

# Annual Report



### **Centre for Rural Technology, Nepal (CRT/N)**

Towards Action for Development... Since 1989



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# Message from the Chairperson

Dr. Ananda Shova Tamrakar Chairperson

We are exceptionally delighted on the remarkable progress during the implementation of the programmes in 2017 with the landmark achievement besides some of the challenges such as elections, strikes, floods and landslides in Nepal.

Having the sole vision of "delivering quality services to local communities for improving their livelihood through the use of appropriate technology and RE " CRT/N has been continuously implementing the various project components based on the collaborative approaches with the state/ non-state actors and community people in the targeted districts of rural areas.

CRT/N specially enforces RETs, local resources and environmentally friendly methodologies to uphold the economy, health and living standard of rural people. CRT/N also enforces gender sensitive approaches to encourage women and other disadvantaged group.

This year CRT/N has outstandingly come over with the several sorts of women empowerment, green energy and eco-village development projects. One of the woman entrepreneurs coached by Women Economic Empowerment projects was rewarded with ENERGIA Women Entrepreneurship Award 2017 due to her outstanding performance in expanding her business of Improved Cookstoves. It has also been involved in building alliances with the line agencies, creating the awareness among the stakeholders and community people while building the capacity of consortium partners.

I am also delighted to have personally played a role to serve on the board and to have been a part of CRT/N. At this moment, we cordially appreciate the warm cooperation of Government, our national and international development partners who have incredibly provided support to us. Further, our great compliments go towards the local partners and communities. Finally, we will have our sincere reception to the feedbacks, comments, inquiries and suggestions from our well-wishers. On the whole my gratefulness and inspirations are overwhelmingly expressed to the team of CRT/N, who rigorously managed and contributed to produce good result of the programme in 2016-2017.



## Foreword

Ganesh Ram Shrestha Executive Director

It is our immense pleasure to present CRT/N's Annual Report of the activities undertaken during the year 2016-17(2073/74 B.S). This report highlights CRT/N's programmes and activities as well as technical and institutional services provided for the promotion of rural and renewable energy for improvement of livelihood of rural communities in Nepal.

CRT/N works with a mission in providing support and services in strengthening capacity of local communities and in creating better opportunities to improve their livelihood conditions. The services range from up-scaling traditional as well as developing improved technologies and its implementation; developing institutional capacity of rural communities to support the sustainability of local initiatives through networking, partnering, and collaborating with the Government, Donors, Banks, Local Financing Institutions, National and International NGOs, CSOs and the Private Sectors.

CRT/N connects energy development with other socio-economic sectors through promoting clean energy, clean cooking solutions including improved cookstoves (ICS) and promoting other improved technologies such as improved water mills for food processing and lighting, hydraulic ram pumps for water lifting for drinking water and high value crop productions and promoting micro-enterprises specially led by rural women. These initiatives have contributed in the empowerment of rural communities specially women.

For CRT/N, this year marked the completion of some on-going projects undertaken since last three years (2014-2017) and many new beginnings supported by Nepal Government and Development Agencies / Donors Partners and initiated in collaboration with Partner Organizations. Let me take this opportunity to highlight some major outcomes of these projects. The Women's Economic Empowerment-Nepal (WEE-Nepal) Project and Energy Empowering Women Uplifting Lives (Advocacy Project) have been implemented in six districts, and supporting rural communities addressing the problem of rural poverty, indoor air pollution, adverse impact on human health due to use of traditional biomass stoves through promotion of clean cookstoves, increased access to clean energy services, skill development, income generation and employment creation in the rural areas. These projects have contributed in providing training to 797 woman entrepreneurs (energy-based and ICS), developed cookstove supply chains, promoted 28,176 ICSs. A mass awareness campaign has been launched on the use of renewable energy technologies, importance of gender and social inclusion, health and environment which has reached to more than two million population through various media, educational institutions like schools and various levels of interaction programmes that has covered rural mass as well as sensitized policy makers and practitioners.

Similarly, CRT/N has also successfully completed the first phase of "Eco-Village Development (EVD)" project in three villages of Kavre district with application of the concept promoting various eco-friendly solutions for sustainable village development. The project has helped beneficiaries from 108 households including women in the project villages in enhancing their livelihood through the use of various eco-friendly solutions.

CRT/N, in collaboration with partner organizations, has launched a new initiative "Green and Inclusive Energy (GIE) Project in Nepal", with funding support from ENERGIA/HIVOS. The objective of this project is to contribute to the development of an enabling policy environment to meet the domestic and productive energy needs of the poor, women and marginalized groups through decentralized renewable energy and clean cooking energy solution.

These initiatives support Government of Nepal's National Goal on "Clean Cooking Solutions for All" aimed at making all the households indoor air pollution free targeting more than 3.0 million households, contribute to the United Nation's "Sustainable Energy for All " and "Sustainable Development Goals".

Finally, I take this opportunity to express my sincere gratitude to all Government organizations, sponsors, collaborators, partners and wellwishers for their continued cooperation, support and encouragement especially to National Planning Commission, Ministry of Population and Environment, Alternative Energy Promotion Centre. Social Welfare Council, Nepal Electricity Authority, ENERGIA/Hivos, the World Bank, SNV/Nepal, EnDev/GIZ, CISU, DIB, Global Alliance for Clean Cookstoves, Asian Development Bank, NEFEJ, NACEUN, PAC, University of Illinois, DDC, Town and Rural Municipalities, National and Local Partner Organizations and Local Communities.

My special thanks to the CRT/N's General Assembly and Governing Board for continued cooperation and support and sincere appreciation to all the staff members for their cooperation, hard works and dedication.

# Abbreviations

ADB	Asian Development Bank
AEPC	Alternative Energy Promotion Board
CANSA	Climate Action Network South Asia, India
CEDBL	Clean Energy Development Bank Limited
CEEN	Centre for Energy and Environment
CISU	Civil Society in Development, Denmark
CRT/N	Center for Rural Technology, Nepal
DDCs	Village Development Committees
DIB	Danish International Human Settlement Service, Denmark
ENERGIA	International Network on Gender and Sustainable Energy
GACC	Global Alliance for Clean Cookstoves
Gov	Government of Nepal
GS	Grameen Shakti, Bangladesh
HIVOS	Humanist Institute for Cooperation
IAPHF	Indoor Air Pollution and Health Forum- Nepal
ICSs	Improved Cookstoves
IDEA	Integrated Development Association, Sri-Lanka
INforSE	International Network for Sustainable Energy, Denmark
INSEDA	Integrated Sustainable Energy and Ecological Development Association, India
LPOs	Local Partner Organizations
MoSTE	Ministry of Science, Technology and Environment
NACEUN	National Association of Community Electricity Users-Nepal
NEA	Nepal Electricity Authority
NEFEJ	Nepal Forum of Environmental Journalists
NPC	National Planning Commission
NRREP	National Rural Renewable Energy Programme
PAC	Practical Action Consulting
RECoN	Renewable Energy Confederation Nepal
RETs	Renewable Energy Sources and Technologies
RETSC	Rural Energy Technology and Service Centre
RRESCs	Regional Renewable Energy Service Centres
RTKC	Regional Cookstoves Testing and Knowledge Centre
RW	Renewable World
SWC	Social Welfare Council
WAFD	Women Action for Development, India
WEE-Nepal	Women's Economic Empowerment Nepal





### 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 2034 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 livelihood.

### 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

- Promote and disseminate rural/appropriate technologies to meet the basic needs of the people and improve their quality of life.
- Conduct adaptive and action-oriented research on indigenous and improved rural/ appropriate technologies.
- Train and transfer technical information and know-how on production, installation and management of rural/appropriate technologies.

- Assist in development of technical and institutional capabilities for sustainable development.
- 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 technologies

### **CRT/N's Priority Themes**

All the Programmes/ Projects running under CRT/N are focused on the following priority themes:

- Total Access to Energy (through intervention of technologies; Improved CookStove (ICS), Improved Water Mill (IWM), and Hydraulic Ram Pumps (Hydram));
- Household Air Quality;
- Gender Equality and Social Inclusion (GESI) in Energy Sector ;
- Community Water Management ;
- Climate Change- Adaptation and Mitigation;
- Productive End Use- Employment and Income Generation

### **Regional/International Activities**

CRT/N has been involved in regional and international level activities through the following networks and extension of technical supports:

- 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;
- Nexus Carbon for Development, Singapore: CRT/N is the founding member since 2008;
- South Asia Evidence-Based Policy in Development Network (SA-ebpdn): The Network is coordinated by Centre for Poverty Analysis (CEPA), Sri Lanka and CRT/N has been the Steward of the Network in Nepal since 2009;
- Global Alliance for Clean Cokstoves (GACC): Through its support to Regional Cookstoves Testing and Knowledge Centre (RTKC) at CRT/N, it has been supporting in the formation of International Standards on Clean Cookstoves and Cooking Solutions.



### Membership

- Energy for All Partnership
- Gender and Water Alliance (GWA), the Netherlands
- Global Alliance for Clean Cookstoves (GACC), USA ; Implementing Partner
- Nepal Alliance for Clean Cookstoves (NACC) Nepal
- Global Village Energy Partnership (GVEP), UK
- International Union for Conservation of Nature (IUCN), Switzerland; Executive Member of Nepal National Committee of IUCN
- Partnership for Clean Indoor Air (PCIA), USA
- Solar Cookers International Association, USA
- The Mountain Fund, 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)
- Climate Action Network South Asia (CANSA)



Heating and Lighting Provided in Poultry Farm by Solar PV



### Promoting Women-led Enterprises for Energy Access and Local Production (WEE-Nepal)

#### Context

CRT/N as the lead organization along with National Association of Community Electricity Users-Nepal (NACEUN) and Practical Action Consulting (PAC) has been implementing the project "Promoting Women-led Enterprises for Energy Access and Local Production: WEE-Nepal". Alternative Energy Promotion Centre (AEPC)/ Government of Nepal (GoN) has development and implementation of the project. This project is supported by ENERGIA, the International Network on Gender and Sustainable Energy hosted by Hivos, the Netherlands under its Phase 5 programme framework "Scaling up Energy Access through Women's Economic Empowerment (WEE)" with funding from SIDA, NORAD and ministry of finance Finland

### Objective

Empowering women by creating enabling environment for woman entrepreneurship in micro enterprises to enhance access to sustainable energy technologies and services and other sustainable energy-based micro enterprises for local production in rural areas.

### **Project Duration**

September 2014 to August 2017

### **Project Districts**

Khotang, Udayapur, Sindhuli, Kavrepalanchok, Lalitpur and Dhading

### **Project Target**

- Forty two thousand improved cookstoves for households and commercial establishments in Khotang, Udayapur and Sindhuli districts;
- Three hundred woman energy entrepreneurs for supply of improved cookstoves in Khotang, Udayapur and Sindhuli districts;

- Five hundred woman entrepreneurs initiate micro enterprises based upon sustainable energy in 15 community rural electrification areas in 6 project districts including few microhydro communities in Dhading district;
- Fifteen Community Rural Electrification Entities (CREEs) institutionalize promotion of woman entrepreneurs in their electrification areas.

### Achievements

- Twenty eight thousand one hundred seventy six ICSs disseminated through 292 WEs
- Five hundred five WEs working with the programme in productive end use (PEU) component
- One hundred forty PEU WEs have received business loan, hundred percent are paying back the loan. There is no reporting of default as of now (PEU component)
- Employment generation to 77 local people

### Entrepreneur from WEE Nepal Project won "The ENERGIA Women Entrepreneurships Award 2017"



Ms Niru Shrestha has been involved in cookstoves business for more than 14 years. Initially she was constructing mud stoves but after having training form WEE Nepal in 2015, she set up shop and started selling biomass cookstoves and components for fixed mud stoves. Niru Shrestha was nominated by CRT/N for ENERGIA Women Entrepreneurship Award based on her success in selling improved cookstoves. She has been able to generate employment for other more than 100 women

*Niru Shrestha, Left One in the Picture. (Picture Taken From energia.org)* 

Awareness Programme Conducted at Shree Buddha Bhagwan Secondary School, Manikhel, Lalitpur



### Energy: Empowering Women Uplifting Lives (Advocacy Project)

#### Context

"Energy: Empowering Women, Uplifting Lives" or "Advocacy" is a project supported by ENERGIA/HIVOS. In line with its commitment to the UN initiative Sustainable Energy for All (SEforAll), ENERGIA's Gender and Energy Advocacy project aims to contribute to efforts that ensure that governments and donors allocate investments to energy programmes that are gender informed. The project aims to achieve this objective by focusing on the following interrelated intervention areas:

- To integrate gender objectives and actions in SE4ALL Country Action Agenda.
- To operationalise a national campaign on WEE through Energy Access.
- To showcase the results of the WEE Nepal (Promoting Women-led Enterprises for Energy Access and Local Production) project in SE4ALL regional and global outreach.

It is being implemented in Nepal under the leadership of Centre for Rural Technology, Nepal (CRT/N). This threeyear project has been initiated since 1 January 2015. The project consortium partners are National Association of Community Electricity Users- Nepal (NACEUN) and Nepal Forum of Environmental Journalists (NEFEJ) with Alternative Energy Promotion Centre (AEPC) providing policy support to the project.

### Key types of activity under this project are:

- Awareness-raising at various levels (Level
  1: Community for energy use, access to opportunities, Level 2: Energy service providers and Level 3: Policy makers and planners)
- Capacity development (internal and external)
- Networking with relevant government and nongovernmental partners
- Lobbying key decision-makers and influencing policy and to raise awareness on social inclusion and sustainable energy

### **Project Districts**

Khotang, Udayapur, Sindhuli, Kavre, Lalitpur and Dhading

### **Target Group**

- Community (women, men and children, user groups (water and forest), traditional leaders (social and religious);
- Energy Service Providers (NGOs, technology suppliers, installers, finance institutions and local media) and,
- Policy Makers and Planners (National, Local)
  - National Policy Makers, Planners and SE4ALL National Focal Points
     : Government Ministries and key Government Agencies such as: National Planning Commission, Ministry of Energy Science Technology and Environment as well as other relevant Ministries/ Departments such as the Ministry of Finance, Ministry of Women, Children

and Social Welfare, Ministry of Industries, Federation of Industries (Woman Entrepreneurs Unit) and Association of Microfinance, Alternative Energy Promotion Centre, Ministry of Agriculture and Ministry of Women and Social Welfare.

- Local Government/Development Community: other project practitioners/ project implementers/academics: such as District and Village Development Committees and Local Civil Society, Woman Associations, Social Enterprises and Microfinance Institutions.
- International Level: International/Regional Energy Sector Policy/Decision Makers (UNDP, WB, UN Agencies such as UNDP, UNIDO, NEPAD, SEforALL GFT, SE4ALL, SG Office, GACC, GIZ, NORAD,IUCN and ENERGIA)

### **Major Project Activities:**

- Map key stakeholders at national level in the SE4all national action plan and investment prospectus process:
- Conduct baseline assessment of key stakeholders relevant to SE4ALL within districts targeted by the project
- Develop and publish policy briefs and other and information products based upon evidences related to gender, energy and empowerment.
- Build alliances with key stakeholders and identify where the project can contribute and complement existing initiatives aimed at influencing GESI in energy policies and the SE4ALL national action plan and investment prospectus process.
- Prepare awareness campaign strategy in consultation with stakeholders
- Develop advocacy tools to be used in the national and public awareness campaign
- Implement a national and district level public awareness campaign, (NECEUN+CRT/ N)

- Conduct Mass Awareness programs
- Promote the role of CSOs in the provision of energy solutions for women (gap analysis and awareness creation)
- Develop Case Studies
- Disseminate results through online/newspaper and communication
- Capacity building training to stakeholders
- Participation in International Events-TA
- Monitoring (including reporting on monthly, quarterly, six monthly and year basis on requirement)

### Achievements

- Develop alliance with
  - Eight media houses
  - Six District Development Committees
  - Fifteen Community Rural Electricity Entities
  - Nepal Clean Cookstove Alliance
  - Department of Health
  - Indoor Air Pollution and Health Forum, Nepal
  - National Curriculum Board
  - Forty five Local Schools
  - Seven CSOs dedicated to promotion of energy
  - Two Education Resource Centre, Lalitpur
- Create awareness through mass awareness, local campaigns and use of various media ~5,000,000
  - 2,059,495 through various media
  - 22 thousand 5 hundred students and teachers
  - One hundred thirty CSOs
  - Twenty five health workers
  - Eight micro financing institutes
  - 2,915,900 through local level mass awareness programs
  - Ninety members of the National Clean Cookstove Alliance

Focus Group Discussion in Hasulia, Kailali



### **Energia: Gender and Research Programme**

#### Context

With support from ENERGIA/HIVOS; M.S. Swaminathan Research Foundation, India as a Lead Organization and Centre for Rural Technology, Nepal (CRT/N) as a Partner Organization are conducting Gender and Energy Research Programme focusing on the political economy of energy sector dynamics from January 2015 to December 2018. The research aims to better understand how rural women can have increased access to energy policies and increased participation in energy governance. It is being funded by DFID. The research comprises of two phases; Scoping study and Field based studies. The programme has been implemented in four districts namely Kailali, Rupandehi, Kavrepalanchok and Dhading.

The objective of the research is to understand the political economy of energy in terms of the use of different energy services (modern and traditional) by indigenous women, men and other poor in both rural and semiurban areas. The Research will do analysis of: i) Political economy of energy at macro (policy formulation), meso (administration) and micro (implementation) levels and ii) Gendered uses of energy in the domestic sphere, agriculture and enterprises.

After the successful completion of scoping study, second phase was started in the reporting period. Field based studies in three working districts were completed. Household survey was conducted using offline questionnaire app using android tablets while the qualitative research was conducted with the structured questionnaires and checklists.

GIE Launch Programme



### Green and Inclusive Energy Programme, Nepal (GIE)

#### Context

The Green and Inclusive Energy programme, focuses on lobby and advocacy that will influence the public and political debate on energy, with the ultimate aim of transitioning toward greener and more inclusive energy systems. Only then, will renewable energy become more available and widespread, so that the energy needs of women and men are met for their daily activities, livelihoods, education and health, creating economic opportunities and growth whilst mitigating climate change.

Lack of access to reliable, affordable and clean energy affects negatively on the health, education, livelihoods and employment, thus GIE programme was launched Energia/ Hivos as a five-year strategic programme with diverse partnership in order to lobby for providing access to energy to all. The programme is implementing in seven other countries- Indonesia, Kenya, Tanzania, Zimbabwe, Malawi, Nicaragua and Guatemala. For Nepal CRT/N is lead organization while Nepal Forum of Environmental Journalists (NEFEJ), National Association of Community Electricity (NACEUN), Renewable Energy Confederation Nepal (RECoN) and Indoor Air Pollution and Health Forum- Nepal (IAPHF) is the other consortium partners, while Practical Action (PA) is research partner and Alternative Energy Promotion Center (AEPC) provides the policy support.

### **Project Targets**

- Organizations working in energy and nonenergy sectors,
- Organisations involved in gender and development,
- Organisations involved in energy policy influencing and development process,
- Government agencies and private sector.

### **Project Duration**

October 1st 2016 to December 31st 2017 with likely extension until 2020

### **Working Area**

Throughout the country

### **Overall Approach:**

- Alliance building to strengthen the network of key stakeholders
- Capacity need assessment of consortium partners
- Strengthening communication methods in order to develop communication strategy and identify communication tools to reach out to the target groups
- Research
- Encouraging Private sector, Consumer and media's effective involvement in the sector
- Policy influencing through the sharing of evidences
- Creating enabling environment for Transparency and Accountability as an effective tool for monitoring and evaluation



### To achieve the objectives the project will work closely with

- Organizations responsible for planning and policy making – national and local: National Planning Commission, Ministry of Population and Environment, Health, District/Village Development Committee,
- Organizations representing Consumers -(NACEUN)
- Organization representing small, micro enterprises (SMEs) – Renewable Energy Technology Association's RETs Forum
- Organization representing Media NEFEJ

### **Achievements:**

- Built alliance with partner organizations and stakeholders
- Carried out Self-Assessment workshop in order

to identify the gaps and weaknesses of partner organizations

- Workshop carried on communication strategy development and T&A (Transparency and Accountability), to strengthen the communication system and to build accountable towards T&A to the partner organizations in gender and energy sector. Curriculum is being developed by NACEUN in order to train CREEs (Community Rural Electrification Entity) on T&A
- Completed mapping of CSOs, Health workers and Government action that can be engaged to support advocacy and outreach on GIE issues
- Identification of the needs of the media community, related to green and inclusive energy and advocacy on transparency and accountability
- Developed a strategy that will be used to engage with micro, small and medium enterprises (MSMEs) on GIE

Woman Entrepreneurs Making Bamboo Muda (Chair)

### Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri-Lanka (ADB GRANT-9158 REG)



#### Background

The Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri-Lanka is supported by Asian Development Bank (ADB) under (Grant-9158 REG). In Nepal, the project aimed to increase rural poor women's access to affordable and reliable clean and renewable energy sources and technologies in selected project sites under the rural electrification programme implemented jointly by Nepal Electricity Authority (NEA) and the selected electricity users committee representing the project community. The main part of the project implemented from 2012 to 2014, supported 500 women on their entrepreneurship development and extension part of the project implemented in 2017 has target of 100 women trained in energy based enterprises.

One of the major project activities of the extension phase is to assist women in establishing and strengthening energy based enterprises in rural areas. As part of this, project conducted capacity building for women in energy based enterprises and further supported them in starting up and improving their business. Woman entrepreneurs received advanced skill-based trainings which provided upgraded knowledge, hands-on skill and practical experiences on selected entrepreneurs useful for their selected enterprises operation and management. The advanced trainings conducted in the project areas include: advanced skill- based training on poultry farming, vegetable farming and beauty parlor/ cosmetics enterprises.

The project has extended community mobilization support to the Electricity Users' Cooperative (EUCs) contributing to sensitization and capacity building of EUCs so that they internalize woman entrepreneurship development in their overall planning. This has been done through an orientation session for the executives of the EUCs, support in business planning of the EUCs, support in selection of potential women entrepreneurs, conduction of training events; this also includes supporting woman entrepreneurs in their business through business mentoring.

### Objective

The project aims to increase rural poor women's access to affordable and reliable clean and renewable energy sources and technologies in selected project sites in Nepal – a SARD (South Asia Department) Developing Member Country (DMC), and implemented interventions supporting gender-inclusive access to renewable energy and energy-based livelihoods.

### Working Area:

Kailali, Chitwan, Sindhuli districts

### **Completed Activities:**

- Community mobilization and baseline data collection
- Basic training on enterprise development
- Advanced skill-based training

### Output of the project:

- Three EUCs are aware about importance of woman entrepreneurship development.
- One hundred and fourteen (out of target of 100) woman entrepreneurs were trained on business development and were provided advanced skill-based training.
- Woman entrepreneurs have initiated and smoothly operated their respective enterprises.
- EUCs have assigned focal persons for promotion of women entrepreneurship.
- EUCs have taken positively to create Woman Entrepreneurship Development Fund.
- EUCs have expressed commitment to include woman entrepreneurship development in their regular planning.
- Although all modules were equally important, but business game related module of the training found more effective and interesting for participants.

### Lesson Learnt through the implementation of the project:

- Developing EUC readiness through EUC coaching is vital for promotion of women Entrepreneurships, creation of women entrepreneurship development fund and mobilization focal person at local level.
- Selection of enterprises and entrepreneur has significant meaning in term of achieving quality results.
- Capacity building on entrepreneurship development and advance skill training plays important role in building confidence of woman entrepreneurs for their business growth and positive changes.
- Post training support such as business mentoring support, loan linkages and market linkages can play very important role for business continuation and sustainability in long run.

#### **PROJECTS/PROGRAMMES AND ACHIEVEMENTS**

Vegetable Farming by a Family From EVD Village

### Evidence Based Advocacy for Low-Carbon, Pro-Poor Sustainable 'Eco-Village Development in South Asia – EVD Project



#### Context

The formulation of this regional project, its contents, contexts and objectives has been prepared jointly by all respective partners from South Asia which includes India, Nepal, Bangladesh and Sri Lanka. The countries in South Asia have been identified as countries with emerging economies and expanding populace. In growing economies, developments are bound to be centralized. Therefore development tends to leave large parts of the rural population in poverty. The poorest groups of society are most vulnerable to the effects of climate change. Therefore, intervention is made in a way that can address poverty reduction, reduction in emission of Green House Gases (GHGs) and sustainable development of rural sector of the country and also produces result where development with poverty reduction and climate mitigation does not need to be in conflict. However, advocacy of the EVD concept is necessary in order to aware concerned stakeholders at local, national and regional level who can influence the decision and policy makers at local, regional and national level. The experience-based advocacy can become a strong tool for promoting and campaigning for Eco Village Development (EVD) concept to be included into national, regional and international negotiations on climate change/mitigation and poverty alleviation. Taking this in to account the objectives of the project are set as follows.

### **Objectives:**

- To establish demonstration villages in partner countries from South Asia as an evidence for eco-village development and strengthen advocacy for low carbon pro-poor sustainable eco-village development to influence national decision-makers, policy makers and climate negotiators to include EVD concept in their climate-related policies and in their proposals for international climate negotiations.
- To make relevant stakeholders at local, national, regional and international aware of sustainable EVD as local climate mitigation and adaptation solution.
- To strengthen rural development to reduce poverty in ways that limit greenhouse gas emissions (mitigate climate change) in South Asia.

### **Project Duration:**

January 15, 2015 – July 15, 2017 (30 months)

### **Project Districts:**

This pilot project is being implemented in three different villages from Kavrepalanchwok district namely Chaymrangebsesi-2 village, Chyamrangbesi VDC; Ladkhu-Chanaute-2 and 9, Dhunkharka VDC and Sikrigyang-9 village, Chalal Ganeshsthan VDC. International partners: Civil Society in Development (CISU), Denmark

- 1. Danish International Human Settlement Service (DIB), Denmark
- 2. International Network for Sustainable Energy (INforSE), Denmark
- 3. Integrated Sustainable Energy and Ecological Development Association (INSEDA), India



- 4. Climate Action Network South Asia (CANSA), India
- 5. Center for Rural Technology, Nepal (CRT/N)
- 6. Integrated Development Association (IDEA), Srilanka
- 7. Grameen Shakti (GS), Bangladesh
- 8. Women Action for Development (WAFD), India

### **District Project Partner:**

 Ghatta Owner Association (GOA), Kavrepalanchwok

### **Local Project Partners:**

- Gahubali Beejbridhi (wheat seed multiplication)
  Farming Group-Chyamrangbesi village
- Ladkhu-Chanaute Hydram Water User Committee-Ladkhu-Chanaute village
- Shree Ganesh Paurakhi Krishi Samuha, Chalal Ganesthan

### **Major Project Activities:**

- Establish an evidence base (three demo ecovillages) in order to advocate for EVD concept and solutions/methods it includes to local, national and international level.
- Advocate for EVD concept through media, position papers/policy briefs, national dialogue meetings, national and regional promotion including presentation & dialogue events, meetings etc. in order to include concept in national priorities for climate negotiations and in national climate actions that govern the framework for local development.
- Facilitate advocacy of EVD concept through international project partners at international level including UN climate conferences through project partners.
- Project will seek participatory approach from EVD villages to draft sustainable eco-village development plans for project villages.

### Achievements:

Conducted School Orientation on Climate Change and its Impacts in Rural Nepal in three schools of Kavrepalanchok district with an objective to orient the students regarding climate change science, climate mitigation/adaptation, to develop EVD and its importance in context of Nepal and to enable students to deliver or convey message of environment/climate friendly practices to various climate and development related stakeholders at local and district level from August-September,

- 2016 Participated in 5th Asia Pacific Adaptation Network (APAN) Adaptation Forum, Colombo Sri Lanka on October 18, 2016 and talked about EVD approach in the session "Coordinating Policy Initiatives for Adaptation in South Asia"
- Participated in COP 22 held at Marrakesh, Morocco from November 7- 12 2016
- Presented on the topic "Improving NDCs: Eco village development, energy access, & zero carbon societies in Africa, Asia & EU in mini side event on 8th November and main side event on November 11, 2016.
- Organized "Exchange Visit to Eco-Village located at Chyamrangbesi-2, Chyamrangbesi VDC, Kavre" to demonstrate implementation of EVD concept for enhancing rural livelihood on November 29, 2016 for stakeholders from government and non-government organizations.
- Documentary on EVD was telecast on January 7, 2017 from Sagarmatha Television in the programme Janachaso
- Conduction of Workshop on Eco-Village Development (EVD) Concept: Low Carbon Approach to Climate Solution and Rural Development together with Clean Energy Nepal (CEN) jointly on April 7, 2017 to share the experiences and lessons along with the success stories from three VDCs of Kavre district where the Eco Village Development project was piloted.
- Participated in Eco-Fair organized by Clean Energy Nepal on the occasion of World Environment Day, 2017
- Organized an interaction programme on June 27, 2017, at Dhulikhel to share the project activities conducted in the project sites with the district stakeholders and collect their feedback to see the possibility of its replication in other areas.
- On July 7, 2017, conducted National Event 2 by organizing a field visit to one of its EVD site Dhunkharka followed by interaction programme at Dhulikhel in presence of Honorable Member from National Planning Commission, Nepal Dr. Prabhu Budhathoki as a Chief Guest

#### **PROJECTS/PROGRAMMES AND ACHIEVEMENTS**

Installation of IWM in Khotang District with the Support of Local Community People

### Rural Community Electrification with Water Mill and Micro Enterprise Development in Nepal (IWM)



#### Context

The IWME project 'Rural Community Electrification with Improved Water Mills and Micro-enterprise Development in Nepal' is being implemented with the financial support from EnDev/GIZ and SNV where Gramin Urja Tatha Prabidhi Sewa Kendra Pvt. Ltd. (RETSC) in collaboration with Centre for Rural Technology, Nepal (CRT/N) is the implementing partner for implementation of the project. The project is being implemented in close coordination with Alternative Energy Promotion Centre (AEPC), local authorities and Local Partner Organizations (LPOs). The project aims in integrating community electrification intervention with productive use of electricity for promoting rural micro enterprises in rural areas of the country.

This phase of the project has been started since April 2016 with the target of 25 IWME/Pico-Hydro installations to provide basic electricity services and benefit from micro enterprises to 1125 rural households. During the period of implementation, numerous demands arose from various districts and some of them are from the new project districts like Nawalparasi, Khotang, Udayapur etc. The local authorities, by realizing the development benefit from such small projects are motivated to provide some matching equity support which not only supports the project in financials but also helps in building the ownership at local level. The project has set the timeline till December 2017 to achieve all output indicators for set target and making superior ground for the extension of project in years to come.

The IWME project is being implemented in seven districts namely Kavre, Makawanpur, Sindhuli, Khotang, Udayapur, Dhading and Nawalparasi. During the reporting period, the project has been able to achieve 15 IWME projects reaching to 780 beneficiary households. Out of 25 projects, remaining 10 projects are in pipeline and under installation. Besides the generation of electricity, the project organized various activities like project initiation workshop, capacity building training for IWME installer companies, micro-enterprise training for potential entrepreneurs of IWME project sites, IWME repair and maintenance training events etc.

### **Iconic Leader of IWME**

**Ms. Sabitri Rai** demonstrated her iconic leadership as a chairperson by successful implementation of Rawakhola IWMEP (2.0 kW) at



Sapteshowr VDC – 4, Khotang with the support of IWME project . During her tenure, she effectively mobilized community for fund mobilization and labor contribution required for construction of IWME project. After commissioning of the project, the entire community which includes 30 households got electrified. For the construction of the project Ms. Rai contributed her private land for construction of headrace canal in addition to cash and labor contribution, she negotiated with District Land Conservation Office for management of 50 gabion wires. She also actively supported for transportation of IWME equipment from Kathmandu etc.

SN	Projects	Location	Power Output (kW)	Beneficiary HHs	Mechanical End-uses	Electrical End-uses
1	Sakhukhola IWMEP	Sindhuli	2	32	Paddy Huller	Poultry
2	Sungure Bhoktar IWMEP	Sindhuli	2.5	34	Paddy Huller	Poultry
3	Damungkhola IWMEP	Nawalparasi	4	36	Grinding	Poultry
4	Nirandikhola IWMEP	Nawalparasi	4	55	Paddy Huller	Poultry, Tailoring
5	Muralikhola IWMEP	Nawalparasi	3	45	Paddy Huller	Poultry, Tailoring
6	Dekhumekhola IWMEP	Khotang	4	72	Paddy Huller	Tailoring
7	Rawakhola IWMEP	Khotang	2	30	Grinding	Vegetable Farming
8	Kalikhola IWMEP	Makawanpur	5	63	Paddy Huller	Poultry, Tailoring
9	Ujyalo Baseni IWMEP	Nawalparasi	4.5	65	Paddy Huller	Poultry
10	Manaharikhola IWMEP	Makawanpur	3	63	Paddy Huller	Tailoring
11	Pakhrebesi IWMEP	Makawanpur	3	36	Paddy Huller	Poultry
12	Shikari Odar IWMEP	Kavre	4	52	Paddy Huller	Tailoring
13	Dharnekhola IWMEP	Kavre	5	80	Saw Milling	Tailoring
14	Jarnekhola IWMEP	Kavre	3	42	Grinding	Poultry
15	Mulkhola IWMEP	Kavre	5	75	Spice Grinder	Poultry, Tailoring
	Total		54	780		

ICS Testing in the lab of RTKC



### Regional Cookstoves Testing and Knowledge Centre (RTKC)

#### Context

Centre for Rural Technology, Nepal (CRT/N) is a partner of the Global Alliance for Clean Cookstoves (GACC), a public-private initiative led by the United Nations Foundation (UNF) to save lives, improve livelihoods, empower women and preserve the environment by creating a thriving global market for clean cooking solutions.

The project is a part of GACC's strategy to strengthen the cookstoves sector's ability to evaluate, communicate, improve performance of cookstoves and fuels and thus improve adoption of clean cookstoves. In line with GACC's mission RTKC Nepal is dedicated to improve the testing facility and provide quality service to stove stakeholders and extend its service to the regional level regarding capacity building, stove testing, forming National Standards on Cookstoves Performance Testing and harmonizing with International Standards.

GACC has supported RTKC to develop business plan in 2015 which has been instrumental in becoming sustainable center so far. Not only cookstoves testing, RTKC has been undertaking lab and field researches on bio-energy technologies and socio-economic perspectives of the bio-energy projects and for its sustainability and extended horizon.

### RTKC's Vision, Mission and Objectives:

#### Vision

To be the region's experts in research, testing and development of bio-energy products & services

#### Mission

To improve technology, communicate performance and promote sales and adoption of clean cooking devices and support the process of standardization in the country and the globe.

### Objectives

 Enhance testing capacity of RTKC mapping to the International Standard Organization (ISO), International Workshop Agreement (IWA) Tiers of Performance.

- Establish effective knowledge dissemination and networking with other Stove Testing and Knowledge Centres at the national and regional level.
- Advocate and support to Government of Nepal's mission on "Clean Cooking Solutions for All by 2022" implemented by the Alternative Energy Promotion Centre (AEPC).
- Modify / upgrade stove designs and develop clean cookstoves technology.
- Offer testing and monitoring services to organizations at national and regional level.
- Support national and international efforts for Standardization of clean cookstoves
- Pave way to enhance the Centre's service menu to other environmental services such as stack emissions monitoring, validating carbon projects institutional energy audits etc.



### Development Partners (Funding Agencies):

The RTKC was initially funded by GACC led by United Nations Foundation (UNF) as a part of capacity building for about three years. Since then RTKC has been able to sustain on its own generating income by testing national and international client stoves and implementing stoves related research and development activities for the interested parties.

### **Partner Organizations:**

Global list of Regional Testing and Knowledge Centres http://cleancookstoves.org/technologyand-fuels/testing/centers.html has been working together to develop and improve testing facilities in their respective regions through each other's cooperation. Besides, RTKC in Nepal works together with national stakeholders such as: AEPC, Kathmandu University.

### **Project Duration:**

The project started in January 2012 with capacity building funds from GACC until 2015. Since then the center runs on the short-term research projects and stoves testing form clients.

### **Project Area:**

Field researches are most often in remote areas where biomass energy is a crucial part of people's life while the short-term lab research is based in the lab in Lalitpur. The clients are global.

### **Beneficiaries:**

RTKC Nepal has been working with the number of National and International Organizations. Mostly, the research and testing clients are stove manufacturers, stove programme implementers, research institutions and universities. The ultimate beneficiaries are the bio-energy stakeholders in the value chain.

### **Key Achievements:**

- RTKC Guiding Business Plan for its sustainability has been operational.
- Practicing Quality Assurance Plan since 2016
- Cookstoves Laboratory with Quality Assurance guarantee, trained staff members and ability to monitor black carbon including PM2.5, CO, CO2 and thermal efficiencies of biomass fuel using stoves.
- Field monitoring of emissions and other researches.
- Ability to calibrate the gas sensors in the lab.
- Supporting national/international developments on cookstoves standards.

Women Using Eco Chulo (Force Draft Stove) During User Acceptance Test

### Product Development and Labeling of Clean Cookstoves and Standardized Biomass Fuels for Nepali Market



#### Context

Developing Improved Solutions for Cooking (DISC) is a technical assistance project, which is implemented by the World Bank with Energy Sector Management Assistance Programme (ESMAP) funding under the country action track of SE4All initiative. Among all stakeholders in the Nepali clean cookstove sector, there is a general consensus that "improvement" in clean cookstoves should be in terms of reduced household air pollution, efficient use of fuel, faster cooking time, robustness and reparability and improved sanitation (healthy kitchen practices). Perception of modernity, affordability, ease of operation, use of local materials and labor, ability to provide multiple utilities and ability to perform specialized functions are some of the other key attributes associated to clean cookstoves by stakeholders. Activities promoting innovations in cookstove design and product development are essential for meeting the target of universal access.

DISC project activities will complement the ongoing and planned work plan of BEST (Bio-Energy Strategy) and assist in scaling up clean cookstove deployment. The project will support clean cookstove and biomass fuel product development and labeling.

### DISC's Vision, Mission and Objectives

#### Vision

Promote adoption and market of clean cookstoves and clean biomass fuel by introducing product branding and labeling in Nepal.

#### Mission

Increase the variety and number of advanced clean cookstoves available in Nepali market with clean fuel options and promote branding and labeling.

#### Objectives

 Develop clean cookstoves prototypes and clean biomass fuel options collaborating with private sector manufacturers and distributors and prepare action plan to go for mass production

- Increase the variety and number of advanced clean cookstoves available in Nepali market by facilitating franchising model between potential external manufactures/suppliers and Nepalese enterprises
- Promote branding and labeling of the clean cookstoves to create value for the target customers in line with SE4All Levels of access to household cooking solutions, International Organization for Standards – International Working Agreement (ISO\_IWA) Tiers, and ongoing efforts to develop National standards

### **Project Partners:**

National Rural Renewable Energy Programme (NRREP) led by Alternative Energy Promotion Centre



(AEPC), under Ministry of Science, Technology and Environment (MoSTE), Government of Nepal (GoN); Centre for Energy and Environment (CEEN); Energy Environment Research and Development Centre (EERDC).

### **Development Partners (Funding agencies):**

 Energy Sector Management Assistance Programme (ESMAP) of The World Bank

### **Partner Organizations:**

- Alternative Energy Promotion Centre (AEPC);
- Centre for Energy and Environment (CEEN);
- Energy Environment Research and Development Centre (EERDC)
- Regional Testing and Knowledge Centre (RTKC)

### **Project Duration:**

Initially August 12, 2015- February 28, 2017(18 months) extended till August 30, 2017

### **Project Area:**

Throughout the Country

### **Beneficiaries:**

All Bio-energy stakeholders in the country; Alternative Energy Promotion Centre (AEPC); Nepal Bureau of Standards and Metrology (NBSM) etc

### **Key Achievements:**

- Repositories of private sector companies, NGOs, and research institutions interested in designing, manufacturing, and distributing clean cookstoves and standardized biomass fuels in Nepali market – one to one communication with the manufacturers in India and China has been the latest approach in generating interest – 66 international Stoves Manufacturers have been listed - 40 National Stoves Manufacturers and 28 national processed fuel producers have been listed (obtained through Open call for national newspaper and previous records and direct communication with the companies)
- Repository of reliable and competitive suppliers of cookstove equipment and machinery, materials and parts for manufacturing and distributing clean cookstove and standardized biomass fuels have been completed.
- Baseline Users Need Assessment and Users Need Assessment Attributes Validation have been completed.
- High Performance Stoves were selected and Acceptance Test was Conducted in four different market segments of high hills, mid hills, western terai and central terai
- Phase II a and Phase II b have been completed and reports have been submitted.
- Working on Phase III i.e. final phase of reporting is going on.

### Financial Update

### ग्रामीण प्रविधि केन्द्र

#### Centre for Rural Technology, Nepal Balance Sheet

As on Ashad 31, 2074 (July 15, 2017)

Particulars	Sch.	2073-74	2072-73
Capital & Liabilities			
Reserve Funds	1 1		
General Reserve	1 1	8,023,107.69	8,927,985.74
Last Year	1 1	8,927,985.74	8,788,776.29
Less: This Year Deficit		(904,878.05)	139,209.45
Staff Welfare Fund		384,905.00	410,030.00
Last Year	1 1	410,030.00	408,993.00
Add: This Year addition	1 1		15,467.00
Less: This Year Payment		(25,125.00)	(14,430.00)
Gratuity Fund		3,365,125.00	3.065,125.00
Last Year	1 1	3,065,125.00	3.073,744.00
Add: This Year addition		300,000.00	300,000.00
Less: This Year Payment	1 1		(308,619.00)
Technology Study & Research Fund		299,829.00	299,829.00
Fixed Assets Reserve Fund (Projects)	1 1		
Fixed Assets Reserve Fund	1 1	1,490,981.24	1,803,457,31
Current Liabilities & Provisions	1 1		
Sundry Creditors	9	2,962,584.04	4,044,486.66
Staff Payables	10	149,285.00	45,985.00
Project Advances	11	26.397.447.60	19,476,577.90
Provision and Payables	12	937.627.00	328,000.00
Total		44,010,891.57	38,401,476.61
Assets		-	
Fixed assets	11	651,922.48	796,635.02
Fixed Assets (Projects)	2	1,490,981.24	1,803,457.31
Current Assets & Advances			
Sundry Debtors	3	6.978.411.39	7,490,551.54
Staff Advances	4	138,833.00	546,688.40
Other receivable	5		100.00
Deposits	6	42,500.00	40,000.00
Prepald Expenses	7	19,905.00	32,390.44
Cash and Bank Balances	8	34,688,338,46	27,691,653.90
Total		44,010,891.57	38,401,476.61

Significant Accounting Policies & Notes to Accounts

Schedule 1 to 18 form an integral part of the financial statements

Tounas

Ganesh Ram Shrestha

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Madan Kumar Niraula For: Madan Niraula & Co.

**Chartered Accountants** 

As per Our Attached I

Ananda Shova Tamrakar Chairperson

Hari Gopal Gorkhali Treasurer Date: 2074/07/15

Annual Report 2017

Executive Director

Pawan K. Singh Accounts/Admin. Officer

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केपाल \*

### **Financial Update**

### ग्रामीण प्रविधि केन्द्र Centre for Rural Technology, Nepal

Income & Expenditure Account For the Year ended 31st Asadh, 2074 (15th July, 2017)

Particulars	Sch	2073-74	2072-73
Incomes			
Contribution from Projects			
Contribution from Projects	13	12,167,661.69	12.069.301.14
Other Receipts	14	1,841,705.76	350,592.00
Received for Project Expenses			
Received for Projects/ Program Expenses	15	46,903,214.41	70,339,553.20
TOTAL INCOME	A	60,912,581.86	82,759,446.34
Administrative Expenses			
Administrative Expenses	16	15,401,673.37	15,140,628.03
Project Expenses			
Project/Program Expenses	17	45,446,596.29	67,464,141.86
TOTAL EXPENDITURE	В	60,848,269.66	82.604.769.89
Surplus before exchange gain/loss		64,312.20	154,676.45
Exchange gain/ (Loss) in Euro A/c		(969,190.25)	
Surplus (Deficit) after Exchange gain / loss	A-B	(904,878.05)	154,676.45
Transfered to Staff Welfare Fund			(15,467.00)
Balance Transferred to Balance Sheet	A-8	(904,878.05)	139,209.45

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Ananda Shova Tamrakar Chairperson

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Hari Gopal Gorkhali Treasurer

Date: 2074/07/15

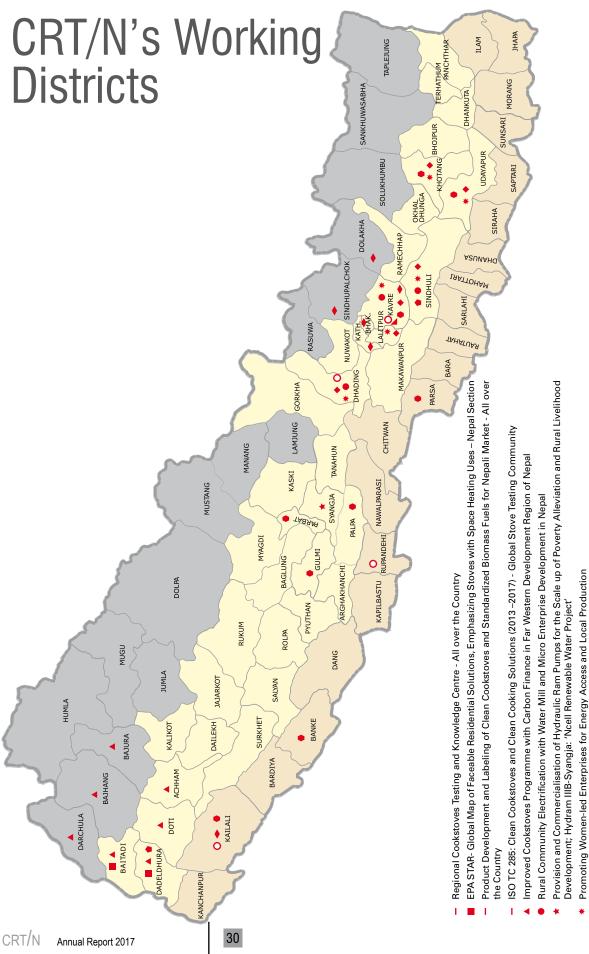


As per Our Attached Report of even date

Ganesh Ram Shrestha Executive Director

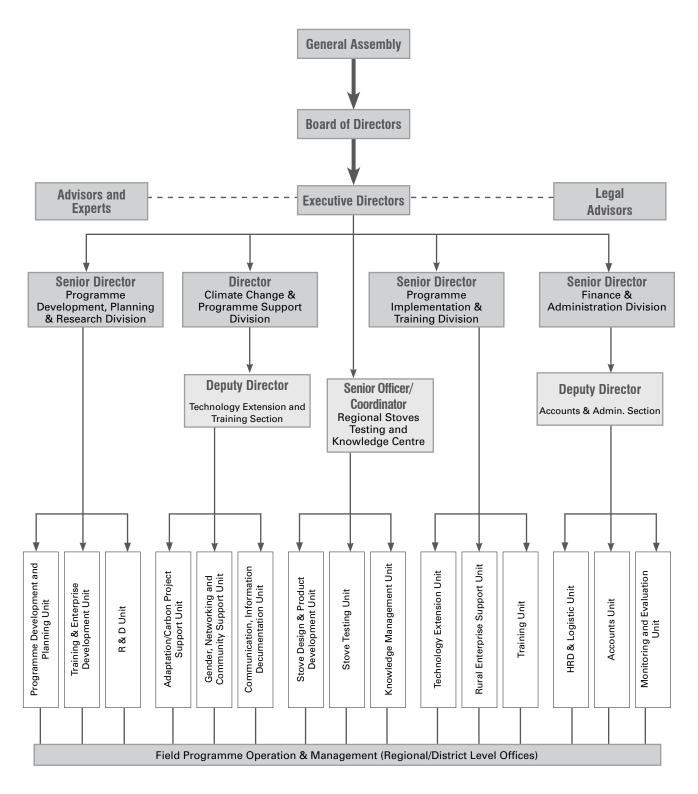
Madan Kumar Niraula For: Madan Niraula & Co. Chartered Accountants

Pawan K. Singh Accounts/Admin. Officer



- - Energy: Empowering Women, Uplifting Lives
- Gender and Energy Research Programme 0
- Electricity Transmission Expansion and Supply Improvement Project (ADB TA 7923)
- Improving Gender-Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Sri Lanka (ADB JFPR 9158)
  - **EVD** Project
- Piloting Innovative Financing Project in Nepal

# **Organisation Structure**



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# **Board of Directors**



### Dr. Ananda Shova Tamrakar, Chairperson

Dr. Ananda Shova 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 Programme (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 publication).



#### Mr. Ganesh Ram Shrestha, Member Secretary

Mr. Ganesh Ram Shrestha joined CRT/N in 1989 as a founder member. Under his leadership CRT/N is widely known for its pioneering efforts in promoting the improved cookstoves, Improved Water Mill and other rural technologies for sustainable development. Under his leadership, CRT/N has developed successful partnership with national institutions and strategic cooperation with key international agencies. He has been instrumental in mobilizing resources and has developed planned, managed and implemented successful programmes through his carrier. Mr. Shrestha has pursued Post Graduate Diploma in Rural and Agricultural Project Planning from Institute of Social Studies (ISS), the Hague, the Netherlands and Bachelor's Degree in Agricultural Engineering from Israel Institute of Technology from Haifa, Israel. He has been granted an Overseas Fellow of the Economic Development Institute (EDI) of the World Bank, 1977.



### Mr. Lumin Kumar Shrestha, Member

Mr. Lumin Kumar Shrestha holds M.Sc. Degree in Agriculture Economics. He is a founder member of CRT/N. He holds over four decades experience in agricultural financing and various rural technologies. He also had experience of working in the various capacities in the Agricultural Development Bank, Nepal for 20 years.





### Mr. Nanda Ram Baidya, Member

Mr. Nanda Ram Baidya worked in Agricultural Development Bank, Nepal for 32 years in various capacities from Officer to Deputy General Manager. He was the first General Manager (Chief Executive Officer) of Biogas and Agricultural Equipment Development Company (a sister concern of ADB/N) from 1979 to1984. He is the Treasurer and the Founder Member of CRT/N since its inception to 2016. He is one of the founder members of Centre for Self-help Development (CSD) and Chairman of Governing Board of CSD from 1996 to 2004. Besides, he is the Founder Promoter of Swabalamban Laghu Bitta Bikas Bank Limited *(Swabalamban Micro Finance Development Bank Limited).* He had served as Chairman of Swabalamban Laghu Bitta Bikas Bank for 10 years. He holds Master's Degree in Commerce (M. Com) from Tribhuvan University, Nepal (T.U.), Kirtipur, Kathmandu.



### Mr. Hari Gopal Gorkhali, Treasurer

Mr. Hari Gopal 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. Birjung Prajapati, Member

Mr. Birjung Prajapati worked in National Trading Limited for 21 years in various capacities from Officer to Division Chief. He also worked in Agricultural Tools Factory, Birgunj as Senior Production Engineer for 12 years. He has served as Board Member of CRT/N since 2002 to date. He has pursued Bachelor of Science in Agricultural Engineering (Machine Option) Degree from Technion, Israel Institute of Technology, Haifa,Israel.



### Mr. Damodar Karki, Member

Mr. Karki worked in CRT/N from February 16, 1992 to April 1, 2014. He started his job as Technical Officer and upgraded to Senior Officer in 1995. Currently, he is contributing as Board Member of CRT/N. Under his supervision and coordination CRT/N has conducted demonstration activities on various renewable energy technologies such as Improved Cookstoves, Improved Water Mill, Solar Cookers/ Dryers, Hydraulic Ram Pump etc. promoted by CRT/N.

# **CRT/N Personnel**

### **Management Team**

- Mr. Ganesh Ram Shrestha, Executive Director Mr. Nanda Ram Baidya, Senior Director Mr. Lumin Kumar Shrestha, Senior Director Mr. Hari Gopal Gorkhali, Senior Director Dr. Purushottam Shrestha, Director Mr. Gyanendra Raj Sharma, Deputy Director
- Mr. Shyam Kumar Rai, Deputy Director

### Account and Administration Team

Mr. Pawan Kumar Singh, Accounts/Admin Officer Mr. Raju Maharjan, Accounts/Admin Officer Ms. Gita Subedi, Receptionist Mr. Ram Krishna Dawadi, Driver Mr. Sudesh Man Singh, Messenger Mr. Ramesh Khadka, Messenger Ms. Sanu Maiya Singh, Messenger

### **Programme Implementation Team**

Mr. Subarna Prasad Kapali, Consultant Dr. Indira Shakya, Consultant Mr. Basudev Upadhyay, Consultant Dr. Ashma Vaidya, Senior Program Officer Ms. Lachana Shresthacharva, Senior Programme Officer Ms. Babita Adhikari, Programme Officer Ms. Shovana Maharjan, Programme Officer Mr. Subas Lamichhane, Programme Officer Ms. Ashma Pakhrin, Programme Officer Mr. Niraj Shrestha, Programme Officer Mr. Prabin Shrestha, ICS R&D Officer Ms Gyanu Bist, Event Associate and Communication Officer Mr. Ritavrat Joshi, Engineer Mr. Milan Shrestha, Assistant Programme Officer Ms. Kaushila Rai, Senior Programme Assistant Ms. Cheeja Adhikari, Sr.Technician Mr. Farsha Prasad Tandan, Biomass Technical Coordinator Mr. Bhim Bahadur Bohara, Biomass Technical Coordinator Mr. Bodhraj Bhandari, Business Development Coordinator Mr. Hari Prasad Ghimire, Business Development Coordinator Mr. Keshab Bahadur Thapa, Biomass Technical Coordinator Mr. Likh Ram Chaudhary, Business Development Coordinator

# Few Highlights from 2016/2017



Mass awareness and school awareness programmes conducted by "Energy: Empowering Women, Uplifting Lives" project at various locations to reach out greater mass and create awareness among students and general public about the significance of gender and energy choices, policy issues and importance in local government level and to improve health and energy use status of the country





## Ms. Kalpana Rai Participated in Asia Clean Energy Forum, Manila



Ms. Kalpana Rai, Improved Cookstove entrepreneur under WEE-Nepal Project participated at Asia Clean Energy Forum from 5-8 June 2017 in Manila, Philippines at Asian Development Bank Headquarters. ACEF is one of Asia's premier networking and knowledge-sharing events dedicated to clean energy and energy access in Asia. She remained one of the speakers for the session "Energy Access Leaders and Voices from the Grassroots" and presented about her innovative business model, challenges and solutions. She also highlighted her leadership in building relationship with government agencies, local financial institutions, national supplier and her marketing agents.



WEE Nepal Project Supporting Women in Diverse Entrepreneurship to Empower Them Socially and Economically







*CRT/N Cohosted the Event of Energia Phase 6 Strategic Planning Meeting in Coordination with ENERGIA/HIVOS, Held From 18-21 April, 2017 in the Hotel Annapurna, Kathmandu, Nepal.* 







Dr. Purushottam Shrestha, Director CRT/N Participating at Civil Society Forum and Knowledge Sharing Events Organized by ADB Headquarters in Manila, the Philippines



Dr. Purushottam Shrestha and Dr. Indira Shakya, CRT/N Participating Bilateral Meeting at Gender and Energy Research Programme Meeting Held from 12-17 December, 2016 India



Center for Rural technology, Nepal, Awarded with "Protsahan (Encouragement) Prize" by UKaid DFID Supported Adaptation at Scale Prize on 16 December 2016 for "Promoting Ram Pump, the Climate Change Adaption Technology for Livelihood Enhancement"



Ms. Shovana Maharjan, Program Officer, CRT/N Participated in the COP 22 Held at Marrakesh, Morocco from 7- 12 November 2016, Where Ms. Maharjan Got Opportunity to Talk About Improving NDCs: Eco-village Development, Energy Access, & Zero Carbon Societies



Children Studying in the Light Generated by IWME

# Awards and Recognition







- Certificate for Promoting Energy based Livelihoods and Entrepreneurship for Rural Women through JFPR Grant 9158: Improving Gender – Inclusive Access to Clean and Renewable Energy in Bhutan, Nepal and Srilanka April, 2016.
- Honored for Special Contribution to Biomass Energy Support Programme Award from Alternative Energy Sector Assistance Programme, July 2012;
- Improved Water Mill Programme was selected as a final nominee for Energy Globe Award 2010;
- The Ashden Awards for Sustainable Energy 2007 to 'Improved Water Mill Support Programme' (Ashden Trust for Sustainable Energy, UK);
- Recognition as `Women in Energy and Water Management Project' as best practice by Wuppertal Institute for Climate, Environment and Energy (WISION), Germany in 2004. The Project was implemented by CRT/N with support from UNEP/ICIMOD during 2002-2004;
- Consolation Ashden Awards for Renewable Energy 2002 (Ashden Trust for Sustainable Energy, UK);
- Green Energy Letter of National Felicitation 2001 (Green Energy Mission), Nepal;
- CRT/N Project Registered at Expo 2000 Hannover, Germany.



### Centre for Rural Technology, Nepal (CRT/N)

Bhanimandal, Lalitpur G.P.O. Box 3628, Kathmandu, Nepal Tel.: +977-1-5530071/5544758/5547627 Email: info@CRT/Nepal.org Web: www.CRT/Nepal.org