for 26 women participants.
- Capacity Building training on installation, use, repair and maintenance of Improved cook stove to 8 participants
- Plantation of high value trees (Avocado, Schezwan, Bay plant) to 96 households
- Three days training on Poly-house tunnel construction and vegetable farming
- Training on Bio-pesticide, waste and water management

Similar to the project in Dharpa, CSD, CRT/N and Mahila Sahayogi Bachat Tatha Rin Sahakari Sanstha Ltd. Samakhusi, Kathmandu discussed and reached to the decision that Mahila Sahayogi Bachat Tatha Rin Sahakari Sanstha Ltd. will act as a partner for organizing the Self-help Eco-Village Development project by signing the triparty agreement.

Supported by: Center for Self- Help Development (CSD)

Project Period: October 2021 - October, 2023.

Project Area: Chandragiri-2, Masine village, Kathmandu

Project Budget: NRS. 6,65,000

Project Goal: The primary goal of Self-help Eco-Village Development Project is to investigate the alternatives and solutions to enhance the eco-friendly situation in order to reduce the Green House Gases effect and to minimize the impacts of Climate Change for better quality of life

Project Objectives:

- To develop Eco-friendly concept as a best model for Sustainable Rural Development and for better quality of life,
- To coordinate with local microfinanceinstitutions (MFIs) for convenient and appropriate investment in order to add and boost the Eco-friendly technologies and to improve income-oriented mechanism,
- To encourage to utilize the local resources and skills predominantly,
- To help for formulating plans and policies with local decision-making offices and microfinance institutions (MFIs) for discouraging foreign employment and for increasing the employment opportunities at a local level

Planned Activities:

- Collection of Data, Process and formulation of Project Strategy
- Publication distribution (EVD concept and eco-solution)
- Goat Rearing Introductory Training (35 participants)
- Grass Cultivation Field Visit to Farmers in Dharke, Dhading Besi
- Akabarey Chilli Pepper Farming Training +Tunnel farming
- Goat Shed Management Training for 20 participants (2-Days)
- Goat Shed Management (Five Clusters of the communities)
- Chaff Cutter Machine (Five Clusters of the communities)

Completed Activities:

- Goat Rearing Introductory Training (35 participants)
- Grass Cultivation Field Visit to Farmers in Dharke, Dhading Besi
- Akabarey Chilli Pepper Farming Training +Tunnel farming
- Goat Shed Management Training for 20 participants (2-Days)
- Goat Shed Management (Five Clusters of the community

Project Partners:

Centre for Self-help Development (CSD), Kathmandu, Centre for Rural Technology, Nepal (CRT/N), Mahila Sahayogi Bachat Tatha Rin Sahakari Sanstha Ltd (Samakhusi, Kathmandu (Chandragiri Branch)

Nursery bed preparation for training on Akabarey Chilly Farming

Beneficiaries chopping insecticidal plants to prepare Bio-pesticide

Supporting Indigenous Practices and Entrepreneurship through Promotion of Renewable Energy Technology in the Indigenous Community of Bardiya

Background

The proposed project has been aimed to support indigenous culture and practices and livelihood through promotion of renewable energy technology in the indigenous Tharu of Bardiya through solar, solar dryer improved cook stoves and biogas for efficient and clean cooking for promoting sustainable livelihood development. Also promote organic farming vermi-composting and use of bio fertilizer and bio pesticide like "Jholmal", plastic tunnel, plastic mulching and micro irrigation (drip and sprinkler) technologies. Knowledge on these initiatives will also be promoted and advocated at the local school providing some knowledge to the students through engagement of their teacher and organize educational events.

Project Implemented by: UNYC Nepal, Bardiya in collaboration with CRT/N

Project Supported by: SGP/UNDP/GEF

Project Duration: November 2021-October 2022 (11 Months)

Project Budget: NRP 4,28,000

Project Location: Bardagahi village, Rajapur Municipality-3, Bardia

Objective:

To improve rural livelihood of Indigenous people by supporting indigenous practices through promotion of renewable energy technologies.

Activities:

- Project Initiation Workshop
- Need Assessment and Demand Collection of RETs
- Orientation and Demonstration of RETs
- Promotion & Installation of RETs

Demonstration of EVD solutions to project beneficiaries

Demonstration of Drip Irrigation, a Climate Smart Agriculture Technology

SOUTH ASIA SUB-REGIONAL ECONOMIC COOPERATION POWER TRANSMISSION AND DISTRIBUTION SYSTEM STRENGTHENING PROJECT: Implementation Support for Gender Equality and Social Inclusion TA-6526 NEP

Background

The South Asia Subregional Economic Cooperation (SASEC) power Transmission and Distribution System Strengthening Project (PTDSSP) aims to reinforce and modernize power supply system in and around Kathmandu Valley including the strengthening of distribution systems outside of Kathmandu starting with Bharatpur and Pokhara where power supply interruptions are frequent and prolonged. The project also supports Madhesh Province where the quality of electricity supply is poor and around 20 percent of households are still without access to the national grid.

This Technical Assistance (TA) will contribute to the overall goal of the SASEC PTDSSP project. Specifically, it will support NEA to strengthen its Gender Equality and Social Inclusion (GESI) mainstreaming process in a manner that ensures social inclusion and gender equality while improving the access, reliability, and efficiency of power supply throughout the country. At the same time, it will demonstrate a pro-poor and gender-responsive service delivery model in Madhesh Province, including productive use of energy, electric cooking, and employment generation.

Output 1: Strengthened capacity of NEA to implement approved strategy, operational guidelines, and manuals of GESI.

Output 2: Increased capacity of women, poor and the marginalized to use electricity efficiently and productively

Project Duration: April 2021 - September 2024

Project Supported by: ADB and SIDA

Project Budget: USD 1,969,288 = NPR. 23,23,75,984

Project Location

The project shall cover Madhesh Province, Kathmandu Valley, Pokhara and Bharatpur.

Implementation Arrangement

NEA is the executing agency (EA) of the PTDSSP and the consulting firm will work closely with the TA implementation unit under Social Safeguards and Environmental Management department (SSEM) of Project Management Directorate (PMD) of NEA.

The Asian Development Bank (ADB) has contracted the Humanist Institute for Cooperation with Developing Countries (Hivos), the Netherlands to implement the TA project. In doing so, Hivos will collaborate with Centre for Rural Technology, Nepal (CRT/N) Nepal and National Association of Community Electricity Users - Nepal (NACEUN) Nepal to implement the project.

Approach and Methodology

For effective implementation and considering the synergies between various tasks, activities are clustered under three Intervention Areas:

INTERVENTION AREA 1: CAPACITY BUILDING AND INSTITUTIONALIZATION OF GESI IN NEA

The expected result of this intervention area is strengthened capacity of NEA to implement the approved GESI Strategy and Operational Guidelines.

TARGETS

- At least **500 NEA staff** (at least **20 percent women** and **30 percent excluded groups**) from all major directorates (including regional offices), department and project offices oriented on application of
- GESI strategy, guidelines, and manuals and its monitoring mechanisms.
- **2 DCS** to pilot test GESI related provisions (i.e., diversity of staff, special support to women and excluded group, ergonomic infrastructure for disabled workers).
- Training on complaint/grievance handling mechanism on sexual exploitation and abuse and harassment (SEAH) provided to the appointed GESI focal persons and GESI coordinator.
- Lessons learnt captured and recommendations to NEA for required adjustment to existing approach in GESI mainstreaming.

ACTIVITIES

- Operationalization of GESI secretariat and GESI focal points in each directorate.
- Formation of GESI working group.
- Support to develop and implement annual GESI workplans.
- Planning the implementation of GESI responsive mechanism in DCSs.
- Institutional assessment of DCSs.
- Pilot Test GESI related Provisions.
- Training and guidance on Grievance Management.
- Orientation on operationalising GESI Strategy and Operational Guideline.
- Capturing Lessons Learnt .

INTERVENTION AREA 2: SKILL BUILDING AND ENERGY-BASED LIVELIHOODS IN MADHESH PROVINCE

The expected result of the intervention area is increased capacity of women, poor and the marginalized to use electricity efficiently and productively.

TARGETS

- 400 entrepreneurs trained in energy-based livelihood enhancement (among them 50 percent women of which at least 20 percent from excluded group and 50 percent men preferably youth from excluded social groups).
- 200 persons trained on vocational education (of whom 20 percent are women and 50 percent are men from excluded groups); post-training, hand-holding support for entrepreneurs; assuredemployment and counselling support to the trainees of vocational training.

This Intervention Area deals with two parallel activities: promoting energy-based livelihoods and creating employment opportunities, both to be implemented in Madhesh Province.

ACTIVITIES

- Building team readiness.
- Rapid Market Assessment (RMA) for entrepreneurship promotion and job placement.
- Detailed intervention planning including labour market analysis and market insertion and detailed market assessment of selected value chains.
- Mechanisms for establishing partnership among entrepreneurial ecosystem stakeholders through steps including kick off meetings, ongoing review meetings, exposure visits and technical support.
- Establishment and promotion of PUE promotion facility at local focal institution including institutional development of local focal institution.
- Social mobilization and entrepreneur selection including social mobilization, selection of potential entrepreneurs and employees and a minimum commitment fee.
- Capacity building and post training support for PUE promotion (400 entrepreneurs) that includes collecting baseline data for entrepreneurs, integration of entrepreneurship and business management training with
- Agency based Empowerment, technical and skill training, follow-up business advisory services, facilitation for market and other linkages, finance facilitation adoption of energy efficient technologies and maintaining electrical safety, and supporting innovation in business management and operation.
- Employment creation through Technical and Vocational Education and Training (200 beneficiaries) including employment through partnership with selected industries, employment at supported enterprises, and counselling and handholding support for job placement.

INTERVENTION AREA 3: COMMUNITY LEVEL AWARENESS CREATION ON GESI ISSUES, ENERGY-BASED LIVELIHOODS AND ELECTRIC COOKING

The expected results of this intervention is the creation of community level awareness on GESI issues, energy- based livelihoods, and electric cooking.

TARGETS

- 200 mass awareness programmes on gender and exclusion issues and on electricity use and safety in project areas including Distribution and Consumer Service (DCSs) in Kathmandu Valley, Bharatpur and Pokhara (10,000 people participating with at least 30% women and 30% excluded group).
- 600 persons covered through orientation to reduce gender and social barriers in Madhesh Province (at least 50 percent men).
- The pro-poor and socially excluded HHs are motivated to improve their livelihood through electricity access along with the practice of safe and efficient use.
- At least 400 households change their behaviour for cooking their daily meal by adopting e-cooking technology (induction cooktops) in on-grid areas especially, newly electrified HHs and distribution augmented areas.

INTERVENTION AREA	ACTIVITIES
3a. Mass awareness campaigns on GESI and electricity use	• Mass media awareness campaigns on GESI and electricity use. • Innovative media including 3-2-1 service (Social norming) and Gamification for behaviour change on GESI • and on efficient use of electricity and electricity conservation, electrical safety, and energy for livelihoods. • Family and community level dialogues and focus group orientations. • Community activities including a series of interactive street performances, women champions of change, • creative expressions competitions and Policy dialogues.
3b. Support NEA in developing a mechanism to ensure electricity access to poor; and excluded households in Madhesh Province	• Baseline survey • Problem identification • Advocacy and lobby • Formulation and implementation of strategy • Capacity enhancement
3c. Promote use of electric induction cooking	• Baseline Survey • Advocacy and lobby • Promotional Activities • Market Mapping • Demand Collection • Behavioural Change

Financial Updates 16 July 2021 –15 July 2022

ग्रामीण प्रविधि केन्द्र

Centre for Rural Technology, Nepal

STATEMENT OF INCOME AND EXPENDITURE

For the year ended on 32nd Ashadh 2079 (16th July 2022)

Particulars	Notes	Current Year	Previous Year
INCOME			
Incoming Resources	4.10	9,548,528.52	10,485,292.81
Received From Projects	4.10A	59,540,214.98	49,027,510.00
Financial Income	4.10B	573,030.34	722,502.52
Other Income	4.10C	259,394.05	20,040.00
Total Income		**69,921,167.89**	**60,255,345.33**
EXPENDITURE			
Staff cost/ Expenses	4.11	8,974,785.55	7,807,634.32
Project Expenses	4.12	55,568,777.00	48,977,550.00
General Administrative Expenditure	4.13	5,059,979.23	3,361,061.15
Staff Training/Development		-	-
Depreciation	4.1	277,125.42	77,972.00
Total Expenditure		**69,880,667.20**	**60,224,217.47**
Surplus before exchange gain/loss		**40,500.69**	**31,127.86**
Exchange Gain/ (Loss) in Euro A/c		(1,649.21)	303.84
Net Surplus/(Deficit) before taxation		**38,851.48**	**31,431.70**
Income Tax Expenses		-	-
Surplus /(Deficit) for the Year		**38,851.48**	**31,431.70**
Appropriation of surplus for the year			
Allocation to reserves		34,966.48	28,288.70
Allocation to Staff Welfare Fund		3,885.00	3,143.00

The Notes on accounts form an integral part of the financial statements

Dr. Ananda Shova Tamrakar
Chairperson

Dr. Purushottam Shrestha
Executive Director

CA Narayan K. Joshi
N.K. Joshi & Company
Chartered Accountants

Hari Gopal Gorkhali
Treasurer
Date: 2079/06/25
Place: Kathmandu

ग्रामीण प्रविधि केन्द्र नेपाल

Bhawan K. Singh
Sr. Account Officer

N. K. Joshi & Co. * Kathmandu * Chartered Accountants

ग्रामीण प्रविधि केन्द्र

Centre for Rural Technology, Nepal
STATEMENT OF FINANCIAL POSITION
As at 32nd Ashadh 2079 (16th July 2022)

Particulars	Notes	Current Year	Previous Year
ASSETS			
Non-Current Assets			
Property, Plant and Equipment	4.1	2,325,222.09	1,428,280.70
Intangible assets		-	-
Investment property		-	-
Long term investments	4.2	5,278,688.66	6,163,198.02
Other non current assets		-	-
Total Non-current Assets		**7,603,910.75**	**7,591,478.72**
Current Assets			
Account receivable	4.3	11,577,430.57	32,018,925.55
Cash and cash equivalents	4.4	10,462,177.03	19,158,479.21
Total Current Assets		**22,039,607.60**	**51,177,404.76**
Total Assets		**29,643,518.35**	**58,768,883.48**
LIABILITIES & RESERVES			
Accumulated reserves			
General Reserve Fund	4.5	8,190,460.02	8,155,493.54
Technology Study & Research Fund	4.6	370,829.00	310,829.00
Fixed Assets Reserve Fund (Projects)	4.7	735,503.54	1,171,436.73
Total Accumulated Reserves		**9,296,792.56**	**9,637,759.27**
Non-Current Liabilities			
Loans & Borrowings		-	-
Employee Benefit Liabilities	4.8	4,526,906.00	3,887,831.45
Deferred Revenue		-	-
Other Non-current Liabilities		-	-
Total Non-current Liabilities		**4,526,906.00**	**3,887,831.45**
Current Liabilities			
Account Payables	4.9	15,819,819.79	45,243,292.76
Loans & Borrowings			
Provisions		-	-
Total Current Liabilities		**15,819,819.79**	**45,243,292.76**
Total Liabilities		**20,346,725.79**	**49,131,124.21**
Total Liabilities & Reserves		**29,643,518.35**	**58,768,883.48**

The notes on accounts form an integral part of financial statements

Dr. Ananda Shova Tamrakar
Chairperson

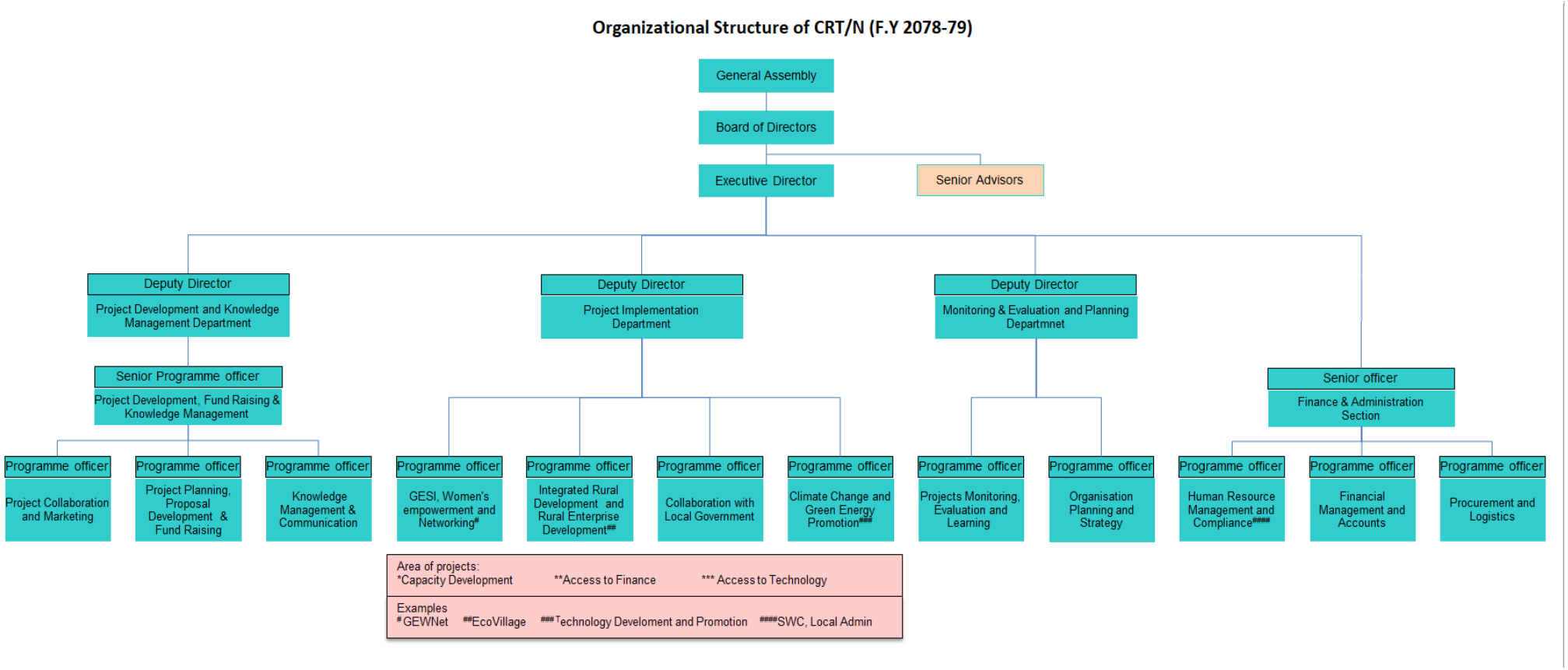
Dr. Purushottam Shresthc
Executive Director

CA Narayan K. Joshi
N.K. Joshi & Company
Chartered Accountants

Hari Gopal Gorkhali
Treasurer
Date: 2079/06/25
Place: Kathmandu

awan K. Singh
. Account Officer

Organizational Chart (FY 2078-79)



Board of Directors

Dr. Ananda Shova Tamrakar, Chairperson

Dr. Tamrakar was a professor at Tribhuvan University. She has served Tribhuvan University for 37 years. Besides teaching, she is conducting researches on pest management, water management, vermin composting and biodiversity. She has pursued Ph.D. from India. She has completed her Diploma of Environmental Management and Protection from University of Technology, Dresden, Germany. She has been awarded US-AEP Fellowship by Asia Foundation in USA. She remained Board Member of CRT/N since 2002 and also served as a Board Member of Mahila Sahayogi Bachat Tatha Rin Sahakari Sanstha Ltd. Besides, she is the president of Trans-Himalayan Environment and Livelihood Programmeme (T-HELP). She is also the member of Federation of Women Entrepreneurs Association (FWEAN). She has about 100 research publications (includes both national and international

Mr. Ganesh Ram Shrestha, Member

Mr. Shrestha is one of the founder members of the Centre for Rural Technology, Nepal (CRT/N) established in August, 1989. He has served as Executive Director of CRT/N till January, 2021 and has more than 3 decades of experience in the development and promotion of the renewable energy and appropriate / rural technologies and contributed his expertise towards enhancement of rural livelihoods and sustainable development in Nepal through working with rural communities, government institutions and international organizations. He has also worked with the Agricultural Development Bank from 1970 till 1988. He holds Post Graduate Diploma in Rural and Agricultural Project Planning from Institute of Social Studies (ISS), the Netherlands in 1980 and Bachelor's Degree in Agricultural Engineering from Technion, Israel Institute of Technology, Israel in 1968. He has also been granted an Overseas Fellow of the Economic Development Institute (EDI) of the World Bank in 1977.

Mr. Hari Gopal Gorkhali, Treasurer

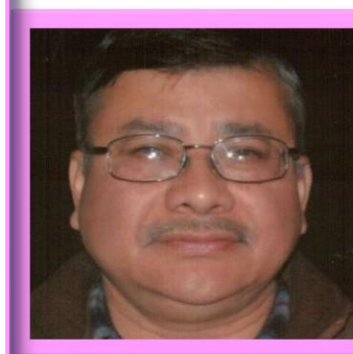
Mr. Gorkhali holds Bachelor's Degree in Agriculture (B.Sc.Ag.). He is the Chairman at Rural Energy and Technology Service Center (RETSC). He worked for more than 34 years in the Agricultural Development Bank, Nepal in various capacities such as General Manager (CEO), Deputy General Manager (Deputy CEO), Regional Manager, etc. He has 26 years of experiences in renewable energy sector with key experiences on guiding in promotion and development of various Renewable Energy Technologies such as Improved Cookstove (ICS), Improved Water Mill Technology (IWM), Briquette Technologies and Hydraulic Ram Pump for the benefit of rural communities.

Mr. Lumin Kumar Shrestha, Member

Mr. Lumin Kumar Shrestha holds M.Sc. Degree in Agriculture Economics from University College of Wales, UK. He is one of the founder members of CRT/N. He holds more than three decades of experiences in various rural and appropriate technologies during his tenure at CRT/N. He also had experiences of agricultural financing while working in various capacities in the Agricultural Development Bank, Nepal for 20 years.

Prof. Dr. Krishna Raj Shrestha, Member

Dr. Shrestha was a Professor at Research Centre for Applied Science and Technology (RECAST), Tribhuvan University. He has more than 35 years of professional experience in the field of renewable energy and holds a Ph.D. Degree in Chemical Engineering from Indian Institute of Technology Delhi, India. After serving RECAST for 38 years, he has been teaching in the Central Department of Environmental Science (CDES), Tribhuvan University as a Visiting Professor and has supervised a number of students for their Master's Thesis and two students for Ph.D.Degree. He has published a number of papers in various national and international journals. He has coordinated several national level projects funded by INGO's and Government agencies and successfully conducted a number of training programmemes on energy saving devices such as improved cook stoves (ICS), biomass briquettes, briquette and pellet stoves. Currently he has been working for the management of Municipal Solid Wastes through the production of Refuse Derived Fuel (RDF) for industrial applications.



Mr. Vishwa Bhushan Amatya, Member

Mr. Amatya has over 35 years of professional experiences in public, private and development sector. His recent works spanning over 18 years are in the field of project/programmeme development, planning, implementation and monitoring and evaluation towards energy access improvements in Nepal. He has an Engineering Bachelor degree from University of Jodhpur, India and Master in Applied Science in Systems Design Engineering from University of Waterloo, Ontario, Canada. Some of his recent assignments as a team leader are, i) Result Based Financing (RBF) project for cook-stove market development and access to Finance, ii) imparting training of trainers on Energy Access and Climate Data to Faculties of University of DAWEI, Tanantheri, Myanmar, iii) GEF Project formulation for UNDP, RERL GEF/UNDP, on Mini Hydro and Large scale solar PV system for livelihood applications, etc.

Ms. Shova Bajracharya, Member

Ms. Bajracharya has over two decade of experience in the microfinance sector and currently leads the Manushi Laghubitta Bittiya Sanstha Ltd. as Chief Executive Officer (CEO). She started her professional career as an Assistant Lecturer at the Hiralal Multiple Campus and working in development organization such as SEARCH and IIDS thus contributing to her experience in the education and development sector. She is equipped with a Master's Degree in Economics from Tribhuwan University. Her educational qualification is further enriched with her experience of managing microfinance and community development programmes exclusively focusing on women. Ms. Bajracharya takes keen interest in learning from other institutions successfully implementing microfinance and development programmes by participating in study visits, seminars and workshops.

Dr. Purushottam Shrestha, Board Secretary

Dr. Shrestha is the Executive Director of Center for Rural Technology Nepal (CRT/N). He holds Ph. D in Economics from Tribhuvan University Kirtipur Kathmandu, M.A Development Studies in Agricultural and Rural Development, and Post Graduate Diploma in Rural Policy and Project Planning from the International Institute of Social Studies (ISS), the Hague, the Netherlands.

He has worked being associated with the Government of Nepal, Banks and Financial institutions, Private Sector, NGOs and national and international Development Partners. He has more than 35 years of experiences in renewable energy, rural finance, microfinance, training, research, project development, planning, management and implementation.

He has worked in various institutions including a Board Director of Cottage and Small Industries Board Government of Nepal. Chairman of Sarathi Nepal Microfinance Development Bank Limited, Naya Nepal Microfinance Development Bank Limited, Chief Executive Officer of Small Farmers Development Bank Limited, DGM/Deputy CEO, Division Chief and Director of Agricultural Development Bank Limited (ADBL), and National Team Leader and Microfinance Development Expert of ADB financed project in Nepal He has authored a book on "Financial Performance of Small Farmers Cooperatives in Nepal". He has been honored for Contribution in Poverty Reduction in Nepal through Microfinance awarded by the Governor Nepal Rastra Bank. July, 2013.

Dr. Shrestha has published several articles in various journals and presented papers on Green and Inclusive Energy, Rural/Microfinance in national and international workshops and seminars.

CRT/N Personnel

Senior Advisors

4. Mr. Ganesh Ram Shrestha, Senior Advisor
5. Mr. Hari Gopal Gorkhali, Senior Advisor
6. Mr. Lumin Kumar Shrestha, Senior Advisor

Management Team

1. Dr. Purushottam Shrestha, Executive Director
2. Dr. Anzoo Sharma, Deputy Director
3. Mr. Niraj Shrestha, Deputy Director

Account & Administration Team

1. Mr. Pawan Kumar Singh, Senior Accounts Officer
2. Mr. Raju Maharjan, Accounts Officer
3. Ms. Gita Subedi, Act. Admin Officer
4. Mr. Ram Krishna Dawadi, Driver
5. Mr. Ramesh Khadka, Messenger
6. Ms. Sanu Maiya Singh, Messenger

Programme Implementation Team

1. Mr. Subas Lamichhane, Officer
2. Mr. Rajendra Ghimire, Officer
3. Mr. Sanubabu Pandit, Officer
4. Ms. Cheeja Adhikari, Officer
5. Mr. Farsha Bahadur Tandan, Officer
6. Ms. Poonam Bhatt, Officer
7. Mr. Likh Ram Chaudhary, Enterprise Development and Livelihood Coordinator
8. Ms. Mina Basnet, Enterprise Development and livelihod Coordinator
9. Ms. Shita Pandey, Officer *
10. Ms Gyanu Bist, Officer*
11. Ms. Kaushila Rai, Officer*
12. Mr. Bodhraj Bhandari, National Social Mobilizer *
13. Mr. Khadga Bahadur Thapa, National Social Mobilizer *
14. Ms.Indu Aryal, National Social Mobilizer *
15. Mr. Deepak Bohara, National Social Mobilizer *
16. Mr. Rup Bahadur Deuba, National Social Mobilizer*

Consultant Team

1. Dr. Indira Shakya, Consultant
2. Dr. Ashma Vaidya, Consultant
3. Ms. Ashma Pakhrin, Consultant
4. Mr. Sumiran Shrestha, Consultant

* Left during FY 2020/21

CRT/N Working Districts

S.N.	Name of Project	Working District/Area
1.	Eco-Village Development (EVD) through Integration of Renewable Energy Solutions and Climate Friendly Activities for Enhancing Livelihood of Rural Communities	Chyasingkharka-5, Bethanchwok Rural Municipality, Kavrepalanchwok
2.	emPOWER Collective Project –Phase II	Chyasingkharka-5, Bethanchwok Rural Municipality, Kavrepalanchwok
3.	Next Generation Low Carbon, Climate-resilient Eco-Village Development in South Asia	Bhalumara-3, Marin Rural Municipality, Sindhuli
4.	Self-help Eco-Village Development Project	Barabise-3, Dharpa, Sindhupalchowk
5.	Solidarity Fund	Dolakha, Ramechhap, Sindhupalchowk, Kavre, Lalitpur, Dhading, Chitwan and Sindhuli
6.	Solar Electrification of a Remote Village and Promoting Energy Planning Based on Reliable Data Collection in Nepal	Khanikhola Rural Municipality, Kavrepalanchowk
7.	Strengthening the Capacity of Nepal's Energy Sector to Deliver Gender Equality and Social Inclusion (GESI) Results	Dolakha, Ramechhap, Sindhupalchowk, Kavre, Lalitpur, Dhading, Chitwan and Sindhuli
8.	Strengthening the Eco-Village Development concept: Affordable local climate actions for sustainable development in South Asia	Marine Rural municipality, Sindhuli
9.	The Green and Inclusive Energy (GIE) Programme in Nepal	Sindhuli, Lalitpur, Palpa, Gulmi, Nawalpur, Kavre
10.	South Asia Sub-Regional Economic Cooperation Power Transmission And Distribution System Strengthening Project: Implementation Support for Gender Equality and Social Inclusion TA-6526 NEP	Madhesh Province, Kathmandu Valley, Pokhara and Bharatpur
11.	Improving Access to Drinking Water through Solar Water Lifting Project" at Bhalumara Village Marin, Sindhuli	Bhalumara Village located in Marin Rural Municipality-3, Sindhuli District, Bagmati Province, Nepal.
12.	Self-help Eco-Village Development Project	Barabise-3, Dharpa of Sindhupalchowk district and Masine, Chandragiri Municipality-2, Kathmandu, Nepal

Abbreviations

ACCESS Coalition	Alliance of Civil Society Organizations for Clean Energy Access
ADB	Asian Development Bank
ADBL	Agriculture Development Bank Ltd
AEPC	Alternative Energy Promotion Center
CANSA	Climate Action Network South Asia
CBOs	Community Based Organizations
CBS	Central Bureau of Statistics
CECI	Canadian Centre for International Studies and Coorporation
CISU	Civil Society in Development
CRI	Climate Risk Index
CRT/N	Centre for Rural Technology, Nepal
CSD	Centre For Self-help Development
CSOs	Civil Society Organizations
CSR	Corporate Social Responsibility
DCS	Distribution and consumer service
EDCs	Enterprise Development Coordinators
EnDev	Energizing Development Partnership
ENERGIA	International Network on Gender and Sustainable Energy
EUCs	Electricity User Cooperatives
EVD	Eco-Village Development
FY	Fiscal Year
GEF/SGP	Global Environment Facility /Small Grants Programme
GESI	Gender Equality and Social Inclusion
GEWNet	Gender, Energy and Water Network
GGCAN	Global Gender and Climate Alliance Nepal
GHGs	Green House Gases
GIS	Geographic Information System
GiZ	German Agency for International Cooperation
IAPHF	Indoor Air Pollution Health Forum
GWA	Gender and Water Alliance
ICS	Improved Cook Stove
INFORSE	International Network for Sustainable Energy
ISO	International Standard Organization
IUCN	International Union for Conservation of Nature
IWA	International Workshop Agreement
IWM	Improved Water Mill
IWME	Improved Water Mill Electrification
JFPR	Japan Fund for Poverty Reduction
LDCs	Least Developed Countries
MEP	Municipal Energy Planning
MIS	Micro Irrigation System
MTF	Multi-Tier Framework
NACEUN	National Association of Community Electricity Users-Nepal
NEA	Nepal Electricity Authority
NEFEJ	Nepal Forum of Environmental Journalists
PAC	Practical Action Consulting
PCIA	Partnership for Clean Indoor Air
PUE	Productive Use of Energy
RECON	Renewable Energy Confederation of Nepal
RERA	Renewable Energy for Rural Areas
RETs	Renewable Energy Technologies
SDGs	Sustainable Development Goals
SE4ALL	Sustainable Energy for All
Sida	Swedish International Development Agency
UNDP	United Nations Development Programme
UNF	United Nations Foundation
WCRE	World Council of Renewable Energy
WEs	Women Entrepreneurs
WWF	World Wildlife Fund

Writeshop program under ADB TA 9334 NEP at Chandragiri Hills Kathmandu (7–8 August 2021)

Learning and Experience Sharing Workshop under the project Solar Electrification of a Remote Village and Promoting Energy Planning Based on Reliable Data Collection in Nepal

Learning and Experience Sharing Workshop under the project Eco- Village Development (EVD) Project, Bethanchowk, Kavre

Awards and Recognitions

CRT/N's efforts have been recognized in international area through following rewards:

- CRT/N has been acknowledged for its special contribution in Renewable Energy Development in Nepal by the Ministry of Energy, Water Resources and Irrigation (MoEWRI) Alternative Energy Promotion Centre (AEPC)
- CRT/N has been awarded with "The Adaptation at Scale Prize" on 23rd May 2019 in recognition for the promotion of innovative and unique Hydraulic Ram Pump technology.
- Hydraulic Ram Pump Project was awarded with "Protsahan (Encouragement) Prize by UKaid DFID supported Adaption at Scale Prize, Ideas to Impact-Rewarding Innovative Climate Change Adaption in Nepal, 2016
- IWM Programmeme was selected as final nominee for Energy Globe Award 2010
- The Ashden Awards for Sustainable Energy 2007 to IWM Programmeme (Ashden Trust for Sustainable Energy, UK)
- Recognition for Best Practice from Wuppertal Institute for Climate, Environment and Energy (WISION) in 2004, Germany on "Women in Energy and Water Management Project" supported by UNEP/ICIMOD.
- Consolation prize on the Ashden Awards for Sustainable Energy 2002 to IWM Project (Ashden Trust for Sustainable Energy, UK)
- Green Energy Letter of National Felicitation 2001 to IWM Project (Green Energy Mission, Nepal)
- IWM Project registered as Projects around the World at Expo 2000 Hanover, Germany.

Centre for Rural Technology, Nepal (CRT/N)

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