

**NEPAL
DEVELOPMENT
RESEARCH INSTITUTE**

**ANNUAL REPORT
FY 2022/23**



NDRI



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FOREWORD FROM THE EXECUTIVE DIRECTOR

The continual growth of NDRI with service of excellence in the capacity of a think tank/research institute for 20 years portrays that it is running as envisioned. Nonetheless, we are reviewing its past mileage on the auspicious occasion of its 20th Annual General Meeting (AGM) with the view to identifying the pathways for the future. The annual report published each year during the AGM is a blueprint to reflect what the institute is doing at this moment. Remarkably, NDRI is running smoothly with more activities than ever before, even during the COVID, post-COVID, and post-Dengue eras, in all its attributes: research, events, and publications.

Research: The connectivity of NDRI has significantly increased during the fiscal year, both nationally and internationally. In the fiscal year, NDRI got chance to work with new collaborators: Kangbuk Samsung Hospital-South Korea, University of Massachusetts-USA, Japan Economic Research Institute-Japan, Texas A&M University-USA, Centre for Policy Dialogue-Bangladesh, Water and Land Management Institute (WALMI)-Karnataka India, Nepal CRS Company-Nepal, Welthungerhilfe-Nepal, Youth and Small Entrepreneurs Self Employment Fund (YSEF)-Nepal, and Ministry of Industry, Commerce and Supplies (MoCS)-Nepal, among others, in addition to the regular collaborators such as Cancer Research UK, Kivu International-UK, GCRF, University of Edinburgh-UK, University of Tokyo-Japan, AIT-Thailand, Khulna University of Engineering and Technology-Bangladesh, APN-Japan, CSIRO-Australia, IDRC-Canada, UNICEF, ICIMOD, ILO, Practical Action, Habitat for Humanity, and Ministry of Health and Population-Nepal, among others, covering all the thematic areas of NDRI (details of research activities provided in the 'Project Highlight' section). In addition to the externally funded research activities, NDRI has also initiated its study on (i) Nepal's journey towards Zero Hunger: State of Food Security and Nutrition 2023 (ii) Feasibility study for Business Prospects and Startups, and (iii) Water-induced Landslides, among others.

Events: NDRI actively participated in various international conferences, workshops, and summits in Australia, Bangladesh, Japan, India, Thailand, the UK, and the USA in the fiscal year in the field of environment engineering and management, economic development, enterprises, water management and climate change, and tobacco economics (details provided in the 'International Visits' section). In the fiscal year, NDRI signed an MOU with FNCSI-Nepal with the objective to contribute to enterprise development in Nepal and with Stepup Nepal-USA to work collaboratively to adopt the state-of-the-art technology and knowledge transfer and in developing policies and programs in a range of issues including the environment, occupational safety, and health areas (OSH), and thus improve the quality of life of the people living in Nepal.

One of the highlights of the fiscal year was NDRI awarded the prestigious "Health Minister Bloomberg Public Health Award" by the Ministry of Health and Population, Government of Nepal on the occasion of World No Tobacco Day, 31 May 2023 for its contribution to tobacco control efforts in Nepal. Motivated by this award, NDRI is planning to support tobacco control efforts in Nepal by providing awards, regularly, to the relevant stakeholders working in the field of tobacco control.

The keynote presentation/lecture by Dr. Somkiat Tangkitvanich (President of Thailand Development Research Institute) entitled “Learning from Thailand’s Development Experience: Dos and Don’ts for Developing Countries” followed by a panel discussion session on “Role of Think Tanks in the Economic Development of Nation” during the auspicious occasion of 20th Annual Day of NDRI (11 April 2023) was also an important event in the fiscal year which was participated and acknowledged by high level national and international delegates from embassies, government agencies, bilateral and multilateral agencies, research institutes, academic institutes and media (details provided in the ‘Events and Outreach’ section).

As a part of its corporate social responsibility, NDRI released the “Jajarkot Earthquake situation report” soon after the Jajarkot Earthquake of 3 November 2023 to contribute to an informed humanitarian response. Similarly, on March 2023, NDRI organized a Rally Program in the streets of Dhangadhi to sensitize people on tobacco control; and a School Health Awareness Program at Sharadha School-Dhangadhi on the health impact of tobacco, ways to mitigate tobacco use, and economic costs associated with tobacco use. NDRI Knowledge Café was initiated in the fiscal year where relevant subject matter experts share their research and/or professional experiences in-depth. As of now, four episodes of the knowledge café have been completed (details provided in the ‘Events and Outreach’ section). Likewise, NDRI in coordination with Resources Himalaya Foundation has been running a popular scientific discourse series in a wide range of intellectual forums named Contemporary Policy Dialogue (CPD) (previously, Covid-19 Support Network Group) which is running on its 183rd episode. Similarly, the NDRI Talk Series has continued with presentations by relevant experts on contemporary issues followed by fruitful discussions.

Publications: Unlike previous years, the fiscal year was better in terms of research publications: various research papers have been published in renowned international journals such as the International Journal of Disaster Risk Reduction, Journal of Agriculture and Food Research, Frontiers in Sustainable Food Systems, BMJ Tobacco, and Environmental Research, among others. Similarly, conference papers and several project (technical) reports and policy briefs have been published whereas, a few research papers are being reviewed in international journals and conferences and are expected to be published in the next fiscal year.

At this moment, I take the opportunity to acknowledge the researchers and management staff for their hard work, all the NDRI members / senior research specialists for their persistent guidance and encouragement, all the associated experts for their professional contribution, and all the collaborators for their continuous support. Special thanks to the Government of Nepal for creating a congenial environment. I hope for continuous support, collaboration, and encouragement from all the key stakeholders including NDRI Alumni to make the upcoming years more fruitful.



Shankar Shrestha, Ph.D.
Executive Director

ABBREVIATIONS

ARH:	Adolescent Reproductive Health
ASRH:	Adolescent Sexual Reproductive Health
COS:	Combined Oral Contraceptive
CMIP:	Coupled Model Intercomparison Project
CRUK:	Cancer Research UK
CSO:	Civil Society Organizations
ECP:	Emergency Contraceptive Pill
EDCD:	Epidemiology and Disease Control Division
ETCCDI:	Expert Team on Climate Change Detection and Indices
EWFD:	Empowering Women Farmers with Digital Finance
FGD:	Focused Group Discussion
FP:	Family Planning
FY:	Fiscal Year
GCM:	Global Climate Model (or General Circulation Model)
GCRF:	Global Challenges Research Fund
GESI:	Gender Equality and Social Inclusion
HAT:	Helping Adolescent Thrive
HMA:	High Mountain Asia
IMAM:	Integrated Management of Acute Malnutrition
IUCD:	Intrauterine Contraceptive Device
KII:	Key Informant Interview
MEDPA:	Micro-Enterprise Development for Poverty Alleviation
MNCH:	Maternal Newborn and Child Health
MMAP:	Measurement of Mental Health Among Adolescents at the Population
MOEST:	Ministry of Education Science and Technology
MOHP:	Ministry of Health and Population
NASA:	National Aeronautics and Space Administration
NCRS:	Nepal Cancer Relief Society
NDHS:	Nepal Demographic Health Survey
NGO:	Non-Government Organization
NKFMH:	Nepal Korea Friendship Municipality Hospital
NRB:	Nepal Rastra Bank
RH:	Reproductive Health
SEL:	Socio Emotional Learning
PTA:	Parent Teacher Association
SMC:	School Management Committee
TCP:	Tobacco Control Program
UHC:	Universal Health Coverage
YSEF:	Youth and Small Business Self Employment Fund

NDRI AT-A-GLANCE

Nepal Development Research Institute (NDRI) was established in 2004 by an interdisciplinary team of individuals with highest academic degrees and with wide range of experiences. NDRI aims to address the contemporary policy challenges and offer practical and credible recommendations for the benefit of policymakers and the public.

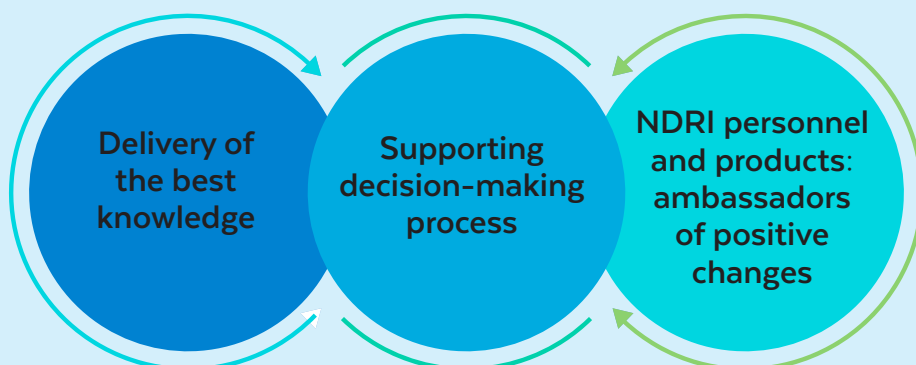
Since its establishment, NDRI has been continuously working to create opportunities for research, dialogue and collaboration to strengthen the communication and partnership between policymakers, academia and pool of experts.

NDRI works on 4 thematic areas: (i) Livelihood and Food Security; (ii) Water and Climate; (iii) Health, Education, and Environment; and (iv) Economic Development and 2 cross-cutting areas: (a) Disaster Management and (b) Gender Equality and Social Inclusion.

The outcomes achieved by NDRI so far have demonstrated its potential to evolve as one of the leading public policy think tanks in Nepal. The experience of NDRI in identifying a niche of research on policy processes in Nepal, creating a cross-disciplinary intellectual community across national boundaries, developing externally-funded research projects on a partnership basis, capacity building of young researchers, and disseminating research results provides a solid foundation for strengthening the institute even further.

We believe that NDRI will be an important hub for long-term knowledge generation in research and academic activities on issues related to economic development and social advancement, and become a Centre of Excellence for quality research, education, and development.

Core Values



VISION

To become the Center of Excellence for quality research, education and development.

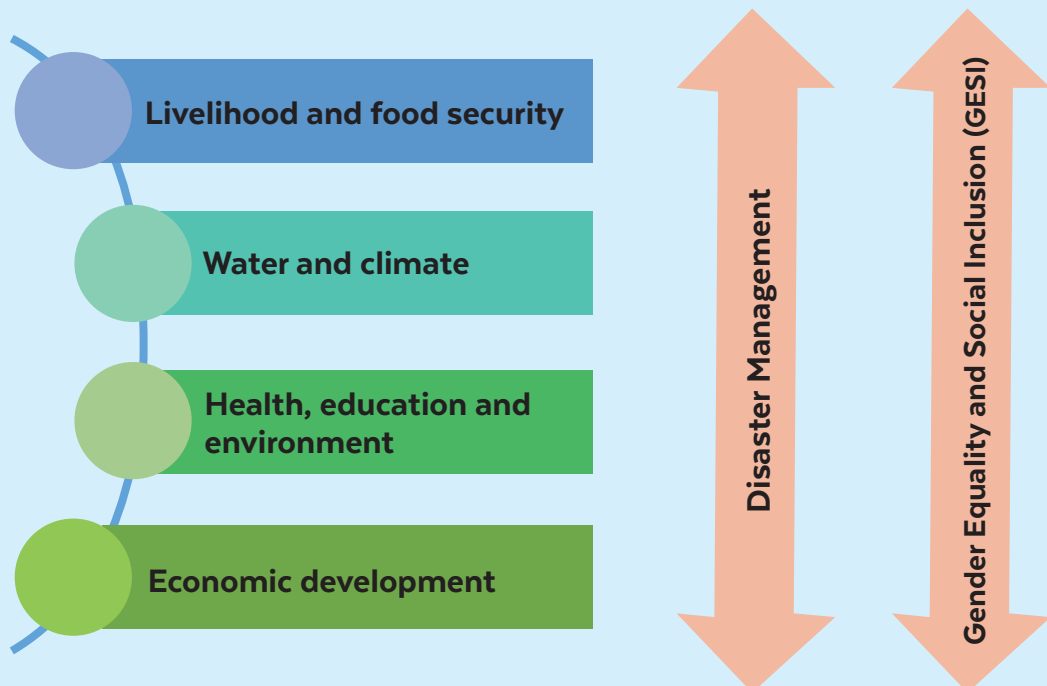
MISSION

To provide substantive analytical inputs for policy making on contemporary issues through rigorous research and dissemination of finding.

OBJECTIVES

- Carry out research and academic activities on contemporary issues related to economic development.
- Contribute to rational opinion building by disseminating information.
- Exchange resources, technology and information with both national and international institutions.
- Contribute to capacity building of young professionals and local communities.
- Provide professional services to the clients as per their demands.

THEMATIC AREAS



PROJECT HIGHLIGHTS





HEALTH, EDUCATION AND ENVIRONMENT

ANTI-TOBACCO COMMITMENT

A serious attention of Nepal Development Research Institute (NDRI) has been Drawn to the rising number of cancer patients caused by tobacco all over the world including Nepal. NDRI being a Policy Think Tank Research Institute, we hereby express our commitment to support policy research and advocacy in all kinds of anti-tobacco initiatives around the world and in South Asian Countries starting from Nepal. The commitment encompasses the following:

- ✓ NDRI offices (Head office and all branches) and their premises are tobacco-free zones. All the members and staff will not, directly and indirectly, promote any tobacco promotion activities, declare not bound to any kind of merchandise of tobacco-related business, and should not be involved in the investment, purchase, or sale of tobacco, or related corporate shares.
- ✓ NDRI plays an instrumental role in all kinds of anti-tobacco movements, particularly in research and advocacy.
- ✓ Those associated with NDRI shall be asked for clarification in case of breaches in the above-mentioned three clauses.

Verified by:



.....
Dr. Jaya Kumar Gurung
Program Coordinator
Tobacco Control Program
NDRI
20th November 2023

Verified by:



.....
Dr. Shankar Shrestha
Executive Director
NDRI
20th November 2023

TOBACCO CONTROL PROGRAM PHASE II

Study Team:

Dr. Jaya Kumar Gurung
Mr. Kamal Chaulagain
Ms. Anjana Lamichhane
Mr. Rajendra Khatri
Mr. Prabin Shrestha
Ms. Swostika Thapaliya

Funding Partner:



Technical Partner:



Synergy Partners: Nepal Cancer Relief Society, Annapurna Media Network, Nepal Medical Association, and YUWA

Background

The TCP-II (2021-2024) is a Cancer Research UK-funded initiative that aims to prevent and control tobacco use in Nepal. This project primarily focuses on policy advocacy and raising awareness about the importance of tobacco control. It acknowledges the limited priority given to tobacco control in Nepal and adopts a politically informed policy advocacy strategy.

The TCP-I (2019-2021) aimed to generate evidence to support policy advocacy and lobbying efforts. After successfully achieving this goal, it has transitioned to a coalition-based strategy to influence policy. This strategy involves forming an alliance of various interest groups, organizations, and individuals who are committed to tobacco control. The coalition's main objective is to exert pressure on policymakers to further increase tobacco taxes. Notably, NDRI takes the lead in coordinating this coalition and its efforts.

Objectives

The program aims to achieve policy influence by engaging a coalition-based approach to intensify efforts on public and political awareness, thereby enhancing the significance of tobacco control. The specific objectives are as follows:

- » Enhance the availability of high-quality research outputs that are relevant to policy and informed by political considerations.
- » Strengthen the networks of NDRI with influential government officials and politicians.
- » Foster the development of effective and context-appropriate coalitions consisting of influential partners for policy influence.
- » Facilitate capacity building for NDRI and other partners involved in the coalition.

Methodology

The research team has actively utilized primary and secondary research data on tobacco to generate evidence supporting policy advocacy efforts. This evidence-informed policy approach aims to provide a solid foundation for advocating effective tobacco control measures. Additionally, the program has adopted a coalition-based approach to policy influencing, which involves collaborating with various partners who share a common interest in tobacco control.

Recently, notable progress has been made as secondary review reports on the topic of “Youth and tobacco in Nepal” have been released. These reports were unveiled by the Honorable Deputy Speaker of the House of Representatives, highlighting the importance of addressing tobacco-related issues among the youth population in Nepal



Major Achievement

As a center of excellence, NDRI has been working on a new policy issue. The research conducted by NDRI has generated evidence for policy change and bridged gaps in knowledge.

NDRI has been successful in bringing the policy impact. The FY 2021-22 Budget included the highest rise in tobacco taxation in over a decade, a 25% increase in cigarette excise rates and the 2022-23 Budget included a 20% rise in excise duty. This has been possible because of evidence-informed policy advocacy activities conducted by NDRI.

Another achievement includes the formation of a coalition with local CSOs, government organizations, and politicians to support more effective tobacco control strategies. NDRI has been leading this coalition for policy advocacy and change. Recently, NDRI has been recognized with a Health Minister Bloomberg Public Health Award for its contribution to tobacco control by the Ministry of Health and Population.

PREVENTING AND CONTROLLING TOBACCO-INDUCED DISEASES IN SUDURPASCHIM PROVINCE

Study Team:

Dr. Jaya Kumar Gurung
Mr. Kamal Chaulagain
Ms. Anjana Lamichhane

Collaborator:



Office of the Secretariat of the Health Tax Fund,
Ministry of Health & Population, Nepal

Background

NDRI conducted a series of impactful activities in March 2023 in Kailali district, Sudurpaschim Province, as part of the Health Tax Fund initiative. These endeavors aimed to address and combat tobacco use within the province. The multifaceted approach included a Provincial Consultative Workshop, Discussion Programs at local levels, a School Health Awareness and Rally Program, and a Health Camp.

Objectives

- » To gather insights and consult stakeholders on tobacco control priorities at the provincial level
- » To understand and address the priorities of local communities regarding tobacco issues
- » To sensitize the community on tobacco control, particularly focusing on school students
- » To raise awareness of tobacco issues and encourage tobacco cessation

Activities

- 1 Provincial Consultative Workshop on Tobacco Control
- 2 Discussion Programs at Local Levels
- 3 Rally in Dhangadhi streets involving school adolescent
- 4 Health Camp

Key Achievement

Stakeholder Engagement: Meaningful contributions from participants in the Consultative Workshop.

Community Commitment: Ward-7 of Kailari Rural Municipality committed to the “No Tobacco Village” initiative.

School Adolescent and Youth Involvement: Active participation of Sharadha School students in the anti-tobacco rally and commitment to further activities.

Health Camp Impact: Distribution of IEC materials, valuable discussions, and encouragement for tobacco cessation.

PRIVATE SECTOR HEALTH FACILITY ASSESSMENT FOR USAID ADOLESCENT REPRODUCTIVE HEALTH (ARH)

Study Team:

Dr. Baburam Marasini	Mr. Rajendra Khatri
Mr. Bhim Prasad Shrestha	Mr. Ram Prasad Devkota
Ms. Kabita Yadav	Mr. Santosh Kumar Mahato
Ms. Sophiya Shrestha	

Collaborator:



Background

NDRI, in association with Nepal CRS Company, has been undertaking the Private Sector Health Facility Assessment for USAID Adolescent Reproductive Health (ARH). USAID ARH collaborates with the Government of Nepal, the private sector, relevant stakeholders, and young people to empower adolescents in Nepal to make informed choices and practice healthy reproductive behaviors. It is an adolescent co-led initiative that aims to enable girls and boys aged 10-19 years, including the most marginalized, to exercise their ARH rights.

The primary goal of USAID ARH is to support adolescents in reaching their full potential and to strengthen both public systems and private entities in creating an enabling environment for healthy ARH behaviors. The purpose of the assessment was to measure the current situation of private health facilities and identify any gaps in providing quality family planning (FP) services to adolescents in selected municipalities covered under the USAID ARH initiative.

Objectives

- » To assess all private health facilities in USAID ARH implementing areas and measure their status in service provision.
- » To identify gaps in client-centered quality Family Planning (FP) and Reproductive Health (RH) services, including Adolescent Reproductive Health (ARH) service delivery.
- » To identify areas for collaboration to inform training and improvement plans for private sector facilities.
- » To identify eligible private health facilities for participation in the USAID ARH initiative.

Methodology

A quantitative method was used for private health facility assessment. Data collection was done to assess the private health facilities' status in terms of registration status, FP services availability, referral system, recording and reporting of FP service data, infrastructure, IP and waste management, FP counseling Knowledge and Practices, client feedback and QA/QI system, stock management, business knowledge, awareness and practice, and status of trained human resources.

The assessment was conducted in all private health facilities that was identified in the areas that are based on the criteria such as major marketplaces (e.g., Haat bazar), rural markets within three provinces (Madhesh, Karnali and Lumbini), 11 program districts and 57 municipalities. The data was collected in the Kobo Toolbox. Data analysis was conducted using SPSS 17.0 statistical software. The cross-tabulations were done to examine the relationship between two variables.

Findings

A total of 910 private health facilities were assessed in which 833 interviewees gave consent to participate. Among 833 private health facilities, almost half 392 (47.1 %) were pharmacies followed by clinics 318 (38.2%), Polyclinics 72 (8.6 %), and hospitals 51 (6.1%) respectively.

Out of 833 assessed private health facilities, most of the health facilities (480) were currently registered with the government authority. 353 health facilities were not currently registered. Among these, 288 health facilities have no plan to register in the future.



98% of the facilities were providing family planning services. Nearly all health facilities offering any modern method of FP provide male condoms (94%), combined oral contraceptive pill (82%), Injectable / sangini (72%) and emergency contraceptives (76%). Less than 5% of health facilities provided implants (1.9%) and IUCDs (1.7%). One third (30%) of service providers of private health facilities were aware about informed choice. Of these, 88.9% of the health facility service providers provide information on all FP methods that are available then let the client choose.

Less than One-fifth of private health facilities (17%) record information on FP commodity distributed whereas only 7% of facilities record FP client information. Among the health facilities that record FP client information, 15% of health facilities monthly report to the government.

44.2% of health facilities were aware of organizational business plans. Only 20% had a business plan in written form. Ninety-four (19.6%) of registered private health facilities had advertised for their service.

The most common health providers were auxiliary health workers (AHWs), available in 304 (63.3 %) private health facilities, followed by health assistants (30.4%). 146 (30.4 %) private health facilities had providers trained in sangini. Thirty-six (7.5%) private health facilities had staff trained on comprehensive FP and counseling.

Conclusion

This study captured several dimensions of the functioning of private health facilities across Madhesh, Lumbini, and Karnali Provinces in Nepal. Gaps were identified in the availability of



trained staff, equipment, and Family Planning (FP) commodities. The relatively low percentage of sites with providers trained in comprehensive FP and counseling, as well as those using quality assurance/improvement approaches, demonstrates a clear opportunity for the project to improve the quality of services. Capacity-building efforts aim to enhance providers' technical knowledge on FP and informed choice counseling, and to build their counseling skills to effectively communicate with patients.

PRIVATE SECTOR HEALTH FACILITY ASSESSMENT FOR MOMENTUM HEALTH CARE DELIVERY NEPAL (MPHD)

Study Team:

Dr. Baburam Marasini Ms. Kabita Yadav
Mr. Rajendra Khatri Mr. Santosh Kumar Mahato
Mr. Bhim Prasad Shrestha Ms. Sophiya Shrestha
Mr. Ram Prasad Devkota

Collaborator:



Background

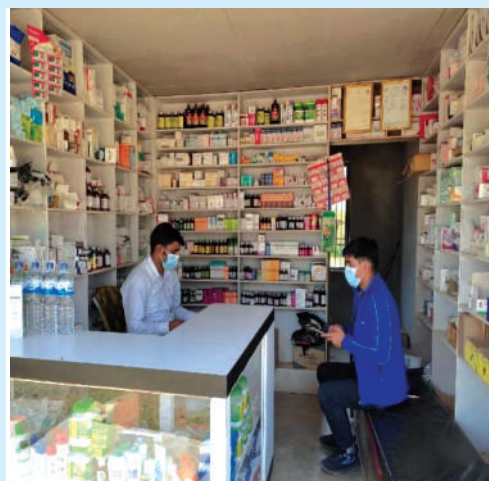
NDRI, in association with Nepal CRS Company, has been undertaking Private Sector Health Facility Assessment for Momentum Health Care Delivery Nepal-Phase 2, since February 2023. MPHD Nepal is a three-year project led by FHI 360 in partnership with PSI Nepal and Nepal CRS. The project focuses on improving the technical capacity of private healthcare providers to deliver high-quality, client-centered FP services, focusing on adolescents and young adults ages 15 to 29 years. The aim of the assessment was to measure the current situation of the private health facilities and identify gaps in providing quality FP services to adolescents in selected municipalities of USAID MPHD Nepal.

Objectives

- » To identify pharmacies and private health facilities eligible for working with MPHD Nepal.
- » To assess the baseline status of service provision of pharmacies and private health facilities in the project municipalities.
- » To identify gaps for client centered quality FP/RH services including ARH service delivery.
- » To identify areas for collaboration to inform training/improvement plans .
- » To identify the possibility to refine and scale up a private sector FP approach for private sector organizations to provide high-quality FP services to adolescents and young people in Nepal.

Methodology

A quantitative method was used for private health facility assessment. Data collection was done to assess the private health facilities' status in terms of registration status, FP services availability, referral system, recording and reporting of FP service data, infrastructure, IP and waste management, FP counselling Knowledge and Practices, client feedback and QA/QI system, stock management, business knowledge, awareness and practice, and status of trained human resources.



The private health facility assessment was conducted in the identified private health facilities within six provinces (except Sudurpaschim Province), 27 program districts and 73 municipalities. Private Health Facilities. (20 PHFs per Palika were assessed; 8 to 12 PHFs per Palika for project intervention were selected). Prior to initiating the assessment, pretest was done and program officers were given extensive training. Throughout the process of the health facility assessment, ethical consideration has been upheld to the highest standards. Data analysis was conducted using SPSS 17.0 statistical software. The cross-tabulations were done to examine the relationship between two variables.

Findings

A total of 1668 private health facilities were assessed in which 1600 interviewees gave consent to participate. Among 1600 private health facilities, majority 1145 (71.5 %) were pharmacy followed by clinic 253 (15.8%), Polyclinic 121 (7.6%) and hospital 81 (5.1%) respectively.

Out Of 1600 assessed health facilities, majority of the health facilities (1366) were currently registered in the government authority. 234 health facilities were not currently registered. Of 234, 68 health facilities have no plan to register in future.



85 of the health facilities were in process of registration for the first time. Similarly, 81 of the health facilities were in process of renewal.

Nearly all health facilities offering any modern method of FP (n = 1532) provide male condoms

(99%), COCs (96.7%), Injectable / sangini (90.3%), ECPs (96.5%) and POPs (6.0%). Less than 5% of health facilities provided implants (2.5%), and IUCDs (3.7%).

The 374 (24.4%) health facilities had maintained records of FP commodities distributed and 389 (25.4%) health facilities had maintained records of clients served. Of health facilities that had maintained records of clients served, seventy- nine (20.3%) health facilities reported FP service delivery data to government authorities.

The private 348 (22.7%) of health facilities reported having client feedback mechanisms. Out of these, 91.8% of providers were obtaining verbal feedback from clients during the visit. Of the total 1532 assessed health facilities, 23.1 percent were familiar with quality assurance/ improvement approaches.

Eighty-five (6.5%) health facilities had providers trained in comprehensive FP and counseling followed by sixty-three (4.1%) had providers trained in adolescent sexual reproductive health (ASRH).

Conclusion

This assessment captured several dimensions of the functioning of private health facilities across six of the seven provinces except for Sudurpashchim Province in Nepal. There are gaps noted in the availability of trained staff. The relatively low percentage of sites with providers trained in comprehensive FP and counseling, as well as those using quality assurance/ improvement approaches, demonstrate a clear opportunity for the project to improve the quality of services. Capacity building efforts enhance providers' technical knowledge on FP and informed choice counseling, building provider counseling skills to effectively communicate with.

BASELINE AND ENDLINE STUDY OF MENTAL HEALTH PROGRAM

Study Team:

Mr. Rajendra Khatri
Dr. Suraj Shakya
Ms. Kabita Yadav
Mr. Ram Prasad Devkota

Collaborator:



Background

NDRI, in association with UNICEF Nepal, Baseline study in the Mental Health Programme, has been undertaken since April 2023. Mental health problems affect 10-20% of children and adolescents worldwide, accounting for 15- 30% of disability-adjusted life years during the first three decades of life. Failure to recognize and address mental health problems among adolescents is a serious public health concern. Screening mental health status in adolescents is a very important step for early detection and timely intervention. To respond to this need, as part of the Helping Adolescent Thrive (HAT) initiative, the UNICEF Nepal country office is designing a socio-emotional learning (SEL) package along with its partner TPO Nepal, Ministry of Health and Population/Epidemiology and Disease Control Division (MOHP/EDCD), Provincial Health Directorate Karnali, is testing the package in Karnali province, before rolling that out among more than 50,000 adolescents in the province.

Objectives

The overall objective of the study was to conduct a baseline assessment of the Social and Emotional Learning (SEL) interventions among a representative population of 10-14 years and 15-19 years and conduct a Measurement of Mental Health Among Adolescents at the Population Level (MMA) among the same adolescent populations to understand the prevalence of mental health issues among adolescents in the region.

Methodology

The research employed a descriptive cross-sectional design to collect data using structured survey questionnaires and interviews from adolescents aged 10-14 years and 15-19 years attending schools in the Karnali province of Nepal. The study was conducted in three districts: Surkhet, Dailekh, and Salyan. Convenience sampling was used to select the participants, and data was collected in person at the schools.



Findings

A total of 418 adolescents aged (10-19) years were included in the study. More than 50% were in the age group 10-14 years.

8.7% of the adolescents were found positive for depression caseness. Positive depression caseness was found more in females (11.7%) than males (5.7%).

12.0% of the adolescents were found positive for anxiety caseness. Anxiety caseness was prevalent more in the age group (10-14) years.

8.9% of adolescents reported suicidal thoughts in the past year, while 7.7% had such thoughts within the last two weeks, and 3.7% had attempted suicide in their lifetime. Additionally, the study emphasized the importance of communication and emotional expression. Encouragingly, 36.8% of adolescents who experienced mental health problems confided in someone, mostly friends and family. This highlights the crucial role of social support in managing mental health challenges among adolescents.

The study underscored the significance of integrating Social and Emotional Learning (SEL) into the education system. SEL equips students with essential skills such as emotional regulation and conflict resolution, promoting their overall well-being.

Conclusion

The baseline survey clearly indicated that mental health problems are the major public health problem that remained as the “Submerged Portion” of the iceberg disclosing the essence of public health interventions aimed at reducing the prevalence of mental disorders. This baseline data would be extremely useful in developing multi-sectoral suicide prevention strategies and mental health reforms in the country. It is essential to integrate a mental health agenda in all policies and programs related to health and other sectors of welfare, education, and employment.

The endline study of the Mental Health Programme will be conducted next year in 2024.

QUANTITATIVE AND QUALITATIVE DATA COLLECTION DATA MUST SPEAK POSITIVE DEVIANCE RESEARCH

Study Team:

Dr. Ganga Ram Gautam	Dr. Manjeshwori Singh
Ms. Shreya Bajimaya	Mr. Rajendra Khatri
Mr. Ram Prasad Devkota	Mr. Prabin Shrestha
Mr. Santosh Kumar Mahato	Ms. Utasaha Gartaula
Ms. Sophiya Shrestha	Ms. Karishma Bhandari
Ms. Ashma Aryal	Ms. Swostika Thapaliya

Collaborator:



Background

NDRI in collaboration with UNICEF, and UNICEF Innocenti undertook a quantitative as well as qualitative survey since May 2023. Nepal's government launched a decade-long School Education Sector Plan (SESP 2022-2032) to enhance education quality. The Ministry of Education, with UNICEF and UNICEF Innocenti, has been running the Data Must Speak (DMS) initiative since 2015. DMS utilizes data for evidence-based decisions, aiding in EMIS transition, Equity Index creation, and Positive Deviance Research. UNICEF and MoEST collaborated to collect data from 120 schools (60 positive deviant, 60 comparison) in diverse regions. Whereas a comprehensive qualitative data collection was carried out in the 24 selected schools based on the quantitative survey results. Moreover, classroom observation coding, interviewing and facilitating focus group discussions with various stakeholders and school children, and transcriptions/translations are other expected results of this study. The study identifies practices behind successful schools through quantitative and qualitative methods, including surveys, observations, interviews, and discussions.

Objective

The overall objective of this study was to conduct quantitative and qualitative data collection at a sample of schools selected in collaboration with MoEST and the DMS team.

Methodology

This study employed both quantitative and qualitative data collection method. The study was conducted in all 7 Provinces of Nepal. The study aims at identifying the school-level practices and behaviors that are enabling the positive deviant schools to perform better than their peer schools. In doing so, it will carry out quantitative data collection activities at pre-identified 120 schools (60 positive deviant schools and 60 comparison schools) spread across three ecological zones: mountain regions, hill regions and terai regions. A comprehensive qualitative data collection was carried out in the 24 selected schools (a subset of the 120 schools).

Quantitative Data Collection

Within the pre-identified 120 schools, the practices and behaviors of principals, teachers, parents of students, and district-level government staff were captured using data collection tools developed by the DMS core technical team and selected experts from the DMS Technical Working Group. Five (5) different types of data collection instruments across nine (9) activities were administered for each school, namely:

Activity Type	Number of Activities in each school
Survey with the School Head Teacher	One (1)
Surveys with schoolteachers (Subjects focusing on Literacy and Numeracy – English, Nepali, Math from Grade 4, 6 and 8)	Three (3)
Survey with a representative from the Parent Teacher Association (PTA)	One (1)
Survey with a representative from the School Management Committee (SMC)	One (1)
Classroom observations of 40-minutes to be recorded on video (English, Nepali, Math from Grade 4, 6 and 8)	Three (3)

Qualitative Data Collection

Qualitative data collection was carried out in 24 schools pre-identified jointly by the MoEST and UNICEF teams. For the qualitative component, seven (7) data collection tools across ten (10) data collection activities were administered in each school:

Activity Type	Number of Activities in each school
Semi-Structured interview with the School Head Teacher	One (1)
Semi-structured interviews with schoolteachers (Subjects focusing on Literacy and Numeracy – English, Nepali, Math from Grades 4, 6 and 8)	Three (3)

Focus group discussion with parents:

- » One with parents who are members of the PTA
- » One with parents who are not part of the PTA;

Two (2)

Focus group discussions with students:

- » Girls-only (Grades 6 and 8)
- » Mixed group (Grades 6 and 8)

Two (2)

Semi-structured interview with the local Government Education Officer

One (1)

Semi-structured interview with a representative from the School Management Committee (SMC)

One (1)



BASELINE SURVEY FOR KOICA PROJECT FOR CAPACITY BUILDING OF MEDICAL SERVICE TO ACHIEVE UNIVERSAL HEALTH COVERAGE FOR THE POOR IN VULNERABLE AREAS IN BHAKTAPUR, NEPAL

Study Team:

Dr. Baburam Marasini Ms. Shreya Bajimaya
Mr. Bhim Prasad Shrestha Ms. Kabita Yadav
Mr. Rajendra Khatri Mr. Ram Prasad Devkota

Collaborator:



Background

NDRI in association with Kangbuk Samsung Hospital undertook a BASELINE SURVEY FOR the KOICA Project for Capacity Building of Medical Services to Achieve Universal Health Coverage for the Poor in Vulnerable Areas in Bhaktapur, Nepal in August 2023. Kangbuk Samsung Hospital will carry out global social contribution activities over the next five years to strengthen the local healthcare system in Nepal, particularly collaborating with the Nepal Korea Friendship Municipality Hospital (NKFMH). This plan includes constructing a four-story 101-bed building at the NKFMH and providing medical equipment. Also, Kangbuk Samsung Hospital will conduct a capacity-building program for about 300 medical staff at the NKFMH and primary medical personnel at 19 nearby health centers. Overall, the project aims to expand the NKFMH, provide support for medical equipment, establish a governance structure through a hospital master plan, dispatch hospital operation experts, doctors, and nurses, and invite high-level/working personnel for training programs.

Objective

The overall objective of this study was to capture data and information that would enable the project to establish the prevailing situation in the project area about UHC and MNCH.

Specific Objectives

To collect data that would be able to determine the level of change on impact and outcome indicators between baseline and final evaluation.

To improve the understanding of constraints and challenges faced by NKFMH, Primary Healthcare (Health post) and target participants, and their current state of needs.

According to the results and findings in the assessment, make a detailed plan for each activity.

Methodology

The research employed a descriptive cross-sectional study, both quantitative and qualitative methods of data generation to collect information. The quantitative method included a patient

satisfaction survey using a structured questionnaire with patients visiting the outpatient department (OPD) and in-patient department (IPD) of NKFMH to assess the satisfaction rate of the hospital. Likewise, qualitative methods such as focus group discussion (FGD) and key informant interviews (KII) were carried out to generate qualitative information.

Findings

The findings revealed a significant demand for Hospital Management Capacity Building Training and Clinical Capacity Building Training among healthcare professionals. These programs are essential to address evolving healthcare challenges, improve quality of care, and ensure efficient healthcare facility management.

In total, 62 health professionals were surveyed in basic health care facilities of four municipalities of Bhaktapur district. The health professionals in health facilities, including health posts and UHC, were asked about the maternal health services they provide to the patients and whether they have received in-service training, training updates, or refresher training different topics related to maternal health services. To enhance healthcare services, the healthcare professionals emphasized the significance of several key areas.

Within the community, there exists a notable awareness regarding maternal, neonatal, and child health (MNCH), signaling a positive shift towards an increased utilization of antenatal care services and a reduction in home deliveries, which can significantly improve maternal and neonatal outcomes.

A total of 395 patients were included in the survey from both outpatient and inpatient ward. Patients reported good levels of satisfaction, particularly with room services. Nevertheless, it is evident that there is room for improvement, especially in enhancing the cleanliness and food supply within the hospital.

Conclusion

This baseline survey has yielded vital insights into the status of healthcare services in Bhaktapur district. The survey has revealed numerous areas for improvement and highlighted critical gaps in awareness and challenges that need immediate attention. It underscores the pivotal role of the project in addressing these disparities and ensuring improved healthcare access and outcomes for vulnerable communities.



STUDY ON THE EFFECTIVENESS OF WHH'S 'NUTRITION CAMP' APPROACH TO PREVENT ACUTE MALNUTRITION IN NEPAL

Study Team:

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Dr. Rabita Shrestha Mulmi Ms. Utasaha Gartaula
Mr. Rajendra Khatri Ms. Karishma Bhandari

Collaborator:



Background

NDRI carried out an evaluation study on the effectiveness of WHH's nutrition camp approach to prevent acute malnutrition in Nepal. Nutrition is an indispensable part of health and development. Better nutrition is related to improved health, more robust immune systems, longevity, and increased productivity. However, today the world faces a double burden of malnutrition that includes both under-nutrition and overweight, especially in low- and middle-income countries. Malnutrition in Nepal is higher compared to the WHO global standards accounting for 25% stunted, 19% underweight, and 8% wasted children below 5 years (NDHS, 2022).

The nutrition camp was based on the concept of 'Positive Deviance'. The 'Positive Deviance' concept is a tool to promote behavior and social change by organizing various 'Positive Deviance' centered social change interventions around the world. 'Positive Deviance' Hearth interventions are community-based nutrition programs for children who are at risk of malnutrition. The 'Positive Deviance' approach encourages local communities to find solutions. 'Positive Deviance' Hearth interventions are community-based nutrition programs for children who are at risk of malnutrition and have shown to be useful with their localized relevance and cost-effectiveness in rehabilitating malnourished children in developing contexts.

Objectives

- » Identify the relevance, effectiveness, and scalability of the 'nutrition camp' approach as compared to other ongoing approaches to prevent acute malnutrition in Nepal
- » Provide concrete and context-specific recommendations to WHH for further improvement of the approach
- » Provide concrete recommendations to advocate towards policymakers and planners for further scaling up this approach into the IMAM program

Methodology

An in-depth desk review was done of all the relevant documents (e.g., protocols, guidelines, project reports, evaluation reports, etc.) related to the implementation of the nutrition camp approach through different projects (both ongoing and completed) in Nepal by WHH and its partners. While the assessment primarily focused on qualitative data, there was also a need to include some quantitative data and results.

As a result, semi-structured interviews were conducted with participants from the Nutrition Camps and mothers of malnourished children. Additionally, key informant interviews (KIIs) were carried out with other major stakeholders, such as representatives from the local government, Female Community Health Volunteers (FCHVs), project team members, health workers, and any other relevant stakeholders of four districts- Salyan, Rolpa, Dhading, Saptari or Rautahat.



Key Findings

The nutrition camp is organized every six months in coordination with municipalities and other line agencies. Mass screening of children under 5 is done to identify the SAM and MAM cases, the SAM cases are referred to OTC, and the MAM cases are consulted and managed in the camp where mothers' skill development, knowledge improvement, and behavioral change occur. The camp is organized for 15 days, where FCHV will aware participants about nutrition education, demonstration of nutritious food recipes, sanitation and hygiene practices, feeding practices, and eating habits. The nutrition camp strategy enhanced awareness among mothers of malnourished children and nutrition camp participants. The nutrition activities performed in the camp were easily understood by the mothers. It has also assisted in improving the malnutrition cases with a recovery rate of children suffering from Moderate Acute Malnutrition (MAM) ranging from 85% to 95%, who were admitted to the 15-day camp. The nutrition camp approach has been successful in addressing moderate acute malnutrition in all four districts, with a recovery rate of 85-90% and weight gain of 400- 500 grams after the 15 days of completion of the camp. The nutrition camp has helped to raise awareness on locally available foods along with their nutritive value as well has ensured that the community people can bear the expense of the foods, they learn to prepare in the nutrition camp.

Most of the food items utilized in the camp are available and produced in most of the household nutrition gardens. The mothers of malnourished children and camp participants are responsible for fetching the food items that are available in their nutrition garden, required in the camp, to prepare the nutritious food recipes. FCHV procure very few food items from the local market that are unavailable in the camp participants' household like oil, sugar, eggs,

and meat. This has supported the cost-effectiveness of the camp and the promotion of locally available food items. the integration of the demonstration of cooking and feeding practices along with the peer learning activities of the nutrition camp approach to the IMAM program, the IMAM program could be a comprehensive package to address the existing malnutrition problem in Nepal.

The integration of the nutrition camp into the IMAM requires policy-level readiness, i.e., including the nutrition camp component to the IMAM policy, which will ensure the nationwide implementation as well as budget allocation for the program. Apart from the policy, the local government can also initiate the nutrition camp and allocate the budget on its own. The FCHV will be responsible for conducting the nutrition camp and the municipality health coordinators and health post in charge will be responsible for the monitoring and supervision of the camp.





WATER AND CLIMATE

HIGH MOUNTAIN ASIA TEAM (HiMAT) RESEARCH AND PRACTICE DIALOGUE

Study Team:

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 Ms. Shreya Bajimaya Mr. Rupesh Baniya
 Ms. Divya Laxmi Subedi

Collaborator:



Background

The High Mountain Asia Team (HiMAT) is an assembly of 13 research groups funded by NASA to improve understanding of cryospheric and hydrological changes in High Mountain Asia (HMA). The project goals are to quantify historical and future variability in weather and climate over the HMA, partition the components of the water budget across HMA watersheds, explore physical processes driving changes, and predict couplings and feedbacks between physical and human systems through assessment of hazards and downstream impacts.

In collaboration with the HiMAT and the International Centre for Integrated Mountain Development (ICIMOD), NDRI organized a two-day workshop for government, civil society, NGOs, and the local research community, and the HiMAT research group to share research objectives and findings, and to find opportunities for mutually beneficial collaboration.

Objectives

- » Socialize the research practices and findings of the NASA HiMAT and HKH SERVIR programs with stakeholders in Nepal, including government, civil society, NGOs, and the local research community to find opportunities for mutually beneficial collaboration, and
- » Convene HiMAT and local research community to share research objectives, methods and findings

Methodology

A two-day field trip with the HiMAT team was conducted by NDRI to two hydropower projects, the Jure Landslide area, and the Melamchi landslide-affected area in the Sindupalchowk and Melamchi districts. The sites were chosen to provide an on-site overview of the landscape and the Sun Koshi Basin. The Sunkoshi Hydropower Project (HPP) (operational since 1972) and the Middle Bhotekoshi HPP (under construction) are important infrastructure projects in Sun Koshi Basin in Nepal that generate clean and renewable energy. The snow-fed Bhotekoshi-Sunkoshi watershed is considered a multi-hazard hotspot of the country. The Jure landslide (2014) and Melamchi flood (2021) are the major disaster events that are stark reminders of the vulnerability of people and infrastructure to natural.

The field team first visited the headwork site of Sunkoshi Hydropower Project located in the Sindhupalchowk district as the first site visit. A staff working on the project gave a briefing on the project components and design of the headwork.

The team then visited the Jure landslide area located upstream of Sunkoshi HPP. Shanmukhesh Amatya, NDRI, briefed about the disaster along with real-time experience as a front liner in disaster management.

The site of Middle Bhotekoshi Hydropower Project started with a brief introduction to the project and its status, followed by a visit to the headworks construction site. The team was able to observe the progress of the construction work, including the progress of the weir, and water conveyance structure. The team also had the opportunity to interact with the construction workers and learn about the various technical challenges faced during the construction phase. Surya Nath Bhurtel, the project manager, guided the team throughout the site visit.

Early morning on the second day, the team visited the powerhouse site of the Middle Bhotekoshi Hydropower project. Water diverted through the tunnel finally hits the Francis turbine (3*34 MW) at this surface powerhouse. The second day of the trip then continued with a visit on the Melamchi Municipality, the 2021 debris flow-affected area. The team was able to see the extent of the damage caused by the debris and to understand the ongoing reconstruction efforts. Prof. Dr. Tara Nidhi Bhattarai, NDRI, explained the cascading hazard along with the severity of impact in the region.

Conclusion and Recommendations

The field trip provided the expert team with a comprehensive understanding of the landscape as well as the water-induced hazards such as landslide and flood in the mountainous region with fragile geology. The team was able to observe the progress of the construction work, the impact of the flood and landslide on the local environment and community, and the ongoing reconstruction efforts.

Based on the observations in the field, the team has recommended the following:

- » Infrastructure needs to be developed in a sustainable manner considering the environmental impacts.
- » The construction work at the hydro projects should be monitored closely to ensure the safety and effective mitigation of social and environmental impacts.
- » Better disaster preparedness and infrastructure are required in Nepal, particularly in the face of climate change and the increasing frequency of extreme weather events.
- » Plans and policies in such multi-hazard hotspot regions need to be based on scientific research findings.



RAINFALL EXTREMES, URBAN FLOOD RISK AND FUTURE CLIMATE PROJECTIONS

Study Team:

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Mr. Dibesh Shrestha

Ms. Divya Laxmi Subedi
Ms. Rojina Haiju

Collaborator:



Background

Globally, over 2 billion individuals living in low-to-middle-income countries are exposed to numerous hazards such as landslides, floods, etc. which threaten the lives and livelihood of the people. As urban areas continue to grow at an unprecedented pace, it is projected that this number will increase to 4 billion by 2050. Failing to integrate multi-hazard disaster risk into urban planning and decision-making is a significant barrier to sustainable development and eradicating poverty in all forms. However, this challenge also presents an enormous opportunity as almost 60% of the area anticipated to be urban by 2030 has yet to be constructed.

Tomorrow's Cities is the UK Research Innovation (UKRI) Global Challenges Research Fund (GCRF) Urban Disaster Risk Hub- a five-year (2019-2024) global interdisciplinary research hub. The aim of this hub is to catalyze the transition from crisis management to multi-hazard risk-informed planning and decision-making, that strengthens the voice and capacity of the urban poor. The activities are aimed at bringing together communities at risk, community leaders, city authorities, and researchers to support momentum toward inclusive, sustainable, and resilient urban futures.

NDRI in collaboration with the University of Edinburgh (Scotland), the Institute of Engineering (Nepal), Practical Action (Nepal), the National Society for Earthquake Technology (Nepal), Southasia Institute of Advanced Studies (Nepal) worked as part of Kathmandu Hub for this project. Under the Work Package 3 "Multi Hazards Modeling" team, NDRI contributes to A) Climate Change Analysis and Impacts on Flood Hazards/Risks in the Rapti Valley and B) Extreme rainfall analysis of historical and future climate projections to support flood hazard/risk analysis.

West Rapti Valley is the chosen study area and Bhaluwang is the focal point of this study. The selected three municipalities are 1) Rapti Rural Municipality 2) Gadhwa Rural Municipality and 3) Sitganga Municipality. The area of the West Rapti basin is 6371.06 sq. km. The main river originates from the middle mountains of Nepal and enters through the lowlands and finally meets the Ganges. The major tributaries are Lundri, Sibani, Jhimruk, Madi, and Arun Khola. It receives an annual average precipitation of approximately 1500 mm and records monthly average temperatures ranging from 46°C to 2°C.

Objectives

The aim of this study is to analyze the impact of spatial and temporal patterns of extreme historical rainfall events on the behavior of floods in West Rapti and to quantify the changes in future rainfall extremes and its influences on flood.

Methodology

The CMIP6 models were selected using an advanced envelope-based selection methodology. The three steps of the envelope-based approach are:

- » Initial selection based on changes in mean air temperature and annual precipitation sum.
- » Refined selection based on the projected changes in four indices for climate extremes.
- » Final selection based on the model skills in simulating the annual cycle of air temperature and precipitation.

Conditions	Name of selected GCMs
SSP245	
Cold Dry (CD)	Nor-ESM2-MM
Cold Wet (CW)	GFDL-CM4_gr2
Warm Dry (WD)	Nor-ESM2-MM
Warm Wet (WW)	CMCC-ESM2
Median	MPI-ESM1-2-LR
SSP585	
Cold Dry (CD)	MPI-ESM1-2-LR
Cold Wet (CW)	CMCC-CM2-SR5
Warm Dry (WD)	MPI-ESM1-2-HR
Warm Wet (WW)	CMCC-CM2-SR5
Median	BCC-CSM2-MR

Table: Adopted Global Climate Model

This study started with the selection of Global Climate Model (GCM) by analyzing model skills in simulating the annual cycle of air temperature and precipitation (the Step 3 in NAP approach), then followed by the selection based on changes in mean air temperature and annual precipitation and afterward the selection based on projected changes in four extreme indices for climate extremes.

The selection of GCM data is followed by bias correction and statistical downscaling of GCM data. This is done with the method of empirical quantile mapping.

The principle of the quantile mapping method is to transform the distribution functions of parameters of interest into observed data using a mathematical function. It holds an advantage over other methods that correct only the mean and variance of datasets. This method has been adopted by various studies for bias correction and for its hydrological implications.

The Expert Team on Climate Change Detection and Indices (ETCCDI) has defined various indices to assess the changes in climate extremes.

We have used 4 indices out of 27 for the GCM selection process: R95PTot (precipitation in wet days (>95th percentile), CDD (consecutive dry days), WSDI (warm spell duration index), and CSDI (cold spell duration index).

The observed data was then used to perform interpolation using the Inverse Distance Weightage (IDW) method, considering 21 stations within and around the West Rapti basin. After the identification of historical extreme flood and rainfall events, spatial patterns of those historical events were analyzed. Historical rainfall frequency analysis was performed using the Gumbel method for the spatial and temporal disaggregation.

Expected Outcomes

- » Climate change input data will be used for the flood modeling. The temporally and spatially disaggregated maximum daily rainfall of different return periods for the baseline and future scenarios will be used to assess climate change impacts on flood hazards in West Rapti Basin, special focus on the new city area in Bhaluwang.
- » Policy briefs/ Newspaper Articles/Technical Notes on Climate Change Analysis and impacts on Multi-hazards/Risks will be prepared.
- » Publications in international journal on Climate Change Analysis and Impacts on future multi-hazards/risks in West Rapti Basin.

Ongoing Activities

This is an ongoing study, where we have completed the GCM selection and stationary climate data analysis, and we are working on the following activities:

- » Bias correction and downscaling of selected GCMs.
- » Integration of climate models and multi-hazard models.



CAPACITY DEVELOPMENT PROGRAMME (CAPABLE): BUILDING CAPACITIES FOR CLIMATE RESILIENT WATER RESOURCES DEVELOPMENT UNDER CLIMATE UNCERTAINTY

Study Team:

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Mr. Divas B. Basnyat
Dr. Shankar Shrestha

Dr. Dhiraj Pradhananga
Mr. Girish Raj Lamsal

Collaborator:



Background

Asia-Pacific Network for Global Change Research (APN) supported Capacity Development Programme (CAPaBLE) aims to enhance the capacities of scientists, policymakers and other relevant stakeholders in Asia and the Pacific to identify and assess global change issues at local, national, and regional levels and further identify appropriate solutions to resolve these issues and achieve sustainability.

As a part of CAPaBLE programme NDRI's ongoing work focuses on Climate Risk Assessment (CRA) for sustainable and climate-resilient water resources (WR) development. The main objective is to provide an accessible platform for WR practitioners to conduct CRA using the upgraded version of the Python programming language-based open-source application, "WEather generator and Climate Change Scenario Generator" (WECCS-Gen) tool. The upgraded tool includes a User's Manual and Technical Document with an illustrative example of downscaling a CMIP6 Global Climate Model (GCM) to the catchment scale in Nepal.

Moreover, the project aims to equip WR practitioners with the necessary concepts and improved skills in CRA. These trained professionals are expected to effectively apply CRA to their work using the upgraded WECCS-Gen tool. Additionally, the project endeavors to raise awareness about climate resilience and foster knowledge and experience sharing among participants from both national and international backgrounds.

NDRI aims to enhance preparedness and promote the integration of CRA findings into WR development practices. The project also seeks to achieve recognition and integration of CRA in policy processes and documents related to water resources development. By promoting awareness of climate resilience design and planning in WR among policymakers, the project aims to facilitate climate adaptation efforts.

Objectives:

Upgrading existing "WEather generator and Climate Change Scenario Generator (WECCS-Gen)" tool: NDRI has developed a WECCS-Gen tool to carry climate stress test for bottom-up CRA. The proposed upgrade is to incorporate statistical climate downscaling into WECCS-Gen to support top-down CRA. This activity intends to ease consuming procedures of climate downscaling / generating CC realizations for WR practitioners as engineers, hydrologists, and researchers with limited background on these topics.

Capacity building training workshop on CRA to WR practitioners: A four-day intensive training workshop on CRA, with focus on capacity building of national and international WR practitioners applying WECCS-Gen tool. It aims to enhance their capabilities and skills to assist project planning under climate uncertainty, thus aiding decision-making for climate resilience.

Awareness raising workshop to promote CRA into existing practices: This workshop, targeted at policy makers, aims to inform about the importance of CRA for achieving climate resiliency of WR projects; and promote the use of tools as WECCS-Gen for supporting decision making. Writing a peer reviewed article and knowledge product.

CLIMATE RESILIENT GUIDELINE FOR HYDROPOWER AND ITS APPLICATION IN THE NARAYANI BASIN

Study Team:

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Mr. Hari Pandit	Mr. Pawan Ghimire
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Dr. Sonu Khanal	Ms. Sunita Magar
Mr. Girish Raj Lamsal	Mr. Rajendra Shrestha
Mr. Rupesh Baniya	Mr. Samyog Bhandari

Collaborator:



Background

The current climate and hydrological variability is a major driver of risk to hydropower projects in Nepal. The high uncertainty of future climate change will further exacerbate the climate risks to hydropower. This requires the planning of hydropower projects to consider resiliency to a highly uncertain future climate. Mitigation measures for managing climate change risks to hydropower are thus as important as those from hydropower projects on the environment. The Guidelines for Study of Hydropower Projects (2018) prepared by the Department of Electricity Development (DOED) and the Hydropower Environmental Impact Assessment Manual (2018) prepared by the Ministry of Forests and Environment provide guidance on risk analysis, but they are limited to current hydrological, financial, design and construction risk assessment, as well as environmental impact assessment, but both documents are silent on climate risk assessment. International climate resilience guidelines prepared by the International Hydropower Association in 2019 and the World Bank in 2015 provide useful references but these are generic and focused on the project-level risk assessment, and do not cover policy and basin (catchment) level risks and further needs to be customized and operationalized in the context of Nepal. The Guideline for Climate Resilient Hydropower in Nepal (2022), prepared by a team of Research Consultants and ICIMOD, proposes six steps to develop guidelines for climate-resilient hydropower in Nepal.

Improving on this work, NDRI in collaboration with ICIMOD, conceptualized the study to implement the steps in the current portfolio of hydropower projects identified in the Narayani Basin. The study aims to develop a detailed methodology for the assessment of vulnerability and risk due to climate change, explore mitigation and adaptation methods, and conduct economic benefits and trade-offs for the selected mitigation and adaptation methods. Finally, this effort will culminate in the production of Guidelines for Climate Resilient Hydropower in Nepal.

Objective

1. Hazard Assessment
2. Vulnerability and Risk Assessment
3. Impact on Runoff and Hydropower Production
4. Guidelines for Climate Resilient Hydropower
5. Supplementary Guidance and Recommendations

Ongoing Activities

- » The comprehensive evaluation of present and future hazards, including landslides, avalanches, GLOFs, PDGL, permafrost thaw, and floods, under diverse climate change scenarios in the Narayani basin. This analysis aims to understand the potential threats posed by these hazards to hydropower development.
- » Assessment of the vulnerability and risk posed by identified hazards on hydropower development within the context of climate change.
- » Assessing the historic and future runoff from glaciers, snowmelt, and precipitation, utilizing the Spatial Processes in the Hydrology model (SPHY) modeling framework under different climate scenarios.
- » Basin-scale impact analysis of runoff variability on energy generation. Investigating the impact of climate change on the current portfolio of hydropower projects in the Narayani basin, including operational projects, those with construction licenses, government-studied projects, and greenfield projects identified in the WECS HP Master Plan Study (2023).
- » Developing a risk management scenario for hydropower development under both present and future climate change conditions, includes the evaluation of cost increments attributable to extreme events and an assessment of the cost of adaptation and resilient design for representative hydropower projects.



ECONOMIC DEVELOPMENT

PROMOTING INNOVATION AND INCLUSION IN GROWTH POTENTIAL ENTERPRISES: EVIDENCE FROM NEPAL

Study Team:

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Prof. Dr. Punya Prasad Regmi	Ms. Ashma Aryal
Dr. Pranil Man Singh Pradhan	Mr. Santosh Kumar Mahato
Dr. Shankar Shrestha	Ms. Sophiya Shrestha
Dr. Aruna Palikhe	Mr. Prabin Shrestha
Mr. Rajendra Khatri	

Collaborator:



Background

NDRI and IDRC Canada are collaborating on a 3-year project (March 2023 - Feb 2026) following the successful stage one of the Evidence for Innovation program (Jan 2022 - Dec 2022). This research analyzes interventions for MSMEs, specifically the Micro Enterprise Development Programme for Poverty Alleviation (MEDPA) and the Youth and Small Entrepreneur Self-Employment Fund (YSEF). The project aims to enhance MSMEs in sectors like agriculture, production, and services, focusing on indigenous knowledge and skills across seven provinces. It includes entrepreneurship development, quality compliance, fund management, technology transfer, and product-market linkage to promote Equity, Diversity, and Inclusion.



Kaushila Khadi Tatha Uni Udhyog

Key Objectives

- » Assess the impact of two government support programs: MEDPA and YSEF, in terms of employment generation, process improvement, product/market development, and sales growth;
- » Implement a randomized controlled trial to assess the impact of intervention/ support services on growth potential MSMEs participating and/ or not participating in the MEDPA and YSEF programs;
- » Determine if the interventions of the MEDPA and YSEF programs are reaching their intended beneficiaries (e.g., youth, women, entrepreneurs in low-income settings) and detail what could be done to bolster their equity, diversity, inclusion, and innovation outcomes; and
- » Utilize the findings to promote a business innovation ecosystem that supports growth enterprises in Nepal.

Methodology

The research design employed in this study is causal-comparative, which involves comparing outcomes between enterprises that have benefited from MEDPA and YSEF programs and those that have not. The research project will utilize a combination of qualitative and quantitative methods for data collection to generate evidence for innovation and inclusion that supports the growth potential of MSMEs. The following steps will be undertaken to accomplish the project objectives:

- » Literature review encompassing national policies and plans, guidelines of innovation support programs, industrial policies, and research articles that are relevant to innovation support programs.
- » Administer questionnaire surveys and conduct in-depth case studies with enterprises who have benefited and not benefitted from MEDPA and YSEF programs.
- » Identify and select growth potential entrepreneurs from the MEDPA and YSEF programs, as well as other independent entrepreneurs in the three sectors.
- » Implement research intervention/treatment for identified growth potential enterprises.

The research team completed an extensive exploratory field visit to all seven provinces of Nepal with the objectives of gathering key information about the business climate in the country and delving into the intricacies of the business ecosystem in enterprises involved in agriculture, production, processing, marketing, and services.



Nepal Mahila Sasaktikaran Samuha



The first baseline survey for the project was a crucial step in understanding the initial conditions and context before implementation which was conducted in all 7 provinces of Nepal. The survey encompassed various key indicators, including demographic information, socio-economic factors, and baseline knowledge of the target population. Through surveys, interviews, and on-the-ground observations, valuable insights were gained into the community's needs, challenges, and existing resources. This baseline information not only guides the project's design but also provides a benchmark against which can measure the impact of interventions over time. The meticulous data gathered during this initial survey serves as a reference point for evaluating the project's effectiveness and adapting strategies as needed to achieve meaningful and sustainable outcomes.

ASSESS THE FINANCIAL AND DIGITAL FINANCIAL LANDSCAPE AS WELL AS TO IDENTIFY BARRIERS OF WOMEN AND MARGINALIZED GROUPS TO SUPPORT DEVELOPMENT AND UPTAKE OF DIGITAL FINANCIAL PRODUCTS AND SERVICES

Study Team:

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Dr. Rabita Shrestha Mulmi
Mr. Rajendra Khatri

Mr. Ram Prasad Devkota
Ms. Shreya Bajimaya
Ms. Kabita Yadav

Collaborator:

**Practical
ACTION**

Background

Most of the households in Rolpa, Rukum East, and Dang districts face significant poverty, marginalization, and climate vulnerability. Women, particularly those heading households due to loss or migration of their husbands, along with people with disabilities, Dalits, and ethnic minorities, are the most vulnerable. Rural women in Nepal encounter multiple obstacles in accessing financial services, including social norms, lack of education and digital literacy, and high transaction costs. Financial institutions often fail to understand women's specific needs, hindering the development of tailored financial products.

The SAMUNNATI and EWFDF projects by Practical Action aim to address these challenges, increase women's access to financial services, and empower them to improve their lives and those of their families.

Objective

This study aims to assess the financial and digital financial landscape and identifies barriers for women and marginalized groups, supporting the development and adoption of digital financial products and services in eight rural municipalities across Rolpa, Rukum, and Dang districts.

Methodology

The study was undertaken in eight rural/municipalities (Shantinagar, Dangisharan, Runtigadhi, Triveni, Pariwarta, Thawang, Bhume, and Puthauttarganga) within the project area, as well as four municipalities outside the project area (Tulsipur, Ghartigaun, Musikot, and Rukumkot). The research employed a mixed-methods approach to data collection. A total of 425 household surveys were conducted ensuring the participation of 80% women as respondents. FGDs were conducted with three types of groups: exclusively female, exclusively male, and mixed groups. KIs were conducted with individuals involved in the financial sector in the study area, including cooperatives, Microfinance Institutions (MFIs), banks, local government representatives, and Nepal Rastra Bank. Besides these, mapping tools and Gender Audit tools were also used.

Key Findings and Conclusion

Access to affordable financial services plays a crucial role in poverty reduction and economic growth. This study highlights the progress made in increasing access to formal financial services in Nepal, with a notable improvement in the percentage of adults holding bank accounts. However, while savings and credit services were widely available and used, the awareness and adoption of digital financial services remain limited, particularly in rural areas. The study identifies barriers such as limited awareness, low literacy, lack of trust, complicated documentation, high collateral requirements, and gendered constraints that hinder the uptake of financial services, especially among women and marginalized groups.

Addressing these barriers requires targeted interventions, including financial education programs, improved access to information and technology, and the development of women-centric financial products. Additionally, the gender audit of existing financial products and services highlights the need for inclusive and accessible offerings that cater to the diverse needs of customers. To overcome the challenges and enhance financial inclusion, it is essential to focus on improving digital literacy and providing targeted training programs. Collaboration between stakeholders is vital to creating an enabling environment that promotes digital financial services, empowering women, and fostering economic opportunities.



WHY IS FDI NOT BEING MATERIALIZED IN NEPAL ?

Study Team:

Dr. Rudra Suwal
Dr. Shankar Shrestha
Ms. Anjana Lamichhane

Mr. Asmit Raj Pandey
Ms. Salisha Raila

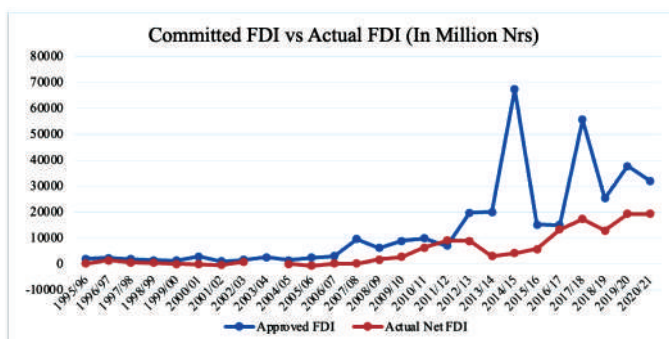
Collaborator:



NDRI

Background

Foreign Direct Investment (FDI) is the net inflow of investment in a country, which is widely believed to have positive effects on the economy of a country. Any investment that flows from one country into another is known as foreign investment. As such, foreign investment is encouraged since it complements and stimulates domestic investments in capital-scarce economies of developing countries. FDI has been one of the important features of the country's development. In developing countries, FDI has a significant contribution to economic growth. The impact of the FDI in developing countries has been well documented as an integral part of modernization, economic growth, and industrial development. One prominent issue concerning Nepal is the significant gap between the high commitment towards foreign direct investment (FDI) and the relatively low actual inflow of FDI. This study aims to shed light on the potential factors contributing to the disparity between committed FDI and the actual amount received.



Objectives

- » To assess the status of FDI in Nepal (literature review)
- » To understand the issues of FDI inflows in Nepal and the reasons behind it (literature review and consultative workshop)
- » To compare the status of Nepal with neighboring countries (literature review)

Methodology

The study will employ a comprehensive approach, utilizing both qualitative and quantitative methods. In order to conduct a multivariate analysis, secondary data from the World Bank will be utilized. Following a thorough analysis of the data, actionable recommendations will be provided, suggesting appropriate measures to enhance the inflow of foreign direct investment (FDI) in Nepal.

MAPPING AND REVIEW OF ENTERPRISE REGISTRATION AND RENEWAL PROCESSES, PRACTICES, AND EXISTING POLICY INCENTIVES IN NEPAL

Study Team:

Mr. Ganesh Singh Bista
Mr. Rajendra Khatri
Ms. Shreya Bajimaya

Mr. Ram Prasad Devkota
Ms. Salisha Raila

Collaborator:



International
Labour
Organization

Background

The informal economy is defined as economic activities that lack legal structures, resulting in the denial of labor rights, poor employment quality, inadequate social protection, a lack of social dialogue, and unfair competition for formal firms. Nepal, like many other nations, is experiencing an increase in the informal sector because of growing urbanization and shifting purchasing patterns. Nepal has one of the region's highest rates of informal economy employment, accounting for 84.6 percent of the working force. Informal firms account for over half of all operations in Nepal and are the primary source of income for most of the labor force. It is critical to formalize these firms to improve working conditions, promote fair competition, increase government revenue, and contribute to national economic growth. The process of formalizing enterprises is an important part of the comprehensive and well-rounded strategy outlined in International Labour Organization (ILO) Recommendation 204 for the transition from the informal to the formal economy.

Objective

With this backdrop, the study aims to map and document existing processes, identify incentives for formalization, and provide recommendations to address any issues, informing consensus-building among government and social partners on facilitating enterprise formalization. As it seeks to understand the issue of informality, it will identify the challenges and barriers that enterprises face when transitioning from the informal to the formal sector. By understanding processes, costs, incentives, and obstacles, the study aims to provide recommendations to provide the facilitation of enterprise formalization. By promoting formalization, ILO aims to reduce entry barriers, incentivize formalization, enhance business productivity, facilitate dialogue, and strengthen enforcement and compliance.

The research will examine the current legislative and policy framework at the national, provincial, and municipal levels. It will outline the registration and renewal procedures, including expenses, roles, responsibilities, requirements, liabilities, and penalties for noncompliance. The study will also evaluate the financial and perceived benefits of formalization from the standpoint of various types of businesses. It seeks to find areas for improvement in registration and compliance procedures, such as administrative simplification, cost reduction, increased information availability, and enterprise assistance. Best practices and lessons learned from registered businesses will be documented, with an emphasis on incentives that support formalization. The study will propose recommendations to make registration and compliance easier, more appealing, viable, and enforceable, to decrease informality. The specific objectives of the study are to:

- » Map and document the existing enterprise registration and renewal processes
- » Document the costs to register from different perspectives
- » Identify specific incentives for formalization, and
- » Provide recommendations to address issues that will inform consensus-building process among government and social partners on necessary actions to better facilitate enterprise formalization.



LIVELIHOOD AND FOOD SECURITY

AGRICULTURAL ECONOMIC SURVEY FOR THE DATA COLLECTION SURVEY ON AGRICULTURE SECTOR FINANCING IN NEPAL

Study Team:

Mr. Rajendra Khatri Mr. Ram Prasad Devkota
Ms. Shreya Bajimaya Mr. Santosh Kumar Mahato



Japan Economic Research Institute Inc.

Collaborator:

Background

Nepal achieved an average annual economic growth rate of 5% over a period of ten years until 2019. Despite this growth, Nepal is currently classified as a low-income country as of 2021. However, the country has set a goal to transition into a middle-income country by 2030. In the agricultural sector, Nepal faces significant challenges, including issues such as low productivity and production, inadequate quality, limited access to inputs such as seeds and fertilizers, insufficient irrigation facilities (with only a portion of the land being irrigated year-round), lack of essential infrastructure such as roads and electricity, and a shortage of agricultural technical expertise. To address these challenges and expand agricultural production, the government aims to promote the mechanization and modernization of agriculture. Access to financial resources within the agricultural sector is considered crucial to achieving this objective. In view of this situation, the Japan International Cooperation Agency (JICA), in collaboration with the Japan Economic Research Institute (JERI), has been conducting a data collection survey on agricultural sector financing since March 2023.

Objective

The objective of the agricultural economic survey is to understand the demand of farmers as well as agribusiness stakeholders for agricultural finance and identify constraints of financial accessibility. In addition, the survey result will be utilized for the project formulation by analyzing the disincentives in terms of technology, finance, and structure to identify financing needs in rural financing and technical assistance needs.

The agricultural economic survey consists of two components: 1) a household survey on small and medium-scale farmers and 2) an interview survey on agricultural cooperatives.

Methodology

The survey was carried out in 5 districts: Jhapa and Morang (Terai), Sindhuli and Gulmi (Hilly) and Sindhupalchowk (Himalaya) districts. In each district, 40 questionnaire surveys were carried out with farmers involved in farming of key products identified by the project. Additionally, in-depth interviews were carried out with two cooperatives in each district.

Key Findings

The survey findings reveal key insights about agricultural practices in the surveyed areas. The average number of plots per household is highest in the Hilly region, followed by the Himalayan and Terai regions. However, the plot sizes are larger in the Terai area. In terms of agricultural machinery, irrigation pumps, maize threshers, and rice mills are popular among Terai farmers, while maize threshers, mills, sprayers, and 2-wheel tractors are commonly used in the Hilly and Himalayan areas. Livestock commonly raised include cows, buffaloes, goats, pigs, poultry (chicken and turkey), and fish. Farmers predominantly cultivate crops like broom grass, cardamom, betel nut, lemon, and turmeric for sale, while millet, mustard, potato, tomato, spinach, and other vegetables are primarily for household consumption. Farmers express interest in adopting digital technology, particularly for accessing market information, weather updates, and new farming techniques.



Female farmers tend to focus on tasks within the farm or household, while males handle activities like purchasing inputs, transportation and marketing. Female farmers often rely on male family members for financial information, indicating limited decision-making power. Despite this, female farmers express satisfaction with their roles and contribution to both the household and farm.

MID-TERM EVALUATION-FINANCIAL INCLUSION FOR MARGINALIZED WOMEN IN NEPAL

Study Team:

Mr. Kamal Raj Gautam
Prof. Dr. Raj Kumar Bhattarai
Ms. Shreya Bajimaya

Ms. Nirmita Shrestha
Mr. Rajendra Khattri
Mr. Ram Prasad Devkota

Collaborator:



Background

Habitat Nepal and Sahara Nepal have been implementing a four-year project- “Financial inclusion for marginalized women in Nepal” with an overall goal of having improved financial security and safer housing through improved access to financial services for low-income women in Nepal. The project is being carried out in eastern Nepal, mainly in Jhapa, Morang, Saptari and Udayapur districts.

Objective

The mid-term evaluation was carried out to conduct an independent review of the status, and performance the project, to identify the progress made so far and to help improve project performance by highlighting key observation. The project was evaluated in terms of the evaluation criteria- relevance, effectiveness, efficiency, sustainability, impact, partnership and coordination, and quality standards.

Methodology

The evaluation was carried out using qualitative methods for data collection- Focus Group Discussion with project beneficiaries, Key Informant Interview with Project team of Habitat Nepal and Sahara Nepal, MFI’s executives, Local government authorities, Frontline workers/ Volunteers and NRB; and case studies with project beneficiaries.

Key Findings and Recommendations

The project’s design and approaches were relevant, and progress has been observed in terms of expected impacts. Financial literacy training has increased knowledge among beneficiaries, while digital financial services usage remains limited due to mobile phone ownership and literacy constraints.

Awareness programs were partially effective, with public interactions proving most impactful. The project has successfully enhanced Micro-Finance Institutions’ ability to offer housing loans through capacity building activities. The project’s management, monitoring, and communication arrangements were effective, and collaboration with partners and volunteers contributed to the project outcomes. The targeted beneficiaries have positive attitude towards the project personnel, partner institutions, and support service providers, however they expect income generating activities/skill development as a part of FLT for increasing their financial inclusion.

The project intervention very well fits in current context of access to finance and economic situation, in eastern Nepal. The intervention is coherent with government policies, NRB's Financial Inclusion Action Plan 2017 and donor policies and goals, and Sustainable Development Goals. To ensure sustainability, follow-up activities for financial literacy training and awareness,



and long-term volunteer involvement are recommended. Collaboration with local government and the Nepal Rastra Bank is crucial for financial inclusion. Recommendations further include curriculum revisions, and closer coordination with the NRB.

JAJARKOT EARTHQUAKE SITUATION REPORT

Study Team:

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Dr. Jaya Kumar Gurung
Ms. Sunita Magar

Ms. Divya Laxmi Subedi
Ms. Rojina Haiju



Background

In order to contribute to an informed humanitarian response after the Jajarkot Earthquake of 3rd November 2023, NDRI published the Jajarkot Earthquake Situation Report on 6th November 2023 based on information from various sources and field information.

An earthquake of magnitude 6.4 was recorded with epicenter in Ramidada of Barekot rural municipality, Jajarkot in Karnali province at 11:45 pm on 3rd November 2023. The quake was strong enough to cause significant loss of life and property in Jajarkot and Rukum districts, while the tremors were felt as far away as Kathmandu. There have been many aftershocks since then, the most significant being the one of magnitude 5.8 reported on 6th November 2023 at 16:29 hours, with the epicenter at Ramidada of Barekot. This has had a devastating effect on the lives and livelihoods of the people in one of the most impoverished areas of Nepal.

The report can be downloaded from the following link:

[https://ndri.org.np/storage/editorimages/NDRI%20EQ%20Bulletin%20\(1\)_1699423634.pdf](https://ndri.org.np/storage/editorimages/NDRI%20EQ%20Bulletin%20(1)_1699423634.pdf)



Photo credit: Bhautik Malla/Jajarkot

NEPAL'S JOURNEY TOWARDS ZERO HUNGER -STATE OF FOOD SECURITY AND NUTRITION IN NEPAL 2023

Study Team:

Dr. Krishna Pahari

Background

Eliminating hunger is a top priority globally and in Nepal.



Zero hunger is one of the most important among the Sustainable Development Goals (SDG). Indeed, it is not acceptable to have people suffer from hunger in this modern age. Governments throughout the world have committed to achieving Zero Hunger by 2030. Nepal is no exception and has made this a high priority.

While it is important to learn from international experiences and to benefit from cooperation with the development partners, such a program can be successful only if it is led by national institutions, particularly by the Government.

NDRI as an independent organization, is uniquely positioned to prepare such a report due to its demonstrated expertise with its long experience in food security studies and its ability to portray the evidence and analysis with a balanced approach.



In the last few decades, Nepal has made some significant progress in improving the food security and nutrition situation of its population, while there are a multitude of challenges in achieving Zero hunger. This report presents an analysis of the trends in Nepal in the last few decades and the current situation vis-à-vis the regional and global context. It also provides an analysis of various factors contributing to food security, an overview of the challenges, and recommendations for the way forward.

Expected to be released in the first quarter of 2024, the report is expected to serve as an important reference for informed policy and programming in addressing food security in the country.



EVENTS AND OUTREACH

NDRI AWARDED HEALTH MINISTER BLOOMBERG PUBLIC HEALTH AWARD

On World No Tobacco Day on 31 May 2023, the Ministry of Health and Population presented the Health Minister Bloomberg Public Health Award to three individuals and three organizations for their contribution to tobacco control efforts in Nepal.



Nepal Development Research Institute (NDRI) was awarded for its continuous efforts to awareness raising in tobacco issues and advocacy for tobacco control policies. Dr. Jaya Kumar Gurung, Lead of the Tobacco Control Program (TCP) accepted the award on behalf of NDRI from the Honorable Minister, Ministry of Health and Population. NDRI has been working in Tobacco Control initiatives through research, policy advocacy, and salience raising. Other individual award recipients were Dr. Bhakta KC, Senior Public Health Administrator at National Health Education and Information and Communication Center; Dr. Rita Thapa, Public Health Specialist, and Mr. Padam Joshi, Health Journalist. Likewise, Action Nepal, and the Biratnagar Metropolitan City, were also awarded for their tobacco control initiatives in addition to NDRI.

KNOWLEDGE CAFÉ SERIES

The Knowledge Café is a platform initiated by NDRI, where experts from various fields come together to share their knowledge and insights on various matters. Each episode of the series focuses on a specific topic and features presentations, discussions and Q&A sessions.

Episode 1:

“Three Decades of Teaching and Research Experiences with Tribhuvan University: Lessons Learnt and their Implications” In this episode, Prof. Dr. Tara Nidhi Bhattarai shared his experiences and challenges while teaching at Nepal’s First University and ways to embrace future endeavors.



Episode 2:

Dr. Krishna Pahari, Senior Research Specialist and Lead of Livelihood and Food Security Program at NDRI shares his reflection on his “Journey through United Nations” serving humanity through data and evidence.

Episode 3:

Prof. Masahiro Umezaki, Head of Department of Human Ecology, University of Tokyo, Japan discussed on “Impact of Aging and Depopulation on Health: A lesson from a case study in Rural Japan”. He presented on what the people in the communities have experienced during the process of aging and depopulation; and how special attention was paid on diet and health status of older people.



Episode 4:

Ms. Sophia Dulal, a distinguished Consultant at the UNICEF Regional Office for South Asia in Kathmandu presented on “Research Journey in Global Health: A Quest to Make the World a Healthier, More Equitable Place for All,” where she focused on her global health research journey and her efforts to improve global health equity.

CONTEMPORARY POLICY DIALOGUE

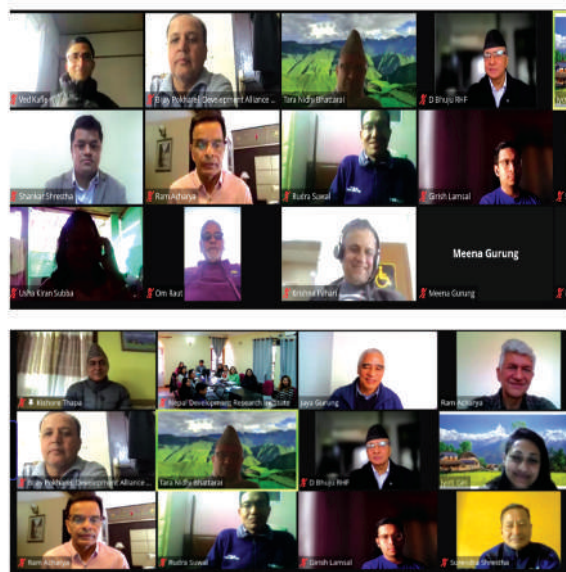
In a dynamic response to the challenges posed by the COVID-19 pandemic, Nepal Development Research Institute (NDRI) in collaboration with Resources Himalaya Foundation (RHF) pioneered a virtual talk series, initially named “COVID-19 Support Network Group (CSNG).” What began as a focused effort to address the unprecedented situation evolved into a long-lasting platform today known as “Contemporary Policy Dialogue (CPD).” CPD was initiated by Dr. Dinesh Bhuju (RHF), Dr. Nawa Raj Khatriwada (NDRI), and Dr. Jaya Kumar Gurung (NDRI) under the chairmanship of Former Minister of Education, Science and Technology: Hon. Ganesh Shah. This series has brought together experts from diverse fields to engage in insightful conversations covering contemporary issues. This series has completed its 183rd episode.

The genesis of the virtual talk series can be traced back to the early days of the COVID-19 pandemic. Recognizing the need for reliable information and expert insights, NDRI and RHF pooled their resources and expertise to create a platform that could disseminate valuable knowledge to a global audience.

Initially, the series (on a daily and later a weekly basis) focused on addressing the challenges posed by the COVID-19 pandemic. From discussions on public health measures to the impact on various industries, CSNG quickly became a go-to source for up-to-date and reliable information. As the world adapted to the new normal, the talk series evolved to encompass a broader spectrum of topics. Recognizing the importance of ongoing discussions around contemporary issues, science, and technology, CSNG transformed and was rebranded as CPD to occur on a fortnightly basis. This shift allowed the series to remain relevant beyond the immediate concerns of the pandemic.

One of the hallmarks of CPD is its commitment to bringing together experts from different fields. Over the course of 183 episodes, the series has featured renowned professionals, scholars, and thought leaders, fostering a rich exchange of ideas. Topics have ranged from the latest advancements in science and technology to discussions on pressing global challenges.

The series has not only provided a platform for experts to share their insights but has also encouraged audience participation through Q&A sessions and interactive discussions. With the success of the talk series, NDRI and RHF are committed to continuing the legacy of CPD. Plans are underway to expand the reach of the series, exploring new formats and collaborations to ensure that the platform remains a beacon of knowledge and inspiration in an ever-changing world.



WORKSHOP ON HIGH MOUNTAIN ASIA TEAM (HIMAT)

The two-day workshop on 18th and 19th January 2023, was divided into 6 various thematic sessions. Session 1 was opening session that was covered by institutional introductions and overview. Dr. Nawa Raj Khatiwada, Nepal Development Research Institute (NDRI), Mr. Birendra Bajracharya International Centre for Integrated Mountain Development (ICIMOD), Prof. Dr. Summer Rupper, University of Utah, Dr. Ashutosh Limaye, National Aeronautics and Space Administration (NASA), Mr. Dinesh Ghimire, Ministry of Energy, Water Resources and Irrigation (MoEWRI), Mr. Robert Kasca, World Food Programme (WFP), Prof Dr. Sashidhar Ram Joshi, Institute of Engineering (IOE) Tribhuvan University (TU) and Prof Dr. Bhola Thapa, Kathmandu University (KU), Mr. Sushil Chandra Tiwari, Water and Energy Commission Secretariat (WECS) were the distinguished speakers. Session-2 included talks on observed and projected climate change in the Himalaya. In this session the speakers Dr. Colin Gleaso, University of Massachusetts Amherst, Prof. Dr. Vishnu Prasad Pandey, Center for Water Resources Studies, IOE, TU, Dr. Rijan Bhakta Kayastha, KU, Dr. Dhiraj Pradhananga, Small Earth Nepal (SEN) and TU presented their research and experiences. Session 3 covered Himalaya economic development challenges- focused on Energy.



In this session, Prof. Dr. Casey Brown, Hydro Systems Research Group, University of Massachusetts Amherst, Dr. Divas B. Basnyat Nepal Development Research Institute (NDRI), Dr. Sandip Shah, Pashupati Renewables Pvt. Ltd. highlighted the main challenges in the energy development. Session 4 focused discussion on sustainable development challenges in Nepal in water and food sectors. Dr. Kapil Gnawali, WECS, Dr. Krishna Pahari, NDRI, Mr. Krishna Yogi, WFP Nepal, Mr. Mohan Das Manandhar, Sustainable Prosperity Initiative (SPI) Nepal, Dr. Santosh Nepal- International Water Management Institute (IWMI) discussed on existing challenges for sustainable development in water and food sectors in Nepal. Session 5 highlighted on hydrological forecasting and early warning system. Dr. Enrico Zorzetto, Princeton University, Dr. Kyung Robin Kim University of Virginia, Mr. Manish Shrestha, ICIMOD, Mr. Sunil Pokhrel, Department of Hydrology and Meteorology (DHM) talked on the advance hydrological forecasting and early warning system and the existing system and their operational challenges in Nepal. Session 6 was on climate change and hazards, Landslides and Multi hazards. In this final session Mr. Jack Jacquet, University of Nevada, Mr. Sudan Bikash Maharjan, ICIMOD and Dr. Umesh Singh, Hydro Lab Nepal, talked on effects of climate change hazards and multi hazards.

Session 6 was followed by closing session and the discussions on how the collaborations with the international universities (HiMAT Team) and NASA team with the Nepal's National, Non-Governmental (NGOs/INGOs) and other private stakeholders could be better in future.

20TH NDRI ANNUAL DAY PROGRAM

On the special occasion of its 20th Annual Day, Nepal Development Research Institute (NDRI) organized an event on April 11, 2023, at Hotel Himalaya, Lalitpur, Nepal. The event was conducted in a hybrid modality, and the program was divided into two parts. The first half included the Opening Ceremony and Keynote Presentation. The event was inaugurated by Chief Guest, Honorable Dr. Bimala Rai Paudyal, Former Minister, Ministry of Foreign Affairs, Government of Nepal, and Member of the National Assembly, Federal Parliament of Nepal. The highlight of the event was the Keynote Address by Dr. Somkiat Tangkitvanich, President, of Thailand Development Research Institute (TDRI), Thailand entitled “Learning from Thailand’s Development Experience: Dos and Don’ts for Developing Countries”

Likewise, the second half of the program was a Panel Discussion session on “Role of Think Tanks in the Economic Development of Nation”. Key personnel from leading Think Tanks in the region actively participated as panelists namely: Dr. Fahmida Khatun, Executive Director, Centre for Policy Dialogue (CPD), Bangladesh; Dr. Vibha Dhawan, Director General, The Energy and Research Institute (TERI), India; Dr. Deepak K. Khadka, Senior Research Fellow, Policy Research Institute (PRI), Nepal; Dr. Abid Qaiyum Suleri, Executive Director, Sustainable Development Policy Institute (SDPI), Pakistan; and Dr. Somkiat Tangkitvanich, President, Thailand Development Research Institute (TDRI), Thailand. The panel session highlighted the important role that Think Tanks can play for knowledge creation, collaboration and public sector rejuvenation for generating high impact in the overall development of a nation.

The program witnessed a wonderful in-person and virtual gathering of the representatives from various diplomatic agencies, research institutes, Think Tanks, academia, development partners, media, professional associations and government agencies. Altogether, there were more than 100 participants representing various countries such as Bangladesh, India, Nepal, Pakistan, Thailand, Qatar, Japan, Canada, and America.



AIT-NDRI HYBRID SEMINAR ON “START-UPS, ENTREPRENEURSHIP AND INNOVATION”



On February 12, 2023, Nepal Development Research Institute (NDRI) in collaboration with the Asian Institute of Technology (AIT), Thailand, organized a hybrid seminar on “Start-ups, Entrepreneurship, and Innovation.” The event included a morning meeting between AIT and NDRI members to discuss updates, followed by an afternoon seminar. AIT representatives shared insights into their Entrepreneurship Center.

The afternoon session, chaired by Ms. Usha Khatiwada and moderated by Dr. Nawa Raj Khatiwada, featured the key speaker Prof. Dieter Trau, Dean of School of Engineering and Technology, Director Entrepreneurship Center, Prof. Mokbul M. Ahmad, Professor and Head of DS Department and Mr. Sanjeet Amatya, Director, Public Affairs; Special Assistant to the President, Office of the President represented AIT.



Attendees included government officials, academics, financial experts, and virtual participants. The seminar aimed to introduce AIT’s Entrepreneurship Center, raise awareness about entrepreneurship, and inspire future entrepreneurs in Nepal.

WORKSHOP, AWARENESS PROGRAMS, AND HEALTH CAMP IN SUDURPASCHIM PROVINCE



NDRI organized a series of activities from 19 to 21 March 2023 at Kailali, Sudurpaschim Province as a part of the Health Tax Fund’s Project activities. The activities included a provincial workshop, discussion at local levels, awareness programs at school, and a health camp. The details of the programs are discussed as follows:

PROVINCIAL CONSULTATIVE WORKSHOP ON TOBACCO CONTROL

On 20 March 2023, a Consultation Workshop took place in Dhangadhi, Sudurpaschim Province organized by NDRI in close coordination with the Nepal Cancer Relief Society (NCRS) Central Office and Kailali District Chapter. Its objective was to consult stakeholders and receive insights into the tobacco control priorities at the provincial level. A total of 22 participants participated in the workshop and shared their opinions about tobacco control interventions.

SCHOOL HEALTH AWARENESS AND RALLY PROGRAM

On 19 March 2023, the TCP team organized a rally program in the streets of Dhangadhi to sensitize people on tobacco control. In the rally program, the students of Sharadha School participated with great zeal and enthusiasm. After the rally program, the school health awareness program was conducted to impart knowledge on the health impact of tobacco, ways to mitigate tobacco use, and economic costs associated with tobacco use. The school students agreed to take part in the anti-tobacco activities, and among those two students were provided with some gifts for their commitments towards tobacco control.



DISCUSSION PROGRAMS AT THE LOCAL LEVEL

The discussion program was held in Kailari Rural Municipality and Gauriganga Municipality of Kailali District. The discussion was focused on the priorities at the local level on tobacco issues, activities planned, budget allocation on tobacco control, the status of human resources, opportunities, and challenges for tobacco control. The Ward-7 of Kailari Rural Municipality has agreed to work for the “No Tobacco Village” initiative.



HEALTH CAMP

The health camp was organized by NCRS Kailali at Swostik Cardio Hospital, Dhangadhi where NDRI had placed a health education corner to aware the participants of tobacco issues. The TCP team distributed IEC and BCC materials to the participants and discussed the health impact of tobacco use. The team encouraged people to quit tobacco by imparting knowledge on the benefits of quitting tobacco.



INTERACTIVE WORKSHOP ON TOBACCO ISSUES

A half-day workshop entitled “Interactive Workshop on Tobacco Issues in Nepal” was organized by Nepal Development Research Institute at Alfa Beta Hall, New Baneshwor on 29 March 2023, Wednesday. The main objective of the workshop was to share the findings of the Dhangadhi program conducted by NDRI and NCRS from 18 to 21 March 2023. The workshop also aimed to interact with experts and key influencing people to get their views on tobacco tax policies and possible ways to reform tobacco taxation. The program was chaired by Hon. Er. Ganesh Shah (Former Minister of Environment, Science and Technology).

The program was moderated by Dr. Jaya Kumar Gurung (Senior Research Specialist, NDRI). In the program, there was a presentation by researchers from the TCP team. Mr. Kamal Chaulagain presented findings, and reflections from the Dhangadhi program, and Ms. Anjana Lamichanne presented the situation of tobacco taxation, a recommendation for the upcoming Fiscal Year Budget, and a way forward.



WORKSHOP ON TOBACCO TAXATION IN FY BUDGET 2080/81

A workshop on tobacco taxation was organized by the Nepal Cancer Relief Society on 6th April 2023. The workshop was conducted with the aim to discuss the situation of tobacco taxation in Nepal and priorities for the upcoming FY budget.



The participants were from different government stakeholders, academia, representatives from political parties, elected member of parliament, and representatives from civil societies. In the workshop, Dr. Jaya Kumar Gurung, Project Coordinator, TCP presented the overall context of tobacco control initiatives in Nepal. He highlighted the importance of tobacco taxation and the reasons for the increase in tobacco tax. He also emphasized Nepal has the lowest tobacco tax in the South Asian region and there is substantial room for increasing the tobacco tax.

HOUSE DEPUTY SPEAKER UNVEILS THE REPORT “YOUTH AND TOBACCO IN NEPAL”

The Tobacco Symposium was organized by Annapurna Media Network on 7 April 2023. The event was inaugurated by Honorable Indira Rana Magar, Deputy Speaker of the House of Representatives. At the event, she unveiled the report entitled “Youth and Tobacco in Nepal” prepared by the Tobacco Control Program (TCP) research team of the Nepal Development Research Institute (NDRI).



At the same event, Dr. Jaya Kumar Gurung, Project Coordinator, TCP presented the situation of tobacco control in Nepal and the importance of tobacco taxation as a prominent measure to control tobacco products. The presentation was followed by a dedicated panel discussion session on tobacco taxation focusing on the upcoming FY 2080/81. The panelists of the discussion session were from the Ministry of Health and Population, the Inland Revenue Department, the Nepal Health Economics Association, the Cancer Care Foundation, and the Nepal Medical Association.

MARKING THE WORLD, NO TOBACCO DAY

On the special occasion of “World No Tobacco Day 2023”, Nepal Development Research Institute along with the Kathmandu Metropolitan Office and Nepal Cancer Relief Society conducted an event intending to highlight the theme of the day “We need food, not tobacco” to raise awareness among the public about alternative crop production and marketing opportunities for tobacco farmers and encourage them to grow sustainable, nutritious crops. The Chief Guest of the program was the Honorable Minister for Health, Mohan Bahadur Basnet. There was a presence of representatives from diverse political parties, development sectors, media, civil society organizations, and students from different schools. Dr. Prakash Raj Neupane presented the health impact of tobacco and emphasized tobacco is hazardous to health.



Similarly, Dr. Jaya Kumar Gurung presented the role and strategies for local levels in the prevention and control of tobacco. He also shared about tobacco taxation issues in FY 2080/81 budget.

NATIONAL COLLOQUIUM: COLLABORATIVE APPROACH TO MITIGATE PLASTIC POLLUTION

Dr. Nawa Raj Khatiwada (President, NDRI), Dr. Shankar Shrestha (Executive Director, NDRI) and Dr. Jyoti Giri (Senior Research Specialist, NDRI) participated in “National Colloquium: Collaborative Approach to Mitigate Plastic Pollution (Solutions to Plastic Pollution under the Campaign #BeatPlasticPollution)” on 6 June 2023. The event was organized on the next day of the World Environment Day by Creasion, Nepal Polymer Institute and Plast Nepal Foundation and supported by the CocaCola Foundation, NAST and NDRI among others.



Through the technical presentations and a panel discussion, the event focused on the issues and challenges of plastic pollution and plastic recycling in Nepal and emphasized the need for collaboration between plastics industries, academia, research institutes and government.

The event was inaugurated by the Chief Guest Hon'ble Dr. Birendra P. Mahato, Minister, Ministry of Forest and Environment, Government of Nepal; chaired by Hon'ble Ganesh Shah, Former Minister of Environment, Science and Technology, Nepal and participated by representatives from federal and local governments, academia, plastic industries, research institutes and media.

PRESS RELEASE: NDRI RESPONDS TO NEPAL'S FY 2080/81 BUDGET



Nepal Development Research Institute (NDRI) has taken a significant step by providing a critical analysis and response to Nepal's budget for the fiscal year 2080/81. The budget, totaling NPR 1.75 trillion, was announced by Finance Minister Dr. Prakash Sharan Mahat on Jestha 15th, 2080. As one of the leading think tanks, NDRI aims to empower stakeholders and foster public debate while holding policymakers accountable. Dr. Rudra Suwal, the Economic Development Program (EDP) team lead at NDRI, presented the findings prepared by the team during a press release, engaging with journalists.

Additionally, experts from NDRI shared their expertise-based opinion on relevant areas of the national budget. The press release and analysis conducted by NDRI drew the attention of 18 journalists from various media outlets who participated in the event.



MONETARY POLICY 2080/81 ANALYSIS PRESS BRIEF



A Press Brief entitled “Monetary Policy 2080/81 Analysis” was held on the 27th of July, 2023. 13 Economic journalists from various Medias attended the program. The event was chaired by the President of NDRI, Dr. Nawa Raj Khatiwada. It started with a round of introduction followed by a presentation, delivered by NDRI's Economic Researcher Mr. Asmit Raj Pandey. Dr. Rudra Suwal, Lead of the Economic Development Program at NDRI addressed the queries raised. The delightful presence of the journalists and the interesting discussion that followed was very informative. Ms. Anjana Lamichhane delivered the press brief during the event. Later, the news was covered by various online Medias.

IDRC INCEPTION WORKSHOP



On July 21, 2023, an inception workshop for the project “Promoting Innovation and Inclusion in Growth Potential Enterprises: Evidence from Nepal” was held at Square Hotel, Pulchowk, Lalitpur. The workshop aimed to establish an innovative and inclusive approach for Nepal’s Micro, Small, and Medium enterprises.

Distinguished participants, including industry experts, entrepreneurs, and stakeholders, attended the event. Dr. Dev Raj Rokka, Executive Vice President of the Youth and Small Entrepreneurs Self Employment Fund (YSEF), was the Chief Guest, and Dr. Nawa Raj Khatiwada, President of NDRI, chaired the event. Representatives from various organizations also attended.

Prof. Dr. Raj Kumar Bhattarai, the Principal Investigator, presented the project’s background and its primary objective to implement innovation programs for Nepal’s growth potential enterprises. A selective three-year experimental study will identify entrepreneurs for fostering innovation.

The attendees engaged in feedback and idea-sharing sessions, addressing challenges faced by Nepalese entrepreneurs and exploring innovation strategies. Mr. Rajendra Khatri, the Project Manager, highlighted the support and inputs received, reinforcing their commitment to positive change. Dr. Khatiwada concluded the program, expressing eagerness for the project’s outcomes. The inception workshop marked a promising beginning to empower entrepreneurs and create a more inclusive and prosperous Nepal.

BOOK REVIEW SESSION ON: THE ESSENCE OF KARNALI

On August 8, 2023, NDRI hosted a book review event, in hybrid modality from NDRI Hall. Dr. Nawa Raj Khatiwada, President of NDRI, chaired the session. The book “The Essence of Karnali” was written by Senior Research Specialist Dr. Deependra Rokaya.



The book was reviewed by a distinguished panel including Mr. Rajendra Maharjan, Dr. Radha Budathapa Khatri, and Dr. Nawa Raj Khatiwada. The book delved into Karnali district’s unique circumstances and the resilient spirit of its people. This enlightening session highlighted that Karnali’s legacy of perseverance will endure for generations.

NEPAL'S WATER SECTOR ENHANCEMENT: INSIGHTS FROM FAO POLICY WORKSHOP

On 6 Oct 2023, Dr. Divas B. Basnyat, Lead, Water and Climate Program, NDRI served as a panelist in a policy workshop on Nepal's Water Sector Investment Priorities, organized by the Food and Agriculture Organization of the United Nations (FAO). The main objective of this workshop was to engage relevant stakeholders in a consultative process to identify and agree on investment priorities for tackling sectoral challenges to strengthen linkages between the water and agriculture sectors. Dr. Basnyat spoke about the importance of the right type of infrastructure to manage the uncertainties of the current climate and future climate change in Nepal.

The infrastructure "deficit" is a challenge and critical gap in coping with the high seasonal variations and uncertainties of the hydrological regime of Nepal. He also stressed that the hydrological and socio-economic "context" of Nepal is quite different from the developed world. Hence, Nepal needs to also focus on "hard water solutions" rather than just relying on "soft-water strategies" that experts from the developed countries often recommend.



Photo source: FAO

Dr. Sagar Prasai and Mr. Saumitra Neupanu presented background papers on the topic. The event was attended by Mr. Madhav P. Belbase, Hon. Member of the Civil Services Commission; Dr. Govinda Prasad Sharma, Secretary of Ministry of Agriculture and Livestock Development; Mr. Ken Shimizu, FAO Country Representative; and other high-ranking government officials, experts, and key stakeholders.

PRESENTATION ON CLIMATE RESILIENCE: CONCEPT AND POTENTIAL APPLICATION IN THE HYDROPOWER SECTOR

On October 2, 2023, Dr. Divas B. Basnyat, Lead, Water and Climate Program, NDRI presented on the topic of "Climate resilience: concept and potential application in the hydropower sector" in the half day workshop on "Climate Resilience in Hydropower: Existing Knowledge & Practices" organized by Nepal Open University, Tribhuvan University, Institute of Engineering, Pulchowk in association with Urja Developers Pvt. Ltd,



Photo Source: Urja Khabar

Other speakers were Mr. Anil Pokhrel, CEO of National Disaster Risk Reduction and Management Authority (NDRRMA), Prof. Vishnu Pandey, Institute of Engineering, and Sr. Divisional Hydrologist, Department of Hydrology and Meteorology. Prof. Shilu Manandhar Bajracharya, Vice Chancellor of Nepal Open University, and Mr. Mohan Das Manandhar, Chairman of Nepal Energy Foundation, and Mr. Mithun Paudel, Executive Member of IPPAN also made remarks in the event. The event was covered by Urja Khabar.

INTERNATIONAL VISITS

NDRI PRESIDENT PARTICIPATES IN VARIOUS MEETINGS IN AUSTRALIA

Dr. Nawa Raj Khatiwada, President of NDRI, participated in various events in Australia. During his visit, he met various dignitaries residing in Canberra, Melbourne, Perth, and Sydney. Dr. Khatiwada led many seminars in Australia in collaboration with organizations like the Nepalese Association of Agriculture, Forestry, and Environment in Australia (NEPAFE), the Federation of Nepalese Community Association of Australia (FENCAA), Melbourne University Nepali Students' Society (MUNSS), and RMIT University. During his sessions, Dr. Khatiwada provided an overview of NDRI. He extensively discussed and offered a historical perspective, detailing NDRI's past accomplishments and projects. He explored diverse sectors such as hydropower, women's empowerment, hospitality, and entrepreneurship, highlighting Nepal's growth in these areas. Additionally, Dr. Khatiwada emphasized the potential for collaboration with NDRI, proposing fellowship programs for young students in outsourcing and startup businesses, and introducing the concept of partnering with the think tanks of Nepal and Australia. This involved the initiation of a virtual research platform as well as platforms dedicated to outsourcing and startup ventures.



NDRI IN THE FOURTEENTH SOUTH ASIA ECONOMIC SUMMIT (SAES XIV), DHAKA, BANGLADESH

On 4th and 5th November 2023, Dr. Shankar Shrestha (Executive Director, NDRI) and Dr. Rudra Suwal (Lead, Economic Development Program, NDRI) participated in the 14th South Asia Economic Summit (SAES XIV) held at Dhaka, Bangladesh. SAES XIV was organized by the Centre for Policy Dialogue (CPD), Dhaka Bangladesh in partnership with the Institute of Policy Studies (IPS), Sri Lanka; Research and Information System for Developing Countries (RIS), India; South Asia Watch on Trade, Economics and Environment (SAWTEE), Nepal; and Sustainable Development Policy Institute (SDPI), Pakistan. The theme for SAES XIV was "Reframing South Asian Regional Cooperation in the New Context: National and Global Dimensions". Dr. Shrestha and Dr. Suwal from NDRI



were invited to serve as panelists for the sessions entitled "Towards an Integrated Energy Grid" and "Cooperation in Public Health" respectively. In his deliberation, among others, Dr. Shrestha emphasized the need for clean energy trade and proper energy mix for energy grid stabilization and greater supply reliability in the South Asian region.



Similarly, Dr. Suwal, highlighted the need for South Asian countries to build their system more assertively with their public health needs and emphasized that the alleviation of South Asia's poor health status requires better priority settings, enough financial provision, and increased investment to achieve universal education and improved health performance.



SAES XIV was participated by distinguished personnel from the South Asian region including policymakers, business leaders, development practitioners and international development partners such as Dr. Shirin Sharmin Chaudhury, MP (Hon'ble Speaker, Bangladesh Parliament), Mr. M. A. Mannan, MP (Hon'ble Minister, Ministry of Planning, Government of Bangladesh), Mr Md. Jashim Uddin (President, SAARC Chamber of Commerce & Industry, Bangladesh), Dr. P. Nandalal Weerasinghe (Governor, Central Bank of Sri Lanka), Dr. Yuba Raj Khatriwada (Former Finance Minister and Former Governor, Nepal Rastra Bank, Nepal), Dr. Swarnim Wagle (Member, Federal Parliament of Nepal), Professor Dr. Govind Raj Pokharel (Former Vice-Chair, National Planning Commission, Nepal), Mr. Durga Bhattarai (Former Foreign Secretary, Nepal), Mr. Madhuraman Acharya (Former Foreign Secretary, Nepal) and Dr. Posh Raj Pandey (Senior Economic Advisor, Ministry of Finance, Nepal).

EMPOWERING HUMANITY: INSIGHTS FROM DR. KRISHNA PAHARI'S TOKYO LECTURES



Dr. Krishna Pahari, Senior Research Specialist at NDRI (Livelihoods, Food Security, and Geo-Information), delivered a special lecture at the Institute of Industrial Science, University of Tokyo, on September 28, 2023. The lecture, titled "Serving Humanity through Data and Evidence: Utilizing Remote Sensing and GIS," focused on his experience at the

institute since 1994 and the significant role it plays in promoting Remote Sensing and GIS. Dr. Pahari also emphasized the application of geo-information technologies in humanitarian contexts and the emerging challenges.

The audience comprised faculty members, graduate students, and researchers at the Institute. Similarly, on October 3, Dr. Pahari conducted a seminar at the Department of Human Ecology, School of International Health, University of Tokyo.

The seminar, titled "Reflections from the World Food Programme: Serving Humanity through Data and Evidence," addressed the challenges associated with addressing hunger and its connection to human ecology.

EXPLORING ADAPTABLE BUSINESS MODELS FOR SUSTAINABLE GROWTH IN NEPALESE ENTERPRISES

Prof. Dr. Raj Kumar Bhattarai explored Japan's Keiretsu and Nokyo business models from July 26, 2023, to August 21, 2023, to find an adaptable business model for growth potential enterprises in Nepal.



He traveled to seven different locations in Japan and observed that Nokyos and Keiretsus fostered collaboration among diverse businesses and ensured efficient utilization of local resources, generating employment opportunities across different sectors. Despite facing challenges, these institutions offer valuable lessons and potential applications to promote growth-oriented enterprises in Nepal, where stability, integration, resource access, interdependency, and community development are essential.

TOBACCO INDUSTRY MONITORING RESEARCH AND ACCOUNTABILITY COURSE 2023

Ms. Anjana Lamichhane, a Research Associate in the Tobacco Control Program, NDRI participated in the Tobacco Industry Monitoring Research and Accountability (TIMRA) Course (10th July- 15th July).

The course, organized by the Tobacco Control Research Group (TCRG) at the University of Bath, United Kingdom, aimed to equip participants with the skills necessary to support the implementation of tobacco control policies in line with the WHO Framework Convention on Tobacco Control (FCTC). Ms. Lamichhane was awarded a scholarship by TCRG to attend this course, which was attended by delegates from 36 different nations.



PARTICIPATION IN EBEAM TECHNOLOGY WORKSHOP AND STAKEHOLDER MEETINGS IN USA



Dr. Shankar Shrestha (Executive Director, NDRI) and Dr. Jaya Kumar Gurung (Senior Research Specialist, NDRI) participated in the eBeam Technology workshop hosted by Texas A&M University, College Station, Texas, USA on 24-28 April 2023.

The workshop detailed the use of eBeam and x-ray technologies for medical device sterilization and food, phytosanitary, and agricultural applications and provided opportunities for hands-on practice with the technology. The workshop was followed by a series of meetings in Washington D.C. on May 1-3, 2023, with key personnel from USDA, USAID, Feed the Future, Kansas State University, Texas A&M University, US Department of State, Department of Energy, CRDF Global and World Bank. The meetings were focused on discussing approaches that could reduce post-harvest losses and improve the shelf life of agricultural commodities in Nepal, and whether such technologies could be beneficial in achieving this.



TOMORROW'S CITIES INTERNATIONAL TEAM MEETING

Ms. Divya Laxmi Subedi and Ms. Rojina Haiju from NDRI participated in the Tomorrow's Cities International Team meeting in Edinburgh, Scotland from 17th to 21st April 2023. The main aims of the meeting were to develop a detailed plan for the "Tomorrow's Cities" Decision Support Environment (TCDSE), finalize the schedule for delivery in new cities (Rapti and Nablus), and to consider a schedule for 2 sets of 2 cities. This meeting was attended by participants from the University of Edinburgh, University of Glasgow, University College London, An-Najah National University, Kandilli Observatory and Earthquake Research Institute, University of Bristol, Nepal Development Research Institute, Practical Action Nepal, Tribhuvan University, National Society for Earthquake Technology and Southasia Institute of Advanced Studies among others. The meeting was a fruitful setting to plan for the next phase with emphasis on timeline for different work packages and responsibilities.



NDRI TEAM IN THE WASTE SAFE 2023 CONFERENCE

Waste Safe 2023 Conference (25th to 26th February 2023), was organized by KUET, BUW, University of Padova, and IWWG at Khulna, Bangladesh to discuss on solid waste and faecal sludge management. In the Conference, Honorable Former Minister Ganesh Shah was invited to the Dias as one of the Special Guests in the opening session of the event. He emphasized the hazards of plastic burning and unmanaged waste. Similarly, Dr. Nawa Raj Khatiwada, President, NDRI was one of the Keynote speakers at the Waste Safe 2023 Conference (Session-I). Dr. Khatiwada gave his keynote speech/presentation on the topic “Social and Behavioral Change Instruments in Solid Waste Management and Sanitation”.



The major theme of Waste Safe 2023 focused on Solid Waste Management, Wastewater Treatment, Faecal Sludge Management, and Plastic Pollution. Likewise, Senior Research Specialist, NDRI, Dr. Jyoti Giri, presented material recovery from laptop circuit boards.

At the event, Research Assistant, NDRI Ms. Sophiya Shrestha talked about “Nudging” in waste management. Day 2 of the Conference covered topics like Transfer Learning for waste classification, landfill leachate characteristics, and future Waste Safe 2025 areas. The event facilitated collaborations among KUET, BUW, University of Padova, IWWG, and Nepali institutions for improved waste solutions. Waste Safe 2023 spurred discussions, innovative ideas, and international partnerships for effective waste management.



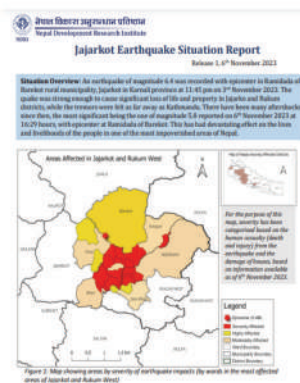
INTERNATIONAL CONFERENCE ON WATER MANAGEMENT AND CLIMATE CHANGE

Dr. Shankar Shrestha and Ms. Divya Laxmi Subedi participated in the International Conference on Water Management and Climate Change (ICWMCC) on the 24th and 25th of January in Dharwad, India. This conference was organized by the Water and Land Management Institute (WALMI), Dharwad. This conference attempted to develop a relationship between the implications of climate change and water management and their effect on agricultural productivity and rural livelihood. The conference had participation from global scientists, academicians,

administrators, water resources managers, farmers, irrigation experts, and environmentalists. Separate sessions on water management and climate change included supply challenges, demand-side challenges, nature and extent of climate change, and impact of climate change on water resources and agriculture. Dr. Shrestha participated as a panelist in the session: “Water Management – Demand Side Challenges”. There was significant participation from Indian government officials, Indian academic institutions, and international organizations like the International Water Management Institute (IWMI), Food and Agricultural Organization (FAO) and the UK Centre for Ecology & Hydrology (UKCEH).



REPORTS AND PUBLICATIONS



NDRI MEMBERS AND STAFF 2022/23

NDRI MEMBERS



Dr. Nawa Raj Khatiwada
President



Prof. Dr. Gopal B. KC
Vice President



Dr. Jaya Kumar Gurung
General Secretary



Dr. Rabita Shrestha Mulmi
Treasurer



Dr. Manjeshwori Singh
Secretary



Er. Shanmukesh Amatya
Executive Committee
Member



Dr. Krishna Pahari
Executive Committee
Member



Prof. Dr. Punya P. Regmi
Member



Prof. Dr. Madhav P. Pokharel
Member



Prof. Dr. Tara N. Bhattarai
Member



Dr. Deependra Rokaya
Member



Dr. Divas B. Basnyat
Member



Prof. Dr. Raj K. Bhattarai
Member



Dr. Rudra Suwal
Member



Dr. Sunil Babu Shrestha
Member



Dr. Basu Dev Pandey
Member



Dr. Jyoti Giri
Member



Dr. Shankar Shrestha
Member/Executive Director



Dr. Kishor Chandra Dahal
Member



Dr. Jagannath Adhikari
Member

RESEARCHERS



Mr. Rajendra Khatri
Senior Research Associate



Ms. Shreya Bajimaya
Senior Research Associate



Mr. Ram Prasad Devkota
Research Associate



Ms. Kabita Yadav
Research Associate



Ms. Anjana Lamichhane
Research Associate



Ms. Rojina Haiju
Research Associate



Ms. Divya Laxmi Subedi
Research Associate



Mr. Santosh Kumar Mahato
Research Associate (IT)



Mr. Kamal Chaulagain
Research Associate



Ms. Nirmita Shrestha
Research Associate



Mr. Girish Raj Lamsal
Research Associate



Ms. Sunita Magar
Research Associate



Ms. Salisha Railla
Research Associate



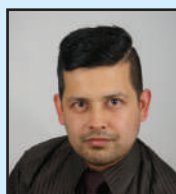
Ms. Sophiya Shrestha
Research Assistant



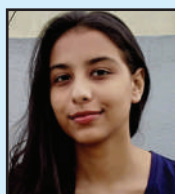
Mr. Prabin Shrestha
Senior Research Assistant (IT)



Ms. Utsaha Gartaula
Senior Research Assistant



Mr. Asmit Raj Pandey
Consultant Economist



Ms. Swostika Thapaliya
Research Intern



Ms. Karishma Bhandari
Research Intern



Ms. Samyang Nembang
Research Intern

NDRI STAFF

ADMINISTRATION AND FINANCE



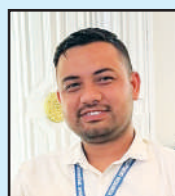
Ms. Manisha Rayamajhi
Senior Admin & Finance Officer



Ms. Ashma Aryal
Outreach & Communication Officer



Ms. Deepa Luitel
Admin & Finance Officer



Mr. Anjan Silwal
Senior Admin & Finance Assistant



Ms. Shreeya Shree Devkota
Front Desk Officer

SUPPORT STAFF



Ms. Sarita Chaudhary
Kitchen Staff



Mr. Bishnu Kumar Baniya
Security Guard



Mr. Kumar Kandel
Security Guard



Ms. Seetal Luitel
Front Desk Officer

NDRI QUALITY POLICY



NDRI is to provide that it always meets or exceeds quality objectives and customer requirements, based on the following precepts:

- ❑ Customer requirements are collected effectively to ensure that NDRI is capable of achieving their requirements.
- ❑ Interested parties' requirements are also clearly understood so that our products and services can be delivered in a timely and professional manner.
- ❑ All processes employed by NDRI to deliver services are determined, resourced appropriately documented, monitored and measured to ensure its objectives and any statutory and regular- tory requirements.
- ❑ All NDRI employees are competent in their areas of work through academic achievements, training, and experience where appropriate.
- ❑ The QMS is an integral part of our process management and NDRI has established a Quality Management System (QMS) in line with the requirements of the ISO 9001:2015 Standard.
- ❑ NDRI top management is dedicated to evaluate risks and opportunities throughout the process of service AND its continual improvement by evaluating, monitoring, and measuring the performance of the QMS and customer satisfaction.

A handwritten signature in black ink, appearing to read 'Shankar'.

.....
Dr. Shankar Shrestha
Executive Director

FINANCIAL HIGHLIGHTS

Accounting System:

Nepal Development Research Institute has been following a systematic accounting system and record keeping which has led the organization to achieve the desired output. The reliable system for collecting, recording, and reporting financial transactions is followed by the organization. The accounting procedures therefore permit a direct reconciliation of the costs and revenue declared in respect to the different programs/projects with the corresponding supporting documents.

NDRI believes in producing outstanding results with a proper accounting system. The accounts of NDRI are maintained in accordance with Nepal Accounting Standards. Financial and administrative laws and by-laws developed by the institute are in practice as per requirements.

Auditing of the Organization:

The internal audit of the organization is carried out on a timely basis to check the financial accuracy of the organization. This is done for the purpose of daily monitoring and evaluation of activities on whether the financial activities of the organization are managed as per the organizational and legal requirements or not. Regular financial auditing is done by an accredited firm that is endorsed by the General Assembly Meeting.

Process for International Standard ISO 9001:2015

Nepal Development Research Institute has also initiated the process for international standardization of ISO 9001:2015 which is the most popular and most commonly used standard for quality management system. With this approach, NDRI is trying to establish a system of quality control and quality management system designed to ensure that the firm and its personnel comply with professional standards and regulatory and legal requirements. It aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

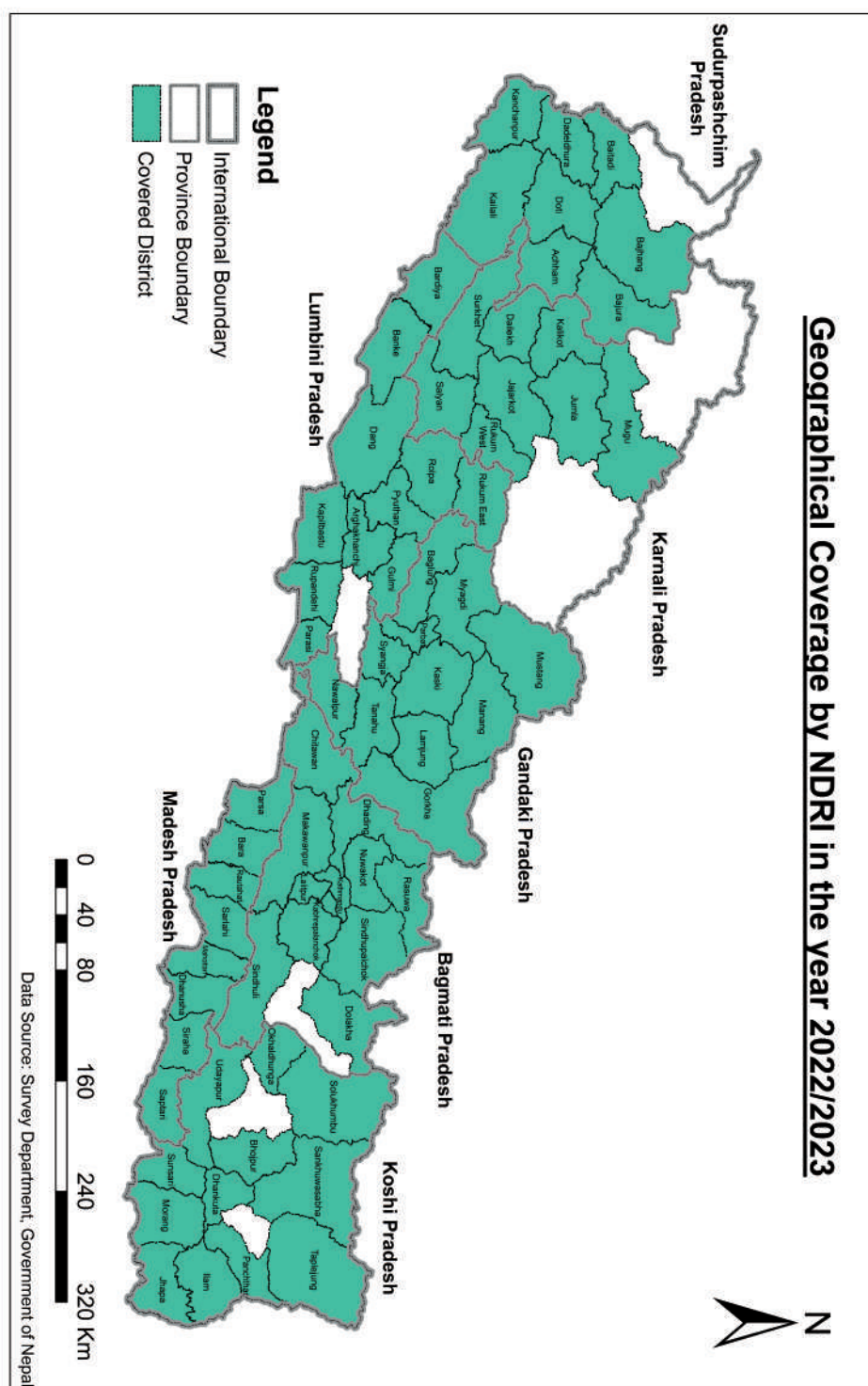
Financial Capacity:

The Financial functions of the organization are performed by a separate "Finance" department led by a (Senior) Admin and Finance Officer with supporting Admin and Finance assistants. The Senior Admin and Finance Officer is responsible for the preparation of consolidated financial statements as well as managing daily financial and administrative functions. Financial Statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP). The statements are checked by the treasurer and finally approved by the Executive Director. If there are any changes in the statement, it needs to be approved by the Executive Committee. The financial statements of the organization include a Balance Sheet, Income Statement, Cash flow Statement, Statement of Changes in Equity, and Notes to the Financial Statements. There is a policy of formulating the annual plans and budget of the institute implementing them transparently and effectively, and running its financial activities pursuant to the prevailing laws.

PARTNER ORGANIZATIONS

Governmental Organizations	Ministry of Agriculture and Livestock Development (MOALD)	National Health Research Council (NHRC)
	Ministry of Communication and information Technology	National Planning Commission (NPC)
Alternative Energy Promotion Centre (AEPIC)	Ministry of Education Science and Technology (MOEST)	Nepal Academy of Science and Technology (NAST)
Agriculture Information and Communication Centre (AICC)	Ministry of Finance (MOF)	Nepal Agricultural Research Council (NARC)
Central Bureau of Statistics (CBS)	Ministry of Federal Affairs and Local Development (MOFALD)	National Statistics Office (NSO)
Department of Hydrology and Meteorology (DHM)	Ministry of Industry Commerce and Supply (MOICS)	Social Welfare Council (SWC)
Department of Agriculture (DOA)	Ministry of Population and Environment (MOPE)	Tribhuvan University (TU)
Karnali Province Planning Commission	Ministry of Social Development Karnali Province	Youth and Small Entrepreneur Self-Employment Fund (YSEF)
Lalitpur Metropolitan City (LMC)		
Non-Governmental Organizations/Academia/International Donors		
Asian Disaster Preparedness Centre (ADPC)	Helen Keller International (HK)	PSI Nepal
Asia-Pacific Network for Global Change Research (APN)	Habitat for Humanity Nepal	SAMARTH
Asian Development Bank (ADB)	ICHARM	Resources Himalaya Foundation
Asian Institute of Technology (AIT)	Ipas Nepal	Save The Children
Cancer Research UK (CRUK)	International Centre for Integrated Mountain Development (ICIMOD)	SOS Children's Villages Nepal
Centre for Policy Dialogue (CPD), Dhaka	International Union for Conservation of Nature (IUCN)	Street Child of Nepal
Climate Change, Agriculture and Food Security (CCAFS)	International Development Research Centre (IDRC)	Swiss Agency for Development and Cooperation (SDC)
Climate Change Strategy and Action Plan (CCSAP)	International Fund for Agricultural Development (IFAD)	Swiss Contact Nepal
Climate and Development Network (CDKN)	Institute for Global Environment Strategies (IGES)	United Nations Children's Fund (UNICEF)
Commonwealth Scientific and Industrial Research Organization (CSIRO)	International Labor Organization (ILO)	United Nations Development Programme (UNDP)
Cornell University	Kathmandu University (KU)	United Nations Office for Project Services (UNOPS)
Confederation of Nepalese Industries (CNI)	Kangbuk Samsung Hospital	United Nations Population Fund (UNFPA)
Consultative Group on International Agricultural Research (CGIAR)	Kansas State University	United Nations Resident Coordinator Office (UNRCO)
International Centre for Tropical Agriculture (CIAT)	Korea International Cooperation Agency (KOICA)	UN Women
Department For International Development (DFID)	Kivu International	UK Research and Innovation (UKRI)
Department of Human Ecology University	Massachusetts Institute of Technology	United States Agency for international Development (USAID)
Danish Hydraulic Institution (DHI)	Mercy Corps Nepal	United States Forest Service (USFS)
Department of Human Ecology (HUMECO), University of Tokyo	Mott MacDonald	University of Edinburgh
Emergency Response and Disaster Management Plan (ERDMP)	Nepal CRS Company	University of Massachusetts
Food and Agriculture Organization (FAO)	Nepal Red Cross Society	Vitti Research Foundation
Frost and Sullivan (F&S)	Nepal Open University	Voluntary Services Overseas (VSO)
Global Climate Adaptation Partnership (GCAP)	Norwegian Embassy	Welt Hunger Hilfe (WHH)
Global Challenges Research Fund (GCRF)	OXFAM Nepal	Western Sydney University
Good Neighbors International	Plan Nepal	The World Bank
Green Climate Fund (GCF)	Planete Enfants & Development (PE&D)	World Food Programme (WFP)
	Practical Action Nepal	World Health Organization (WHO)
	Prakriti Resources Centre (PRC)	WWF Nepal
	Project for Agricultural Commercialization & Trade Nepal (PACT)	

GEOGRAPHICAL COVERAGE



Nepal Development Research Institute

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NDRI