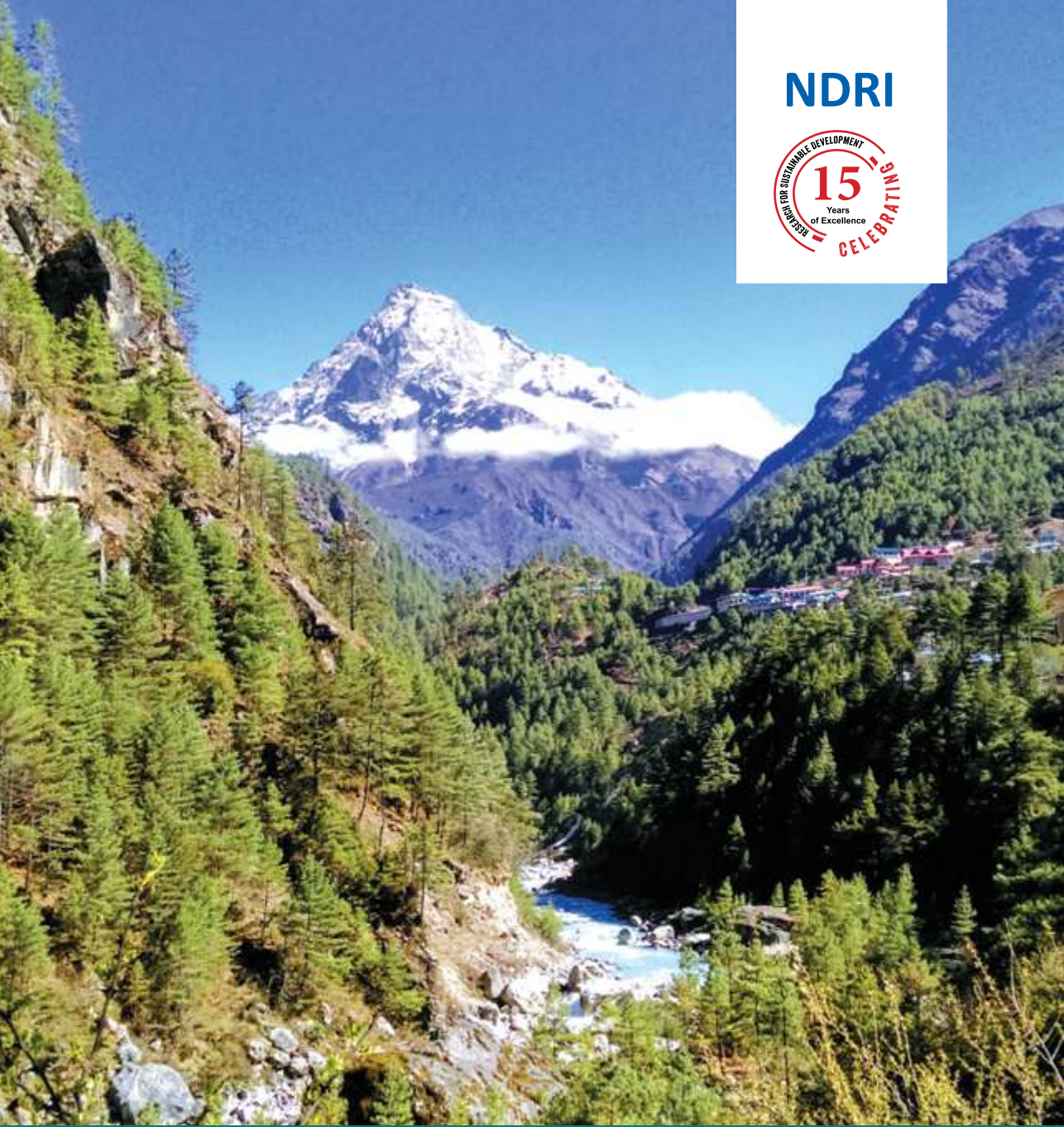




NDRI



Nepal Development Research Institute

ANNUAL REPORT FY 2017/18



NDRI

Regd. No: 1746/060/61, Lalitpur
SWC Regd. No: 16962

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FOREWORD FROM THE EXECUTIVE DIRECTOR



Nepal Development Research Institute (NDRI) has completed its glorious 15 years' of service excellence in research and development with its set mission and vision. NDRI measured some legendary milestones in the fiscal year 2074/75 despite of overwhelming situation of country in the course of the implementation of the federal system.

NDRI has geared up its endeavor into the activities that a typical Think Tank research institute needs to cater. Grasping the Government's target of double digit growth of national per capita income in five years, NDRI has initiated discourses among the Think Tank individuals and organizations on how to achieve this ambitious national goal. The ideas coming out from the discourses have been shared with all tiers of government and other development partners for their due consideration. Institutional capacity enhancement in contemporary context has also been continued this year through the regular activities like training, workshop and exposure visits of researchers and program coordinators.

In the course of scaling up of NDRI's mission nationwide, the Executive Committee has made a landmark decision to establish Field Offices in all seven provinces of the country. The first provincial office has been established in Birendranagar, Surkhet, the Head Quarter of the Karnali Province. As the first activity of the Karnali Field Office, NDRI provided Technical Support to the Province Government to prepare Policy and Program and the Budget of the Fiscal year 2075/76. The regular data base research and publications of NDRI have been continued this year as well.

Following the tradition of NDRI, we put our efforts on Corporate Social Responsibility (CSR) activities; those mainly include supporting the Federal and Provincial Governments for preparing their plan/policy and budget. In the local level, we continued working in the Bhardeu Village Development initiative "*a pilot village development based on research*". NDRI made detailed baseline study of the village and has kicked off local intervention starting from livestock development.

In this auspicious occasion of stepping into the 16 years, I express my deepest gratitude to all members of the Executive Committee, the General Members, the development partners including the Government of Nepal. All the researchers and management staff deserve special gratitude and appreciation, without whom it would not have been possible to celebrate the successful completion of the fiscal year.

In the days ahead, I assure all that NDRI will be coming stronger in terms of scale, quality and institutionalization, more as an emerging think tank organization.

A handwritten signature in black ink, appearing to read 'Jaya Kumar Gurung'. The signature is stylized and fluid.

Dr. Jaya Kumar Gurung
Executive Director

ABBREVIATIONS

ANC	Antenatal Care	NAST	Nepal Academy of Science and Technology
ARIMA	AutoRegressive Integrated Moving Average	NEOC	National Emergency Operation Center
BRCH	Building Resilience to Climate Related Hazards	NGOs	Non Governmental Organizations
CCTV	Closed Circuit Television	NPC	National Planning Commission
CFP	Common Feedback Project	NRA	National Reconstruction Authority
DFID	Department for International Development	NTC	National Training Centre
DHM	Department of Hydrology and Meteorology	PAC	Poly-Aluminum Chloride
DoED	Department of Electricity Development	PHCCs	Primary Health Care Centers
DoI	Department of Irrigation	PHLIL	Innovation Lab for the Reduction of Post-Harvest Loss
DoR	Department of Roads	PNC	Postnatal Care
DWIDM	Department of Water Induced Disaster Management	PPP	Public Private Partnership
DRR	Disaster Risk Reduction	PPS	Probability Proportionate to Size
FFEWs	Flood Forecasting and Early Warning System	QMS	Quality Management System
FP	Family Planning	RH	Reproductive Health
FPAN	Family Planning Association of Nepal	RM	Rural Municipality
FTF	Feed the Future	SDIP	Sustainable Development Investment Portfolio
F&S	Frost & Sullivan	SDPs	Service Delivery Points
GCM	General Circulation Model	SLS	Sisdol Landfill Site
GIS	Geographic Information System	SME	Small and Medium Enterprises
HKI	Helen Keller International	SOS	Save Our Souls
H&E	Health and Education	SSDU	Smart Selangor Delivery Unit
ICT	Information Communication Technology	SWAT	Soil and Water Assessment Tool
IT	Information Technology	UNFPA	United Nations Populations Fund
KSU	Kansas State University	UNRCO	United Nations Resident Coordinator Office
LMC	Lalitpur Metropolitan City	UHCs	Urban Health Clinics
MoCIT	Ministry of Communication and Information Technology	USAID	United States Agency for International Development
Mo-FALD	Ministry of Federal Affairs and Local Development	UN	United Nations
MSMEs	Micro, Small and Medium Enterprises	VDC	Village Development Community
MSW	Municipal Solid Waste	VTC	Vocational Training Centre
MSWM	Municipal Solid Waste Management	WCP	Water and Climate Program
MT	Medical Training	WECS	Water and Energy Commission Secretariat
MuAN	Municipal Association of Nepal	WRM	Water Resource Management

NDRI AT-A-GLANCE

Nepal Development Research Institute (NDRI) was established in 2004 by an interdisciplinary team of experts, with the highest academic degrees and a wide range of experiences. NDRI aims to address the current and emerging policy challenges and offer practical and credible recommendations for the benefit of policy-makers and the general public.

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



CORE VALUES

The focal working areas of NDRI are: policy analysis on the nation's economy, infrastructure policy and planning, poverty reduction, sustainable livelihoods and climate change, and lastly, agriculture and natural resources.

The outcomes achieved by NDRI so far have clearly demonstrated the potential of NDRI to evolve as the leading public policy think tank 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.

MISSION

Provide evidence-based analytical inputs for policy making in local regional and national level on contemporary issues through rigorous research.

VISION

To become a center of excellence for policy research, education and development.

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

Agriculture & Food Policy

Crop Production & Plant Protection

Engineering Geology/
Disaster Risk Reduction

Environmental
Engineering & Management

Gender & Livelihood

Geo-informatics & Natural
Resources

Linguistics &
Communication

Policy Studies

Public Health & Hygiene

Urban & Regional
Planning

Water and Climate

Education

PROJECT HIGHLIGHTS FOR FY 2017/18

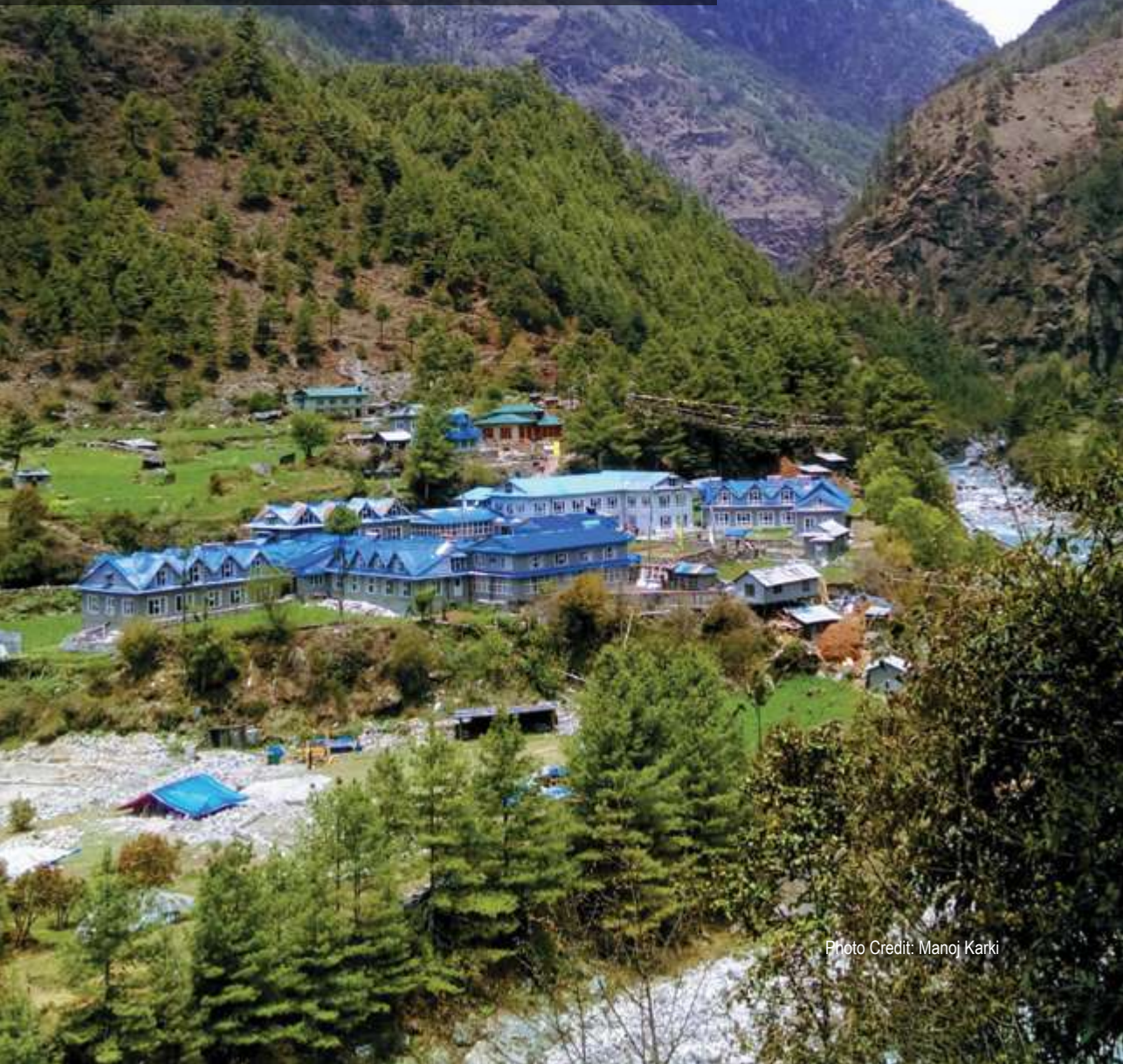
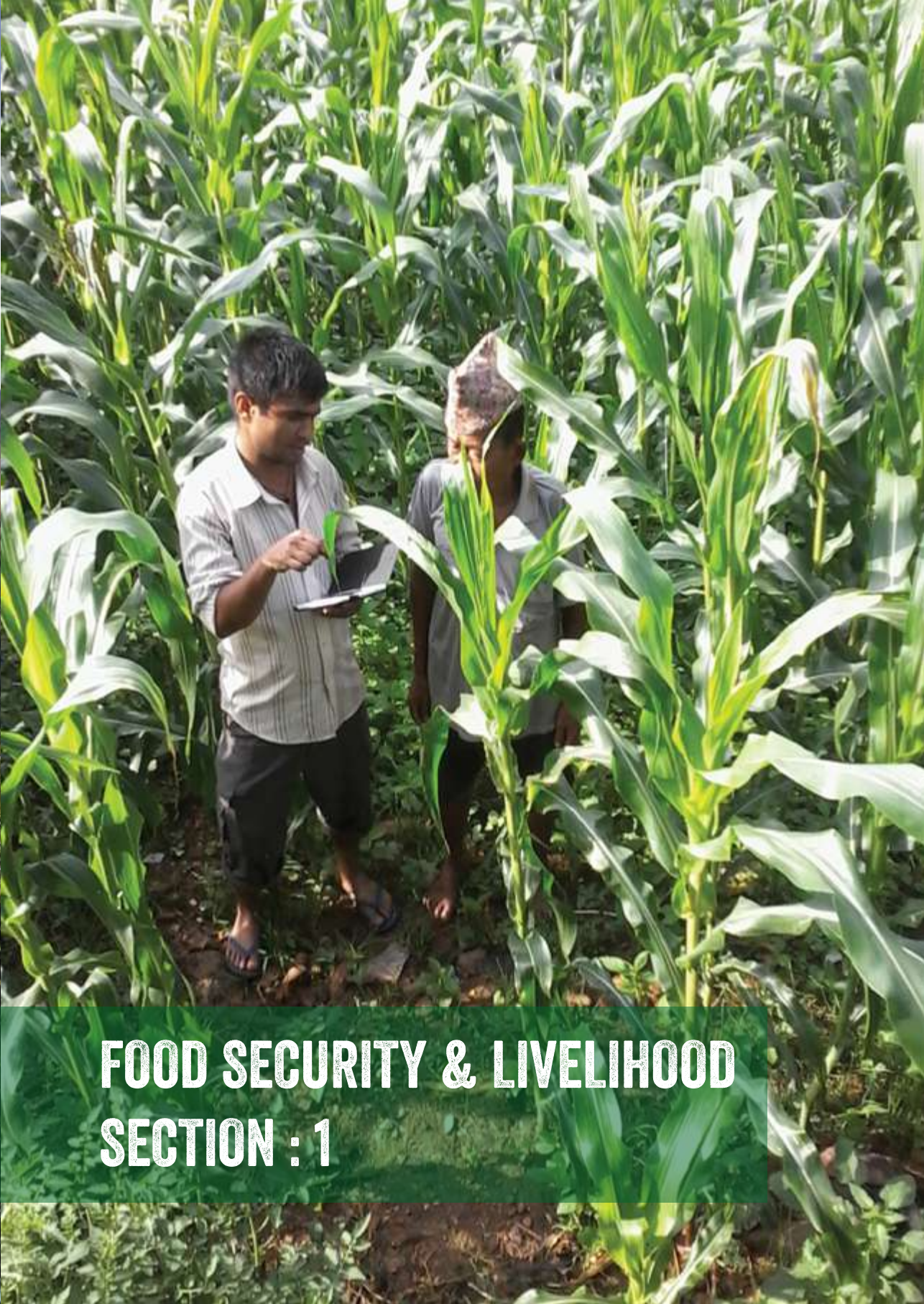


Photo Credit: Manoj Karki



FOOD SECURITY & LIVELIHOOD

SECTION : 1

CHARACTERIZING PREVALENCE OF MYCOTOXINS IN VALUE CHAIN CROPS AND LIVESTOCK FEEDS IN NEPAL

Collaborators:

Study Team

Dr. Jaya Kumar Gurung
Prof. Dr. Gopal Bahadur KC
Mr. Ravindra Shrestha

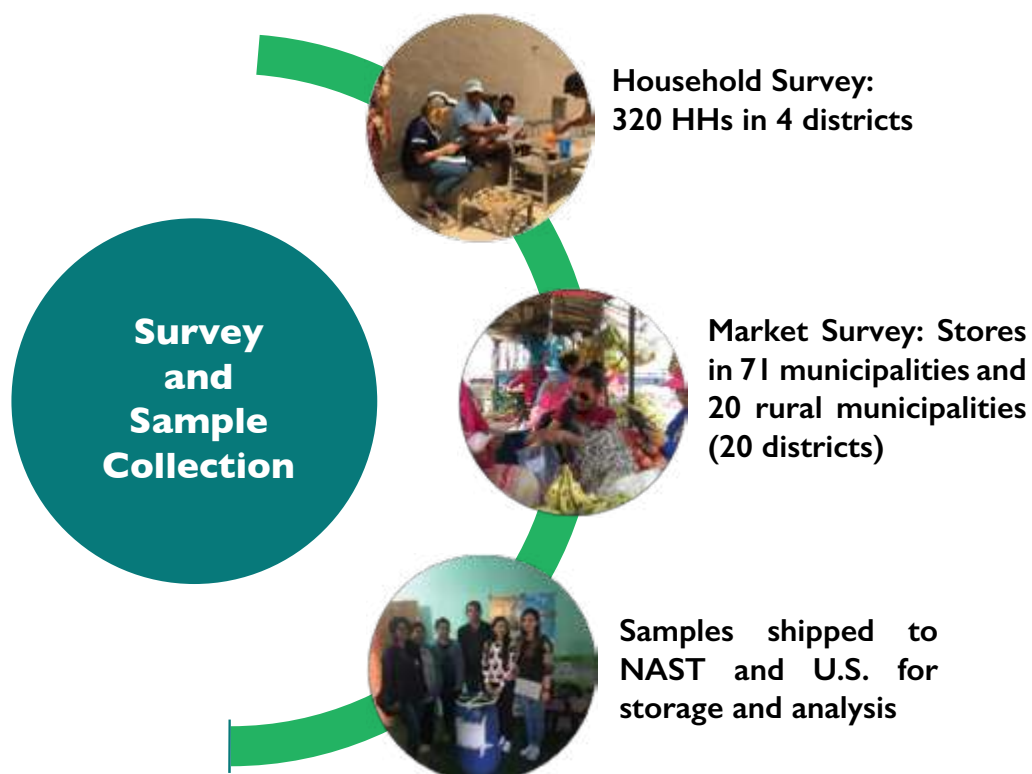
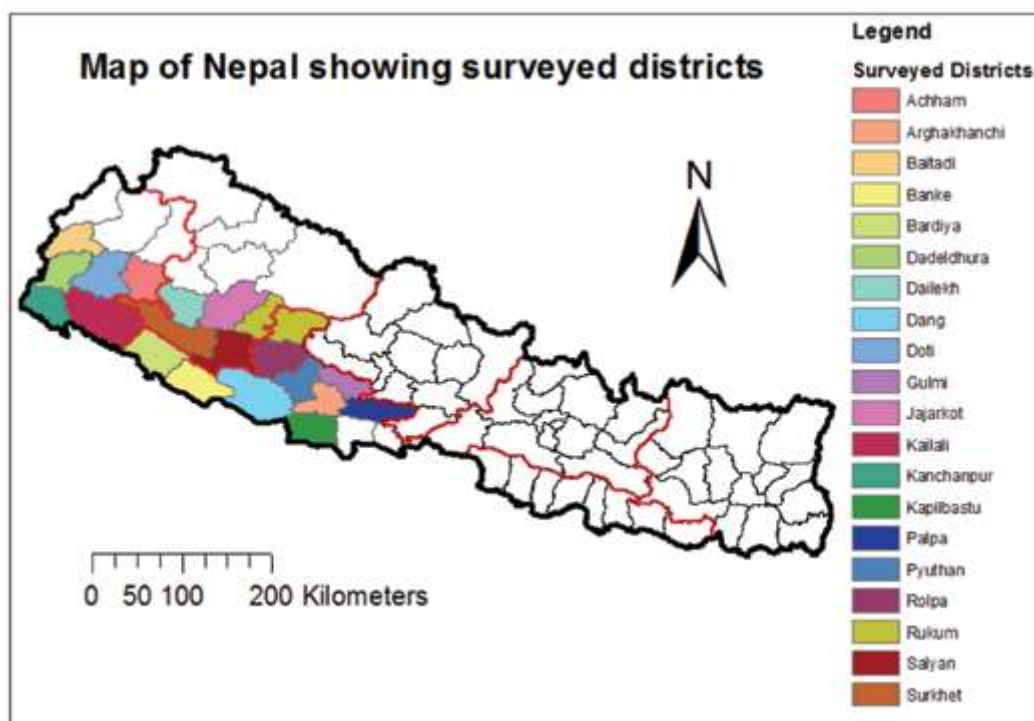


The Feed the Future (FTF) Innovation Lab for the Reduction of Post-Harvest Loss (PHLIL) based in Kansas State University (Manhattan, KS, USA) is studying the prevalence of distinct types of mycotoxins present in value chain crops such as maize and groundnuts, chilies, as well as animal feed in Western Nepal. The project aims to improve global food security by reducing post-harvest losses in stored crops in developing countries such as Nepal, Bangladesh, Ethiopia, Ghana, Guatemala, and Honduras.

THE KEY RESPONSIBILITIES OF NDRI

- Prepare and coordinate the overall project action plan in the country
- Oversee project implementation
- Liaise with local and international stakeholders
- Identify policy imperatives
- Facilitate consultations for policy recommendations to the government

Some of the technical roles include facilitating and overseeing the setup and operation of the laboratory for mycotoxin analysis at NAST, participate in capacity building exercises of the technical lab team in Nepal and the US, and conduct two rounds of household and market surveys, along with food and livestock commodity collection for analyses.



TRAINING OF LAB PERSONNEL AT MARS INTERNATIONAL, HYDERABAD

Training objective

Capacity building of NAST scientists for mycotoxin analysis

Personnel involved

Jai Shree Sijapati (Chief, Faculty of Science, NAST)
Dr. Rosa Ranjit (Senior Scientist, NAST)
Ravindra Shrestha (Research Associate, NDRI)

Training output

Hands-on lab equipment experience
Mycotoxin analysis of maize and ground-nut samples using ELISA



Participants from Nepal with training team at MARS International, Hyderabad, India

MARS International at Hyderabad, Telangana, is a manufacturer and supplier of pet food in India, operating as a subsidiary of MARS, Incorporated. MARS Inc., which is widely renowned for its quality food products is also admired for its commitment to food safety research and education. The event was made possible with immense efforts from Jaya Kumar Gurung (NDRI), Jagger Harvey (KSU), Robert Baker (MARS Inc.), Aneesh Raizada, Jayaprakash Kadiyala and Harish (MARS International, Hyderabad), and Rushikesh Sonavane (MARS International, Pune, India).

MYCOTOXIN ANALYTICAL LABORATORY AT NAST

Mycotoxin Analysis Lab set up at NAST



NDRI led the installation of analytical and processing equipment at NAST, with support from Kansas State University.

The aim is to have a fully-equipped laboratory, both in terms of human resources and infrastructure, capable of carrying out processing and analysis of over 3000 commodity samples collected from two rounds of survey. Moreover, NDRI has successfully lobbied for the laboratory's continuity even after the project, resulting in the Vice-Chancellor of NAST, Prof. Dr. Jiba Raj Pokharel's decision to allocate resources for the lab in their annual budget.

ASSESSMENT OF MICRO, SMALL AND MEDIUM ENTERPRISES IN THE CONSTRUCTION SECTOR IN NUWAKOT AND DHADING DISTRICTS

Study Team

Prof. Dr. Punya Prasad Regmi
Mr. Dhanej Thapa
Mr. Jeebanath Adhikari
Mr. Ram Prasad Devkota
Mr. Manoj Karki
Ms. Sunita Dhital

Collaborator:



Nepal Development Research Institute (NDRI) conducted an assessment on Micro, Small, and Medium Enterprises (MSMEs) working in the construction sector in Nuwakot and Dhading Districts. Information about MSMEs of the construction market is very important for generating economic growth and improving livelihood through post-earthquake recovery.

OBJECTIVES

The overall objective of this study was to assess MSMEs of construction market in Nuwakot and Dhading districts. The specific objectives were:

- To map out the MSMEs
- To identify financial requirements and major constraints limiting MSMEs

METHODOLOGY

Both qualitative and quantitative methods were used for data collection. Questionnaire survey was conducted with the hardware enterprises, crushers, brick/kiln suppliers, compressed stabilized earth block/hollow concrete block producers, stone cutters, sand extractors, furniture/timber treatment enterprises, transporters, contractors, and metal worker/grillers. Altogether, 116 quantitative surveys, 12 in-depth interviews, 10 field observations, 24 key informant interviews were conducted.



FINDINGS

Current market system has not been able to sufficiently deliver construction materials and services to earthquake victims in rural areas. Private Sector's development therefore is the key task to support reconstruction process. The presence of construction based on MSMEs are highly concentrated around the headquarter cities and major roads nearby rivers, while the presence of these MSMEs is very poor at the rural hilly areas. Compared to the urban municipalities, rural municipalities have more supply constraints of construction materials. The supply of construction materials and related services are limited not only due to the topographical difficulties but also due to lack of market information.



Photo Credit : Mr. Manoj Karki

An aerial photograph of a high-altitude mountain landscape. The upper portion of the image shows a massive, jagged mountain peak covered in snow and partially shrouded in white clouds. Below the peak, the terrain descends into a valley with steep, rocky slopes. In the lower foreground, a small village is nestled on a hillside, featuring numerous buildings with colorful roofs in shades of blue, red, and green. The overall scene is set against a clear blue sky.

EARTHQUAKE RESPONSE SECTION : 2

PERCEPTION OF EARTHQUAKE AFFECTED COMMUNITY IN RECOVERY EFFORTS

Study Team

Dr. Jaya Kumar Gurung
Dr. Rabita Shrestha Mulmi
Mr. Rajendra Khatri
Ms. Pratigya Regmi
Ms. Kristina Parajuli
Mr. Ram Prasad Devkota
Mr. Manoj Karki
Ms. Sunita Dhital

Collaborator:



The Inter-Agency Common Feedback Project, referred to as the Common Feedback Project (CFP), is an innovative community engagement project, initiated as a response to the Nepal Earthquake in 2015. The project has been collecting and aggregating feedback from earthquake-affected communities and advocate to the concerned authorities based on voice of affected people. The project's model has since been incorporated into the Emergency Response Preparedness planning endorsed by the national government and the UN system.



Photo Credit : Mr. Ram Prasad Devkota



Photo Credit : Mr. Rajendra Khatri

NDRI in collaboration with the United Nations Resident Coordinator Office (UNRCO), has been conducting perception surveys since November 2016 to ensure recovery and reconstruction efforts. The themes identified for the survey are Reconstruction, Protection, Food Security and Livelihoods. The findings from the survey are believed to support and advocate the government and partner organizations to adapt the activities and interventions accounting the views of the affected people. Three rounds of CFP surveys have been scheduled for 2018, among which round one and two have been successfully completed.

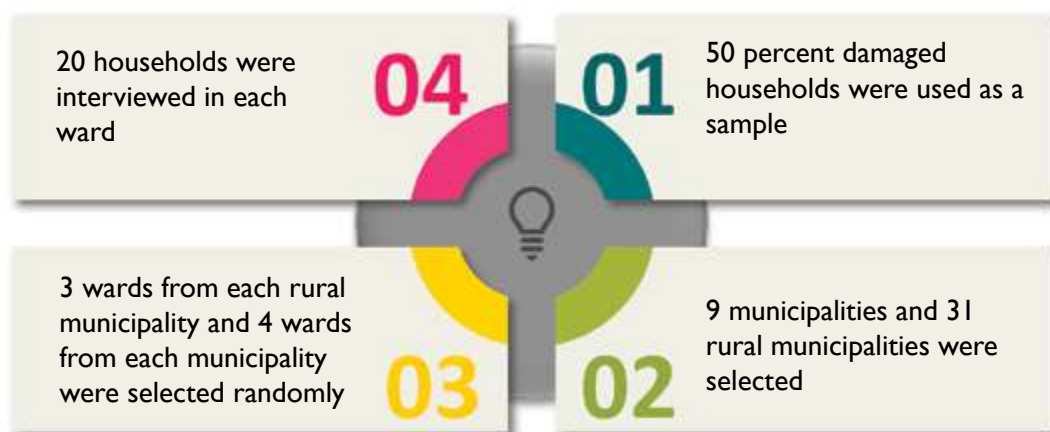
METHODOLOGY

The perception survey was carried out in 118 earthquake affected Rural Municipalities (gaunpalikas) and Municipalities (nagarpaulikas) across 17 districts: Bhaktapur, Lalitpur, Kathmandu, Gorkha, Dhading, Lamjung, Chitwan, Kavrepalanchowk, Dolakha, Sindhupalchowk, Ramechhpa, Makwanpur, Nuwakot, Rasuwa, Okhaldhung, Sindhuli and Solukhumbu. The survey focused on perceptions related to services, people's sense of agency, outcomes and the quality of relation between aid providers and the affected population. NDRI has assisted CFP to facilitate and advocate to the Government of Nepal and other collaborative agencies to adapt activities and interventions to take into account the perceptions of affected people. The total sample size of 2580 taken from both Rural and Urban Municipalities can provide wider insights on trends and issues of reconstruction practices. Quantitative method was used to collect the data using KoBo Toolbox.



Photo Credit : Mr. Manoj Karki

SAMPLING



FLOOD PERCEPTION SURVEY

Study Team

Prof. Dr. Punya Prasad Regmi
Mr. Rajendra Khatri
Mr. Ram Prasad Devkota
Ms. Sunita Dhital
Ms. Rita Pandey

Collaborator:



BACKGROUND

NDRI, in association with UNRCO undertook a Flood Perception Survey in 10 flood affected districts of Nepal in 2017. The main aim of this survey was to control and mitigate the impact of flood in the Terai region, which destroys hundreds of houses and livestock every year. Local people shared information and their ideas on how to mitigate the effect of flood during the monsoon season.

METHODOLOGY

To carry out the Flood Perception Survey, 30 trained enumerators were deployed in 10 mostly flood affected districts to collect 1800 samples using a probability proportionate to size (PPS) methodology. Data was collected by using the KoBo Toolbox.

The number of VDCs from each district were selected on the basis of sample size (two wards per VDC, & 10 samples per ward). Respondents were selected based on gender and age group in each household in order to ensure the sample is demographically diverse and representative.



Photo Credit : Mr. Rajendra Khatri



FINDINGS

Among 1800 respondents, 69 percent were significantly affected and 25 percent were slightly impacted by the flood. The most significant impact were found in livestock shelter, household asset food/grain storage and household. In terms of the need for safety from floods in the future, the respondents felt the need to change the house structures, take DRR related training, expand livelihood opportunities, implement early warning system, and resettlement. In response to the accessibility of support received, majority of the respondents said they were not satisfied. The vulnerable population such as women, caste minorities, female headed households and senior citizens were the most affected. The districts in which the greatest perception of exclusion was recorded include Mahottari, Sarlahi and Saptari. Additionally, 37 percent respondents felt that information is not accessible to the needy people.

CONSTRAINTS OF THE CONSTRUCTION MARKET IN EARTHQUAKE AFFECTED DISTRICTS IN NEPAL

Study Team

Prof. Dr. Punya Prasad Regmi
Mr. Jeebanath Adhikari
Mr. Ram Prasad Devkota
Mr. Manoj Karki
Ms. Sunita Dhital
Ms. Rita Pandey

Collaborator:



NDRI conducted a study on the Constraints of the Construction Market in Earthquake affected Districts (Nuwakot and Dhading) in Nepal. Different studies have revealed that current

market system has failed to deliver services to earthquake victims in rural areas. The Nepalese construction industry which contributes around 6% of GDP, however lack of appropriate policy, plans, stable political environment, infrastructures, technology and adequate investment, are the major challenges.

OBJECTIVES

- To assess and analyze the empirical evidences from MSMEs and local households
- To inform the design interventions for market system development under the NPER project, DFID

METHODOLOGY

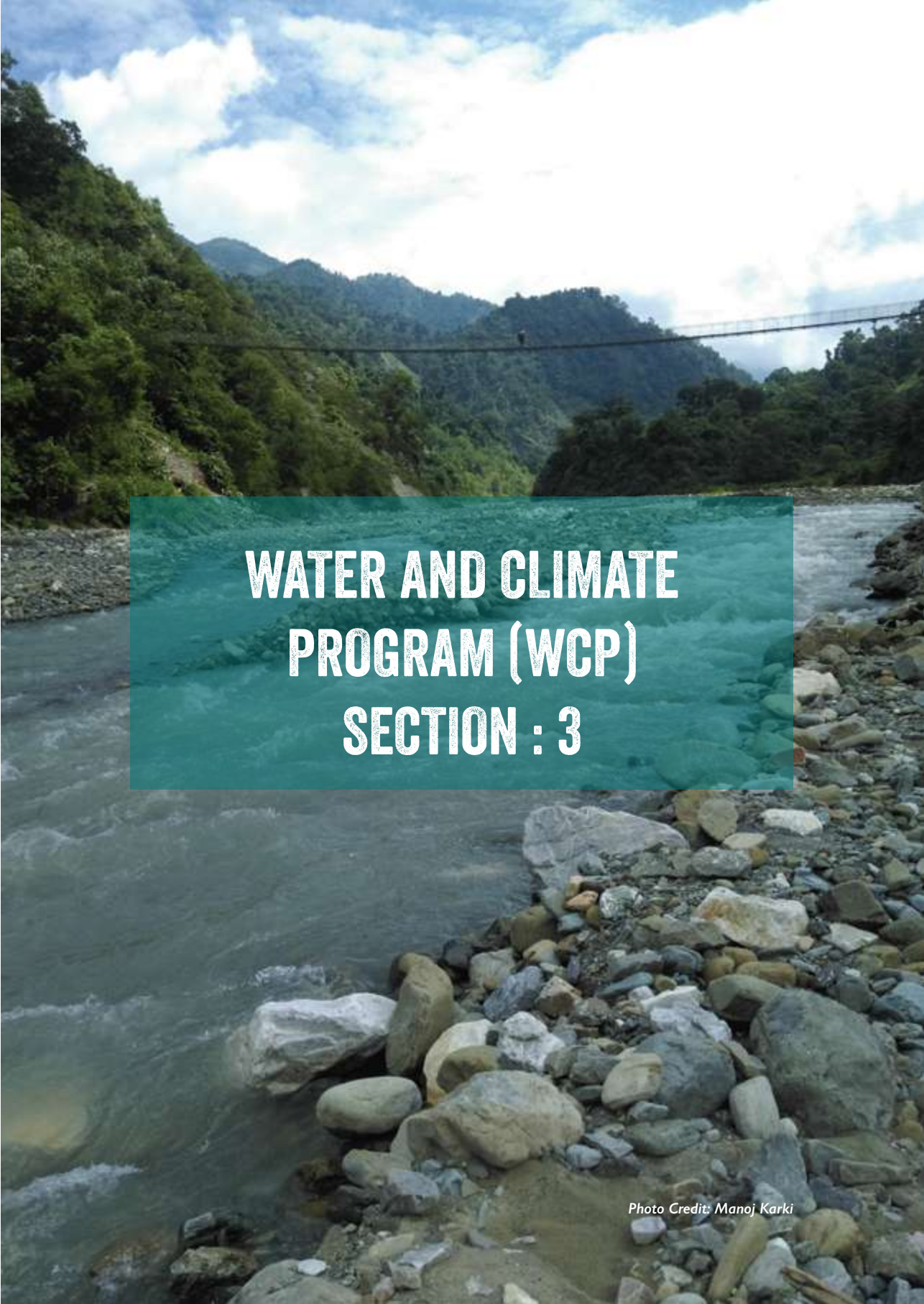
The study considers the demand and supply of the construction market products and services in the selected area. The respondents were from the micro, small and medium enterprises in the supply side, such as contractors, retailers, vendors, wholesalers, manufacturers of construction materials, workers/labor, and consumers from households, renters, consumers and owners, financial intermediaries and finally, local earthquake victims (women and vulnerable households) in the demand side.



KEY FINDINGS

- MSMEs are more reluctant on new product and technology promotion and supply product as per local demand.
- Many of them are not capacitated with business practices such as advance business planning, inventory management, stock keeping and forward contracting.
- The involvement of women in MSMEs in the construction business is meagre.
- Major challenges are irregular import of the cement clinker, raw materials and poor management of stock.
- Lack of effective pricing policy and problem in NRA's guidelines regarding reconstruction process.
- Skilled labors are limited in rural area and those who received training provided by NRA and other agencies is either not fully capable or have migrated to cities.





WATER AND CLIMATE PROGRAM (WCP) SECTION : 3

Photo Credit: Manoj Karki

ESTABLISHMENT OF END-TO-END FLOOD EARLY WARNING SYSTEM IN KOSHI AND WEST RAPTİ RİVER BASİNS İN NEPAL

Study Team

Dr. Manjeshwori Singh
Dr. Laxmi Prasad Devkota

Collaborator:



Client:



Government of Nepal
Ministry of Energy, Water
Resource and Irrigation
Department of
Hydrology & Meteorology

BACKGROUND

The project aimed to develop “End to End Flood Early Warning System (FEWS) in Koshi and West Rapti Basins”, as a part of the Building Resilience to Climate Related Hazards (BRCH) project, funded by the Pilot Programs for Climate Resilience with support from the World Bank. This project intended to help reduce the risk to people, property and livestock from flooding and subsequent impacts on health and livelihood.

OBJECTIVES

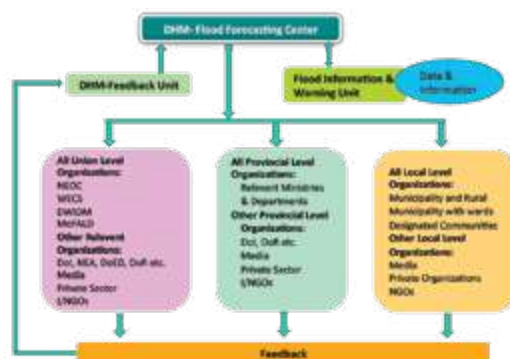
The overall objective was to reduce the loss of lives & properties from flood hazard by improving the capacity of DHM in developing and implementing effective people-centred early warning system.

The specific objectives were:

- ❑ Development of a model for an effective End to End Early Warning System with robust methodological framework.
- ❑ Establishment of a fully operational real time “End to End” Flood Forecasting and Early Warning System (FFEWS) in four hotspots areas in each of the two pilot basins (Koshi and West Rapti).

KEY OUTPUTS

- ❑ Establishment of Standard Operating Procedures
- ❑ Development of Integrated Flood Forecasting Modelling System
- ❑ Development of most applicable communication systems and operational strategy for disseminating FFEWS



Proposed Communication Channel for Disseminating FWS Messages

KAMALA BASIN FIELD TRIP TO SUPPORT THE BASIN PLANNING PROCESS IN NEPAL

Study Team

Dr. Laxmi Prasad Devkota
Mr. Dibesh Shrestha
Ms. Anita Khadka

Collaborator:



Government of Nepal
Water and Energy Commission
Secretariat



Client:



BACKGROUND

This project aimed to gather information to support the development of the pilot Kamala Basin plan as part of the Sustainable Development Investment Portfolio (SDIP) Phase 2 activities. The main focus was working with the government officials to increase their capability to devise and implement effective policies for water resource management. The trip included visits to the Regional offices of the Department of Irrigation and the Department of Water Induced Disaster Management; Irrigation areas; water canals; and erosion containment and reduction infrastructure.

OBJECTIVES

- To identify the main elements of water-use and resource availability in the Kamala Basin, meet with local officials related to Water Resources Management (WRM) from the GoN and interact with community level water users.
- To review existing and potential future issues related to WRM to generate information and promote discussion on the scope and processes to develop the Kamala Basin plan.

KEY OUTPUTS

- The scoping of issues for the development of Kamala Basin plan
- Promoting the exchange of information and data through initial interaction with the local GoN officials
- Identified capacity building requirements through a dialogue between the GoN participants
- An understanding of the factors limiting water availability and quality through discussion with the local officials on WRM
- Identification of data availability and gaps
- An understanding of the social, economic & environmental features of the basin
- Prioritization of future actions



Infrastructure (Barrage) to divert water from the river to the irrigation canals

WEATHER GENERATOR TOOL DEVELOPMENT

Study Team

Dr. Divas Bahadur Basnyat
Mr. Dibesh Shrestha
Mr. Shiva Gopal Shrestha
Ms. Srijana Thapa

BACKGROUND

This Tool generates synthetic series of precipitation and temperature by systematic alteration of the key statistical properties of the historical time series that climate change can cause.

Weather Generator Tool is essential because:

- Synthetic time series data can be used to extend the historical data for use in water resources simulation studies.
- Similarly, the time series generated by altering the key statistical properties can be used to design water resources projects and plans that are robust and resilient to future climate change.

Out of the various types of weather generator, (a) based on process i.e. Richardson type generator; Series-based approach to weather generator; Re-sampling based method (b) based on site i.e. Single site; Multisite; *k-NN based multisite weather generator* was developed by NDRI.



Uses of Weather Generator

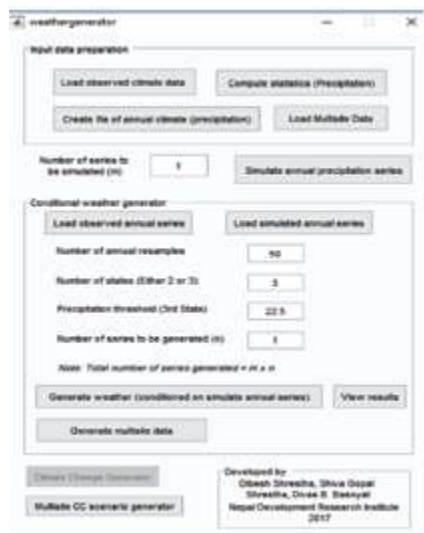
•Generate number of annual climate series to be simulated using ARIMA method

•Users can change the mean characteristics of weather variables based on what GCM models guide us

•Use quantile mapping for precipitation and delta shift method for temperature

•Then using changed series in water resources systems -models for climate risk assessment

Steps of Use of Weather Generators for Climate Risk Assessment



Snapshot of Weather Generator Tool



OUTPUTS

- ❑ Quantile-quantile plot for the observed and simulated series for different variables (precipitation, Tmax, Tmin etc).
- ❑ Dry and wet spell characteristics of the simulated series compared to the observed series.
- ❑ New climate change series with new statistical properties of precipitation and temperature.

LEACHATE MANAGEMENT AT SISDOL LANDFILL SITE, OKHARPAUWA

Study Team

Dr. Nawa Raj Khatiwada
Mr. Surya Man Shakya
Dr. Shankar Shrestha
Ms. Monica Maharjan
Mr. Bijay Thapa

Collaborator:



Lalitpur Metropolitan City

BACKGROUND

The municipal solid waste management (MSWM) is one of the pressing issues in Kathmandu Valley which currently relies on Sisdol Landfill Site (SLS) located in Okharpauwa, Nuwakot. Leachate, the garbage juice from SLS, is being discharged into nearby Kolpu River without treatment threatening the local environment and public health. In this context, NDRI conducted a research on leachate management with assistance from Lalitpur Metropolitan City (LMC). The study was carried out with the objective of quantifying leachate from SLS, characterizing it by measuring various physico-chemical parameters in order to help identifying and suggesting the most appropriate technology options for treatment.

METHODOLOGY

The research team utilized both primary data and available secondary data along with consultations with the experts. In order to understand the nature of pollutants present in the leachate, samples were collected from the discharge outlet and leachate filter bed pond. Some important parameters considered for characterization were Heavy metals, BOD, COD, Total Solids and Total Nitrogen which were analyzed in laboratory. The leachate discharge was measured using bucket method. Samples were subjected to jar test to identify the optimum dosage of coagulants (Alum and Ferric chloride) required to reduce the turbidity.

The leachate characterization showed the values of various parameters that are typical for matured landfills. Observations revealed dark colored malodorous



KEY FINDINGS

leachate with high dissolved solids, high concentration of ammonia-nitrogen and high BOD/COD (50%). The organic dry matter was also found to be high justifying high

organic content of the waste disposed at SLS. Heavy metals were not found in high concentration except for iron.

The coagulants such as alum and ferric chloride were not found to be efficient enough and hence the jar test suggested the use of better polymers flocculants such as poly-aluminum chloride (PAC).

The average discharge was found to be 0.5 liters per second which could be underestimation as the site had multiple leakage points from where the leachate was dripping.



RECOMMENDATIONS

On the basis of these findings, a combination of physical, chemical and biological treatment options which are low cost technologies suitable in Nepalese context (especially for Sisdol) were suggested. The physical treatments included recirculation of leachate, cascade aeration with integration of rock filter and settling tank while upgrading the existing constructed wetland, soil mound system, aeration lagoon, aeration chambers followed by clarifiers, trickling filter or anaerobic filter or media filter were some of the biological options identified. The activated charcoal adsorption was basically recommended for color removal from the leachate.

The choice of treatment methods is highly influenced by leachate quality. The composition of leachate differs between landfills and even within a landfill. The leachate studied in this case was generated from a semi-aerobic type of landfill which is about 13 years old (mature). However, the semi-aerobic system has been jeopardized in recent years. Moreover, the landfill currently being used is unlined. The manner in which leachate is formed in unlined and old landfills are complicated due to presence of varying age of waste piles over the landfill area. Hence, a regular monitoring of leachate as well as local water resources was recommended. The research also suggested the operation of proposed Bancharedanda landfill site as soon as possible. Finally, it underscored the challenges that newly structured Federal Nepal will face in near future regarding MSW management.



PUBLIC HEALTH AND EDUCATION

SECTION : 4

END LINE SURVEY OF EFFECTIVENESS OF INTERVENTION IN IMPROVING INSTITUTIONAL DELIVERY AND CARE SEEKING PRACTICE AMONG POOR AND MARGINALIZED PEOPLE IN MAHOTTARI DISTRICT

Study Team

Mr. Bhim Shrestha
Ms. Usha Singh
Ms. Kristina Parajuli
Mr. Rajendra Khatri

Collaborator:



Save the Children

BACKGROUND

Need of health and nutrition for newborn babies, children and mothers are interconnected. In the past, mother and child programs addressed maternal and child health needs separately, resulting in

gaps in care, especially for newborns.

From the baseline study in the Mahottari district, 43 percent of women had home delivery, so this end line survey provides an evidence of effectiveness of intervention in improving the health seeking behavior and institutional delivery among poor and marginalized people of Mahottari.

OBJECTIVES

To provide an evidence of effectiveness of intervention in improving the health seeking behavior and institutional delivery among poor and marginalized people of Mahottari district

To provide a way forward for improving program

METHODOLOGY

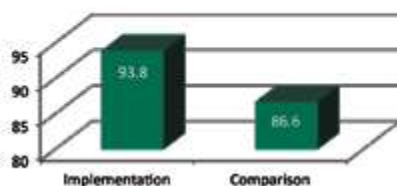
The study used Probability Proportionate to Size (PPS) method for data collection. This study was focused on 20 VDCs of Mahottari district, hence, at first 30 wards from each Implementation and Comparison VDCs was selected and from each ward. Accordingly, 7 mothers having under 2 years children were selected. Furthermore, 20 health workers and 20 Female Community Health Volunteer were interviewed and 20 health facilities observation were done.



FINDINGS

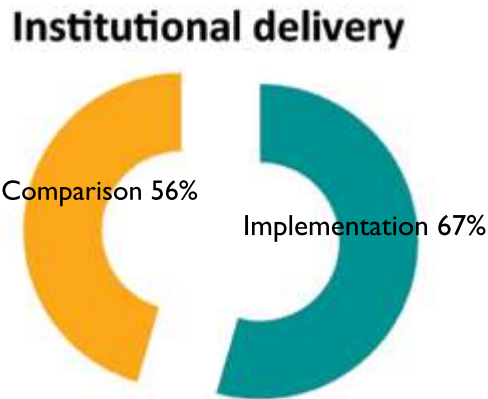
High percentage of women go for antenatal checkup during pregnancy in Implementation VDC compared to Comparison VDC, also among them who did not go, most of mentioned that they did not feel it necessary to go. Further, 18.6 percent and 16.2 percent of

Antenatal Visit during Pregnancy

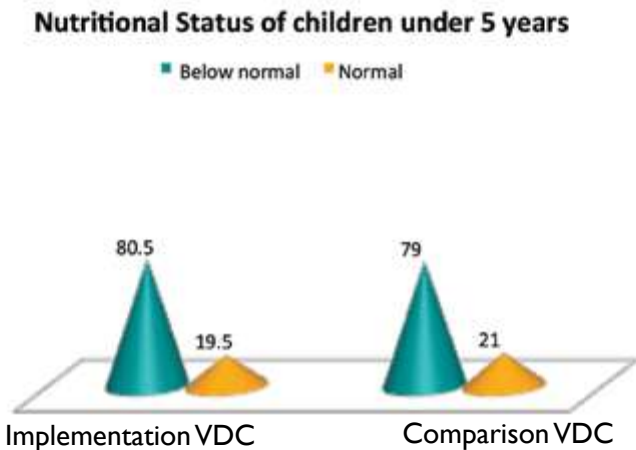


women in Implementation and Comparison VDCs, respectively, responded that they faced problem during their last pregnancy and around 50 percent of the women only received treatment.

The reason for most of the women not going to health institution for delivery was that they did not feel it necessary as well as birthing center was not available. Among the women who had home delivery, above 90 percent of them used new blade to cut the cord. Though, the institutional delivery was seen less in both Comparison and Implementation VDCs. Iron and folic intake for 180 days or more during pregnancy was 74 percent in Implementation VDC and 78 percent in Comparison VDC.



Almost all mothers regularly breastfed as well as colostrum fed their child. Further, in both Implementation and Comparison VDCs, 12 and 10 percent of mothers, respectively responded that danger sign was seen in children and of those sick children more than 90 percent received treatment.



Majority of children were found to be below normal, however all the children were immunized by the complete dose of immunization.

Hence, safe delivery care has to be prioritized through awareness and making safe delivery care accessible and affordable to the local people. Likewise, awareness about the importance of ANC and PNC visits also need to be emphasized in order to improve maternal and child health.

HEALTH AND EDUCATION ASSESSMENT 2017

Study Team

Dr. Manjeshwori Singh

Dr. Sujata Sapkota

Ms. Pratigya Regmi

Mr. Ganga Ram Gautam

Collaborator:



INTRODUCTION

NDRI conducted Health and Education Assessment of 11 SOS projects running in different districts of Nepal. Seven SOS Schools (Hermann Gmeiner School Surkhet, Sanothimi, Kavre, Bharatpur, Pokhara, Gandaki and Itahari), SOS Medical Center (MC), Bardiya, SOS Vocational Training Center (VTC), Pokhara, SOS Ceramic Center, Sanothimi and SOS National Training Center (NTC), Kavre were assessed during the project period.



Photo Credit : Ms. Pratigya Regmi

Nepal, similar to the other countries of the world, has undergone a lot of changes over the years in socio-economic and overall development fronts. The need to evaluate the changes and their impact on the SOS's mission, vision and plans is essential to pave the way for the future. Effective planning of the funds and running costs to sustain the changing nature of the programs also require a review of the existing programs. This H&E assessment was geared to that direction to respond to the changing conditions of the society and to find solutions for sustenance. The assessment was chiefly aimed at evaluating the 'range and reach' of the services and is expected to recommend way for future decisions, and thus, sought to answer:

- 1 If the facility is reaching to an acceptable number of beneficiaries from the program's target group
- 2 If SOS facility, the government or another stakeholder is best placed to provide the services that the facility is delivering
- 3 Whether the operation of the facility, including maintenance and renovation can be self-sustained in the long-run

METHODOLOGY

The methods employed for the assessment of Health and Education programs of SOS Children's Village Nepal were predominantly qualitative, and involved interviews, discussions and interactions with the relevant stakeholders and beneficiaries, including both internal co-workers (SOS staff) and external stakeholders. Quantitative information of the SOS programs and similar programs of the government and privately- run facilities were also collected.

Overall, 32 Key Informant Interviews, 25 Focused Group Discussions, 17 In-depth Interviews and 7 Interactions were conducted. Additionally, eleven client satisfaction interviews were conducted with patients receiving services from the Medical Center in Bardiya.



Photo Credit : Ms. Pratigya Regmi

A need for the local stakeholders (SOS facilities/staff, local, provincial and federal government authorities) to come together, and explore funding to achieve systematic sustainability is recommended.



FINDINGS

The assessment identified SOS schools as a center of quality education with a sound local and national reputation. However, there is a need to increase the enrollment of children from the target group. Despite the fact that quite a few Government and Private schools are providing quality education in the vicinity of the SOS schools, SOS Schools has a strong social recognition. Through SOS Schools, the underprivileged, marginalized and vulnerable children are accessing quality education.

Similarly, SOS Medical Center, working in close collaboration with Motipur Health Post, has been identified as a key healthcare provider of the primary healthcare services in Bansghadi, Bardiya. The VTCs and NTC also have important role for skill and professional development of the beneficiaries. All facilities were recognized as irreplaceable and the continuation of their services has been recommended.

FACILITY BASED ASSESSMENT FOR REPRODUCTIVE HEALTH COMMODITIES AND SERVICES

Study Team

Dr. Basu Dev Pandey
Dr. Sujata Sapkota
Ms. Kristina Parajuli
Ms. Usha Singh
Mr. Rajendra Khatri

Collaborator:



Nepal is one of the recipients of funding through UNFPA supplies for conducting national assessment of Reproductive Health (RH) commodities and services in health facilities. The purpose of the assessment is to explore the gaps in availability of the RH commodities and service delivery facilities underpinning good RH programs and, thereby, bring strategies to strengthen these programs.

Selected Districts



OBJECTIVES

The overall objective of this survey was to assess the service availability, distribution and stock-out of essential lifesaving RH commodities, including contraceptives, and other key issues related to family planning service delivery at public, and NGO sectors health facilities across the country.

Specific objectives

- ◇ To assess the number of Service Delivery Points (SDPs) offering at least three modern methods of contraceptives.
- ◇ To assess the availability and stock out of seven lifesaving maternal/RH medicines (including Magnesium Sulphate and Oxytocin plus any other five drugs from the WHO list including contraceptives).
- ◇ To assess the issues around supply chain management (including cold chain).
- ◇ To identify gaps in staff training and supervision for provision of quality RH services.
- ◇ To assess the availability of national guidelines, protocols, standards and job-aids on provision of quality RH services in the health facilities.
- ◇ To assess the issues around availability and use of Information Communication Technology (ICT).
- ◇ To assess the issues around method of waste disposal.
- ◇ To appraise and assess clients' perception about the costs of family planning services.

METHODOLOGY

Across 17 districts, a total of 367 facilities were surveyed including 236 health posts, 43 primary health care centers (PHCCs), 40 urban health clinics (UHCs), 14 district hospitals, 6 institutional clinics, 3 zonal hospitals, 1 sub-regional hospital, 9 Marie Stopes and 7 Family Planning Association of Nepal (FPAN) centers.

The provision of long acting reversible contraceptives, intrauterine contraceptive devices and implants were found to be lowest in UHC and health posts than other health facilities. The availability of seven essential life-saving maternal and RH medicines was found in only about 73% of the facilities.

Overall, in about 50% of the government SDPs, Health Facility (HF) in-charge was the person responsible for ordering the medical supplies. Majority of SDPs had pull system for quantification of re-supply where in nearly 82.3% of the facilities, the staff member of the facility made request. Major source of medical supplies at all SDPs at government sector were regional/district warehouse (98.6%). Compared to government SDPs, NGOs had higher availability of trained staff to provide FP services as well as for insertion and removal of implants.

RESULTS

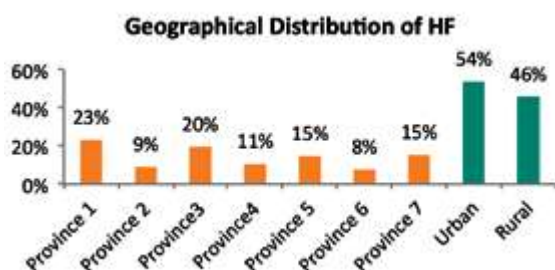
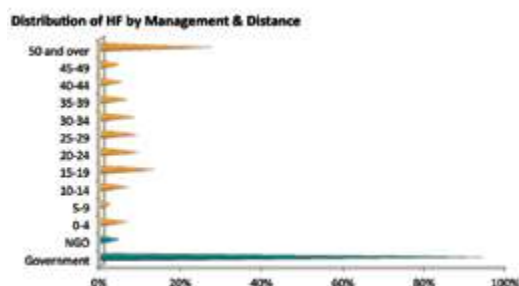


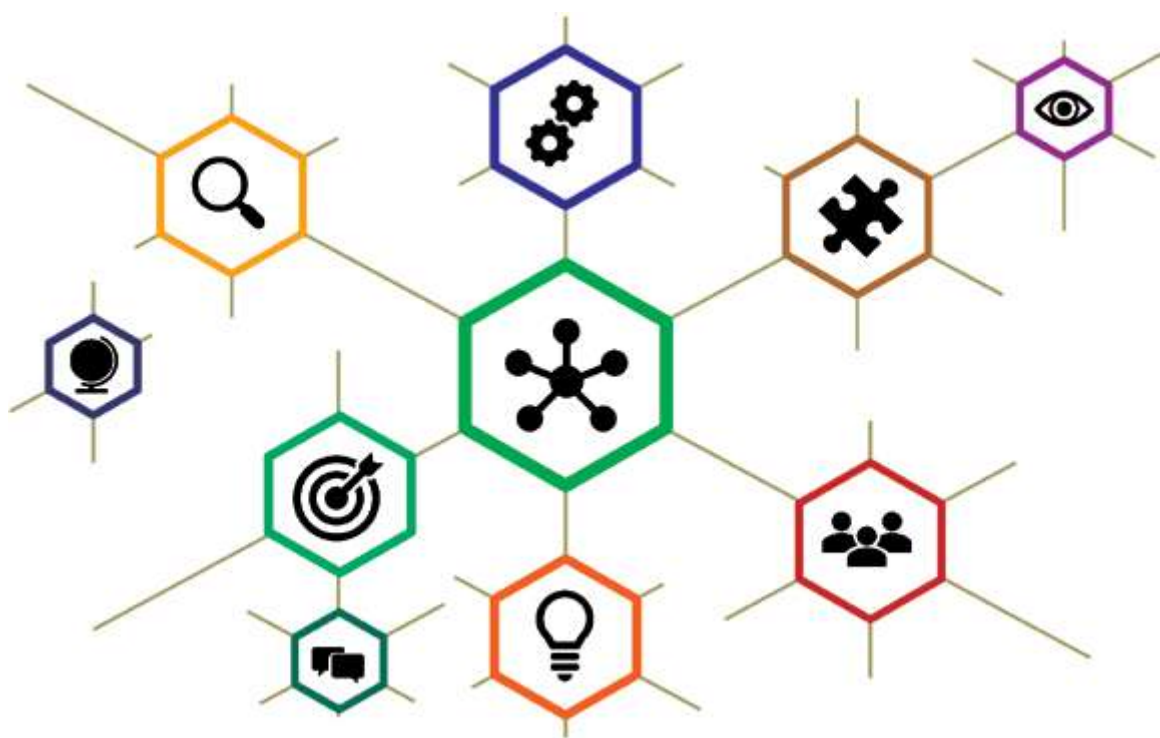
Photo Credit : Ms. Usha Singh

RECOMMENDATIONS

Additional studies must be conducted to assess the feasibility and acceptability of emergency contraceptives and female condom among general population to inform possibilities of provision of these methods through the national FP program.

The provision of long acting and permanent methods of contraception at all levels should be increased. Mandatory training with periodic refreshers training for long acting contraceptive methods to service providers is recommended.





EVENTS

CONSULTATION WORKSHOP ON DEVELOPMENT MODEL OF FEDERAL NEPAL



With the transition of the government towards federalism, the country is heading towards social and economic transformation. NDRI organized a Consultation Workshop titled 'Enhancing Economic Geography of Nepal' to discuss the challenges and potential of federal Nepal, to understand the current development, and to determine the way forward for economic and social development. The goal of the workshop was to collect insights and advice from the experts to develop the Development Model of Federal Democratic Republic of Nepal.

The half day workshop was held on 4th March 2018 at Alfa House Banquet, Baneshwor. The workshop explored the key issues regarding the changes in present Nepal and its current status. National vision and key policies were discussed. Likewise, the prevalent development issues and constraints were also discussed.

Five experts of NDRI presented the current status of development and the way forward. The experts were from various fields such as agriculture, water & energy, education, linguistics and environment. They discussed current situation in each province and the challenges and opportunities ahead.

The presentation was followed by discussion and comments on various issues of interest.

The discussion helped in paving way for development and need of appropriate strategies in each province.

The five experts who presented during the event were:

Prof. Dr. Madhav Prasad Pokharel,
Linguistics

Prof. Dr. Punya Prasad Regmi, Agriculture
& Economy

Dr. Divas Basnyat, Water and Energy

Dr. Raj Kumar Bhattarai, Education

Dr. Nawa Raj Khatiwada, Urban
Development

Participants from various fields such as development, education, environment, economy and governance were present during the Consultation Workshop. Mr. Lava Dev Awasthi, Chairman of Linguistics Commission, Prof. Dr. Fatta Bahadur KC, Mr. Om Raut, Dr. Ram Manohar Shrestha, Mr. Uddab Adhikari, Chairman of Nepal Farmers Association, Mr. Dharma Regmi, and Member of Province Assembly of Province 6, among others, were present during the workshop.

The agenda included an overall development presentation by Dr. Punya Prasad Regmi followed by 4 thematic presentations on Water and Energy, Language, Education and Urban Development. First presenter Prof. Dr. Punya Prasad Regmi supported the modernization of agriculture on the basis of current situation of availability, deficit and production of agricultural products. Dr. Divas Basnyat talked about the abundance of water resources and hydropower potential in Nepal. He discussed the current state of Nepal's water and energy development, which he termed as "hostage to hydrology" due to lack of soft and hard infrastructure. Prof. Dr. Madhav Prasad Pokharel presented on the need of preserving our mother tongue. Further, he talked about the preservation of culture by preserving one's mother tongue as required. Dr. Rajkumar Bhattarai discussed the migration pattern of students abroad for further education. Additionally, he talked about the need of quality education and employment to stop the outflow of more than 25 billion rupees every year in the name of education. Dr. Nawaraj Khatiwada discussed the use of foreign development



models which is not suitable in case of developing countries like Nepal.

Participants discussed the fact that the development models are made based on the developed countries and are not customized as per the need of the specific country. This leads to preparation and execution of models that are not suitable in the current context of Nepal. Likewise, the influence of globalization has led to negative impacts on education, language, culture and infrastructure.

Dr. Sunil Babu Shrestha, Honorable Member of National Planning Commission (NPC) talked about the need of independence for development. He also talked about the need of Private Public Partnership (PPP) in regard to the current economic condition of the country and the development of federal governance. The programme was facilitated by Dr. Jaya Kumar Gurung.

WORKSHOP ON URBAN PLANNING AND SMART CITY



were to share successful Smart City experience of Selangor state, Malaysia from the Malaysian experts and to undertake an exercise on making municipalities smart by involving the participants in developing the vision, key focus areas and key initiatives for their respective municipalities.

With the rapid pace of development, countries in the world are being smart in their urban planning. Least developed countries like Nepal need to be smarter to keep up to the race of rapid development. The recently elected local government authorities have promised to make their city smart during the election campaign held one and half year ago. However, the results so far are not encouraging in heading towards the Smart City goal. The concept of Smart City too is unclear to the local government authorities. In this context, Nepal Development Research Institute (NDRI) in collaboration with Frost & Sullivan (F&S) organized a one-day workshop on “Urban Planning and Smart City” on 5 August 2018 which was supported by the Municipal Association of Nepal (MuAN). The local government authorities such as Mayors, Deputy Mayors, Chief Administrative Officers and/or Engineers of the Planning Section from 19 municipalities of Kathmandu, Bhaktapur, Lalitpur and Kavrepalanchowk districts were the attendees of the workshop (2 participants per municipality). The main objective of the workshop was to make the local government authorities aware about Smart City concept to facilitate smart Urban Planning. The specific objectives

The workshop was held in Hotel Himalaya, Kupondole, Lalitpur, Nepal. The workshop was divided into two sessions. The first (morning) session included welcoming dignitaries to the Dias; delivering welcome speech and context setting by Dr. Jaya Kumar Gurung, Executive Director of NDRI; delivering remarks by Mr. Ashok Kumar Byanju (Shrestha), Mayor of Dhulikhel municipality; introducing and vision setting on Smart City concept by Mr. Adlan Azhar, the Principal Consultant of Asia Pacific from F&S; sharing Experience of Smart Selangor, Malaysia by Mr. Mohamad Suhaimi, Smart Selangor Delivery Unit (SSDU) Malaysia head of programme management; and the Q/A sessions. In his presentation, Mr. Adlan highlighted the meaning and key characteristics of a Smart City, and also demonstrated the 7-step methodology to build a Smart City. Similarly, Mr. Suhaimi highlighted successful examples of introducing Smart City concept in Selangor state in Malaysia such as increased provision of public Wi-Fi access points and public buses, and pothole repair, to name a few. The speakers emphasized that Smart City need not be high-tech but should be smart. Utilizing existing infrastructure in a smarter

way or smarter use of technology, and collaborations and discussions are key to increase the quality of life of citizens.

The second (afternoon) session started after lunch and included Breakout Sessions on Setting Vision, Key Focus Areas and Key Initiatives, respectively, for each municipality. Each municipality with the help of the facilitators from NDRI set the vision, identified key focus areas to meet the vision and also identified the key initiatives to meet these focus areas. After the rigorous exercise, all the municipalities presented their findings. Tourism, Agriculture and Infrastructure development were highly prioritized sectors by various municipalities. Municipalities such as Dhulikhel, Panauti, Mandandeupur, Namobuddha, Tokha, Gokarneshwor, Tarakeshwar, Shankharapur, Nagarjun, Godawari, Dakshinkali, Chandragiri and Kageshwori Manohara emphasized on Tourism. Similarly, Agriculture was emphasized by Panauti, Tarakeshwar, Mandandeupur, Namobuddha, Panchkhal, Shankharapur, Godawari and Kageshwori Manohara municipalities. In contrast, Banepa municipality aimed to be a Business hub

along with Information Technology (IT). Similarly, Infrastructure development for transport (roads, cycling routes, etc.), irrigation, solid waste management, sewage management, water supply, etc. were prioritized by many municipalities including Budanilkantha, Nagarjun, Godawari, Chandragiri, Tokha, Suryabinayak municipalities and Lalitpur Metropolitan City. Initiatives such as development of websites and Apps, GIS mapping, CCTV cameras installation in crime prone areas, smart light, smart vehicle, etc. were also targeted/achieved by some municipalities such as Lalitpur Metropolitan City, Tarakeshwar and Nagarjun municipalities.

Finally, Mr. Avash Piya from F&S and Mr. Kalanidhi Devkota, Executive Secretary of MuAN concluded the workshop by providing valuable comments and suggestions on the presentations of municipalities and presented a way forward. They emphasized that the initiatives of the municipalities should be smart and beyond Business As Usual. Dr. Nawa Raj Khatriwada, Environmental Engineering and Management Expert of NDRI was the Master of Ceremony.



NDRI'S MODEL VILLAGE INITIATION

Nepal Development Research Institute (NDRI) has set a vision to develop Bhardeu (Konjyosom Rural Municipality-5, Lalitpur) as a model village, through social and economic transformation. Utilizing the expertise of NDRI members, NDRI has been planning to facilitate Bhardeu to accelerate the development work in the areas such as agriculture, education, health, environment, livelihood, disaster management, and capacity development.

A basic level research is required to be familiar with the current situation of the village. On the basis of the existing scenario, current need could be explored, which is significant to develop relevant programs for the development of the village. Hence, a baseline survey was carried out in coordination with Konjyosom RM by NDRI team between 21 and 27 January, 2018 and the total of 414 households were surveyed for need analysis to formulate practical plans for the overall development of the Bhardeu village.

NDRI's Senior Research Associates Mr. Dibesh Shrestha and Dr. Shankar Shrestha were also involved in water survey. During their three days survey, they conducted water discharge measurement and water sampling for water quality analyses from different water sources and distribution points available in Bhardeu Village.



DEVELOPMENT OF FOOD MARKETING SYSTEM IN INDIAN SUBCONTINENT AND ITS POSSIBILITIES OF TRADE LINKS WITH JAPAN

Nepal Development Research Institute (NDRI) has set a vision to develop Bhardeu (Konjyosom Rural Municipality-5, Lalitpur) as a model village, through social and economic transformation. Utilizing the expertise of NDRI members, NDRI has been planning to facilitate Bhardeu to accelerate the development work in the areas such as agriculture, education, health, environment, livelihood, disaster management, and capacity development.

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BUFFALO FARMING AS A PILOT PROJECT

NDRI has been planning to develop Bhardeu (Konjyosom Rural Municipality-5, Lalitpur) as a model village through long-term social, economic and environment welfare working with diversified fields such as agriculture, education, health, environment, livelihood, disaster management, and capacity development. The Bhardeu Village Project is expected to graduate the village up to a minimum standard of meeting all basic needs of the community people and eventually to prepare a manual on how a rural village shall be built for the sustainable socio-economic development. A workshop was organized to discuss on the development Bhardeu as a Model village with the representatives from Konjyosom RM and NDRI on 14th August, 2018 at NDRI. Representatives from Bhardeu, included the members from the local government and different development sectors such as Health and Education. In the workshop, Dr. Manjeshwori Singh presented the findings of baseline household survey conducted by NDRI. Similarly, Mr. Subindra Tamang (President, ward no.5, Konjyosom RM) and Mr. Gopi Singtan (President, Konjyosom RM) presented programs and plans of the government to develop Bhardeu. Members representing different sectors shared their views on the current status of Health and Education Facilities, Agriculture, Transportation Facility, Gender Based Violence, Good Governance, Tourism and Employment opportunities in Bhardeu. Agriculture production and utilizing barren land were identified as the key areas to increase the income of the community of Bhardeu. Consequently, participants from Bhardeu and NDRI agreed on buffalo farming could be a suitable initial project to drive the economy. It was therefore decided that the feasibility study for buffalo farming will be conducted in the near future.

NGO AN EXTENDED ARM OF THE NATION: MANAGEMENT IMPERATIVE

NDRI organized a workshop entitled “Importance of NGO Management in the Current Situation of Nepal” on September 21, 2018 at Yala Maya Kendra, Patan Dhoka Lalitpur. The objective of this workshop was to analyze the current situation of NGOs in Nepal. In the development history of Nepal, the role of non-governmental organization has been proved indispensable as the extended arm of the nation. NDRI has made rapid data collection from all seven provinces with representative samples: both quantitative and qualitative. The quick assessment was done by collecting the primary data from the key informant surveys which revealed that there is no way than to categorize the different NGOs with respect to their scope. As per the output of this rapid assessment; there needs to be a clear distinction among NGOs working as a research institute and those supporting programmatic activities. At present, the government regulatory machines including Social Welfare Council is mainly targeted for the NGOs supporting developing programs rather than research activities.



WATER AND CLIMATE PROGRAM (WCP) WEEKLY DISCUSSION FORUM

The Water and Climate Program has been conducting weekly discussion forums with an aim to share information and knowledge among in-house members of NDRI. Altogether, 12 discussion forums have been conducted this year. The topics that were discussed in the forum are listed below:

- ❑ Introduction to Weather Generator Tool and its uses
- ❑ Introduction to Modelling and its types, and a SWAT model
- ❑ Setting up/Running SWAT (Hydrological Model)
- ❑ People's Perception on Agricultural Water Security Emerging from Climate Change and Urbanization in Kathmandu Valley: Feedback session
- ❑ Leachate Management at Sisdol Landfill Site, Okharpauwa
- ❑ Hydrological Analysis (HEP and Bridge Design)
- ❑ Setting up/Running HEC-RAS (Hydraulic Model)
- ❑ PANI Project Proposal Development: Status and Feedback session
- ❑ WCP activities: Status and Planning session
- ❑ Introduction to Water Resources Systems Analysis: Application of Operation Research (OR) techniques in Reservoir Operation
- ❑ 3-days GIS Training workshop

NEPAL NATIONAL WATER AND WEATHER WEEK 2018

Dr. Jaya K Gurung, Executive Director of NDRI, presented a paper on “Rational Use of Water Resources in Federal Nepal” prepared by the WCP team at a thematic workshop on water issues led by WECS, as a part of the Nepal National Water and Weather Week 2018 on March 22, 2018. The objective of the event was to share and discuss the various issues related to water and weather, and come up with some policy resolutions.



Dr. Laxmi P Devkota, NDRI WCP member and NAST Academician, presented a key note speech on the topic entitled “Water, Environment and Development” in the seminar “Nature for Water” organized by NAST (Nepal Academy of Science and Technology) as a part of National Water Week celebration at Mahendranagar, Kanchanpur, on 28 March 2018. The objective of the program was to discuss on water-related issues and find out solutions for the management of the aquatic environment in relation to nature.

DISSEMINATION OF KNOWLEDGE PRODUCTS

It was our privilege to exhibit and disseminate knowledge products of NDRI as well as to share information about working areas of the organization in 6th Annual General Meeting (AGM) of Municipal Association of Nepal (MuAN) at Rastriya Sabha Griha, Exhibition Road, Kathmandu, Nepal. It was the first AGM of MuAN after implementing the new constitution of the federal system of Nepal. Only 15 organizations (NGOs and INGOs) including NDRI were selected among 500 competitor organizations to present in the exhibition stalls open from August 28-29, 2018. As a research organization (Think Tank), NDRI has been working on multidisciplinary

areas of development sectors including Agriculture, Infrastructure, Environment, Water Resources, Climate Change, Health, Education and Language. During the exhibition period, NDRI became the center of attraction for the representatives from various municipalities of Nepal because of the documentary on 'दुत आर्थिक विकास: समृद्धिको आधार' and posters prepared by the NDRI team. More than 500 people visited the stall. Mayors, Deputy Mayors and other representatives from the various municipalities indicated interest in the concept and plan of rapid economic development model presented by NDRI.

VOICES OF LOCAL AND PROVINCIAL GOVERNMENT AUTHORITIES

Is it possible to construct an airport at Bhattedada, Lalitpur?



Mr. Dormani Paudel
Chief Minister, Province No. 3



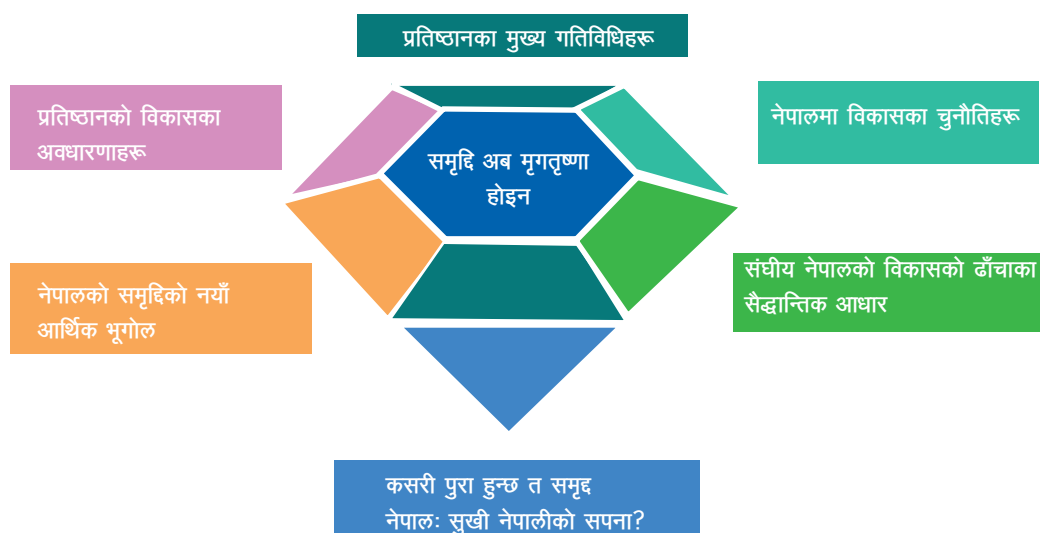
Mr. Chri Babu Maharjan
Mayor, Lalitpur Metropolitan City

I'm very much impressed with your concept of rapid economic development !

द्रुत आर्थिक विकास: समृद्धिको आधार

Nepal Development Research Institute (NDRI) has developed a concept of an overall plan for the rapid economic development of Nepal. To exhibit the model of development, a documentary entitled 'द्रुत आर्थिक विकास: समृद्धिको आधार' has been published and shared with representatives from governmental and non-governmental organizations based on development sector in Nepal as well as with media persons. It can be accessed through NDRI website, Facebook page and NDRI YouTube Channel.

THE DOCUMENTARY INCLUDES



NDRI VIDEO DOCUMENTARY

VIDEO LINK

<https://www.youtube.com/watch?v=nUwfz8Cu2kg>



CERTIFICATE DISTRIBUTION PROGRAM FOR INTER-AGENCY COMMON FEEDBACK PROJECT

NDRI organized a certificate distribution program to the enumerators working in the field for Inter-Agency Common Feedback Project (first phase) which was started from November 2016 and ended in December 2017. The program was held at NDRI premise on 12th January 2018. A total of 35 enumerators were honored during the program for their contribution in field survey throughout the project.



Photo Credit : Mr. Dibesh Shrestha

Mr. Ganesh Shah, Former Minister of Environment was the Guest of Honor for the program with Ms. Bronwyn Russel, Project Manager of Inter-Agency Common Feedback Project and Dr. Tara Nidhi Bhattarai as guests for the program. Dr. Jaya Kumar Gurung, Executive Director of NDRI commenced the program with the introduction of the guest of honor. Ms. Bronwyn Russel gave a brief background about the project and appreciated the hard work that NDRI and enumerators endured during the field surveys. The certificate distribution was done by our guest of honor and other guests present.

INTRODUCING NEW IDEA ON DIGITAL NEPAL

Six days' workshop on 'Digital Nepal Framework', an initiation from Frost and Sullivan (F&S), in collaboration with the Ministry of Communication and Information Technology (MoCIT) and NDRI was organized from 20th-25th August, 2018, at MoCIT, Singha Durbar, Kathmandu, Nepal. The main agenda of the workshop was to discuss on the 80 digitized initiatives, eight different sectors namely Connectivity, Finance, Agriculture, Education, Tourism, Urban Infrastructure, Energy and Health. The digital initiatives have been listed in the Digital Nepal Framework prepared by Frost and Sullivan.



Photo Credit : Mr. Manoj Karki

The main attendees of the workshop were personnel from respective ministries, departments and concerned private and other organizations. NDRI collected information from the stakeholders in each sector about the status of ongoing ICT projects, future initiatives/plans and their opinion on way forward, using different set of questionnaires. All in all, the workshop concluded that a further assessment on digital initiatives is required to ascertain which and how such initiatives would contribute to the economy of the country.

NDRI ANNUAL PICNIC 2018

Nepal Development Research Institute celebrated its 14th Anniversary with refreshment trip to Balthali on April 13, 2018. NDRI annual picnic was organized to celebrate the organization's achievement and as a refreshment for participants. The picnic was organized at the Balthali Village Resort with fun filled activities such as talent hunt and musical chair performances by staff and NDRI board members. The winner of the talent hunt competition was Mr. Ravindra Shrestha and Ms. Namrata Gautam won the musical chair competition. The trip celebrated the unity which strengthened the bonding and respect among each other.



MAJOR ACTIVITIES ACCOMPLISHED IN 2017/18

- ◇ Workshop on Importance of NGO Management in the Current Situation of Nepal on September 21, 2018 at Yala Maya Kendra, Patan Dhoka, Lalitpur
- ◇ Interaction program on sharing initiatives of NDRI with leading journalists of Nepal on 4th September, 2018
- ◇ Dissemination of Knowledge Products at the NDRI stall exhibition on the 6th
- ◇ AGM of Municipal Association of Nepal (MuAN) from August 28-29, 2018 at Rastriya Sabha Griha, Kathmandu
- ◇ Development of Documentary on Rapid Economic Development of Nepal entitled 'दुत्त आर्थिक विकास: समृद्धिको आधार'
- ◇ Workshop on 'Digital Nepal Framework' from 20th-25th August, 2018 at MoCIT, Singha Durbar, Kathmandu
- ◇ Workshop on sharing concept of Development of Bhardeu as a Model Village on 14th August, 2018
- ◇ Workshop on Urban Planning and Smart City on 5th August 2018 at Hotel Himalaya, Lalitpur
- ◇ The interaction program on "Rapid Economic Growth" with the Karnali based Non-Governmental Organizations (NGOs) and Nepal Government on 18th July, 2018
- ◇ Consultation Workshop on Development Model of Federal Nepal on 4th March 2018 at Alfa House Banquet, New Baneshwor, Kathmandu
- ◇ Baseline household and water surveys of Bhardeu between 21 and 27 January, 2018
- ◇ Certificate Distribution Program for Inter-Agency Common Feedback Project on 12th January 2018
- ◇ A seminar on "Development of Food Marketing System in Indian Subcontinent and its Possibilities of Trade Links with Japan" at Kirtipur Hillside Hotel & Resort, Kirtipur
- ◇ Water and Climate Program (WCP) Weekly Discussion Forum
- ◇ Participation in Nepal National Water and Weather Week 2018
- ◇ Establishment of First Provincial Office of NDRI at Karnali Province (Birendranagar, Surkhet)
- ◇ A visit to Bheri Babai Diversion Multipurpose Project by NDRI team



REPORTS AND PUBLICATION



NDRI MEMBERS AND STAFF 2017/18

EXECUTIVE COMMITTEE MEMBERS



Prof. Madhav Prasad Pokharel, Ph.D.
Linguistic & Communication
(President)



Laxmi Prasad Devkota, D.Eng.
Water Resources
(Vice President)



Jaya Kumar Gurung, Ph.D.
Environmental Engineering & Management
(General Secretary)



Manjeshwori Singh, Ph.D.
Gender and Livelihood
(Secretary)



Rabita Shrestha Mulmi, Ph.D.
Gender and Livelihood
(Treasurer)



Nawa Raj Khatiwada, Ph.D.
Environmental Engineering & Management
(Executive Member)



Prof. Gopal Bahadur K.C., Ph.D.
Crop Protection & Plant Protection
(Executive Member)

GENERAL MEMBERS



Prof. Punya Prasad Regmi, Ph.D.
Policy Studies



Divas Bahadur Basnyat, D.Eng.
Water Resources



Prof. Tara Nidhi Bhattarai, Ph.D.
Engineering Geology/Disaster Risk
Reduction



Basu Dev Pandey, Ph.D.
Public Health & Hygiene



Sunil Babu Shrestha, Ph.D.
Urban & Regional Planning



Krishna Pahari, D.Eng.
Geo- Informatics & Natural
Resources



Shanmukesh Chandra Amatya
Disaster Management



Raj Kumar Bhattarai, Ph.D.
Management



Deependra Rokaya, Ph.D.
Political Science

RESEARCHERS



Dibesh Shrestha
Hydroinformatics



Sujata Sapkota, PhD
Pharmacy



Shankar Shrestha, PhD
Water Environment



Usha Singh
Research Methodology



Chhabi Poudel
Agriculture



Kristina Parajuli
Public Health



Pratigya Regmi
Linguistic



Monica Maharjan
Climate Change



Srijana Thapa
Natural Resource Management



Jeebanath Adhikari
Economics



Ravindra Shrestha
Agriculture



Rajendra Khatri
Database Management



Ram Prasad Devkota
Field Research



Manoj Karki
Information Technology



Samriti Maharjan
Social Work



Tanuja Shrestha
Big Data



Anju Tamrakar
Economics



Bikash Acharya
Agriculture



Sadichha Pokharel
Media, Communication & Development

ADMINISTRATION & MANAGEMENT



Manisha Rayamajhi
Administration & Finance Officer



Rita Pandey
Administration & Finance Assistant



Shreejan Shah
Front Desk Officer



Krishna Karki
Office Assistant

SUPPORT STAFF



Sabita Rai Gautam



Bina Poudel



Sarita Chaudhary

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 regulatory requirements.
- ❑ All NDRI employees are competent for 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 'Jaya Kumar Gurung'.

.....
Dr. Jaya Kumar Gurung
Executive Director

FINANCIAL REPORT

ACCOUNTING SYSTEM:

Nepal Development Research Institute has been following 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 work programme with the corresponding supporting documents.

Grant income is recorded in cash basis and programs income, membership fees, bank interest on deposits and miscellaneous income are accounted as revenue income on accrual basis. Regarding the payment procedure, the payment to vendors and service providers are made timely and there are rarely any outstanding bills for the goods and services received.

This organization believes in producing outstanding result with proper accounting system. The accounting policies have been consistently applied by NDRI. The accounts of this institute have been kept on the current general principles in accordance with Nepal accounting standards. It is to be committed for continuity to the practices of deducting income tax at source and depositing it in concerned account in time. The membership fees as per Institutions rules and regulation are collected in time. 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 on timely basis to check the financial accuracy of the organization. This is done for the purpose of daily monitoring and evaluation activities on whether the income and expenditure statements managed for daily conduct of the Institution are related to the operation of the organization or not. Regular financial auditing is done by accredited firm that is endorsed by the General Meeting. Any non-compliance declared by auditor is critically discussed in Executive Committee meeting and addressed properly. There is system of performance auditing.

PROCESS FOR INTERNATIONAL STANDARD ISO 9001:2015

Nepal Development Research Institute has also initiated the process for international standardization ISO 9001:2015 which is the most popular and most commonly used standard for quality management system. With this approach, the firm is trying to establish a system of quality control and quality management system designed to provide 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 separate "Financial" department headed by Finance officer with supporting administrative assistants. The Finance officer is responsible for the preparation of consolidated financial statements as well as managing daily financial and administrative functions. There is separate financial regulation for expenditure. The statements are checked by treasurer and finally approved by Executive Director. If there are any changes in the statement, it needs to be approved by the Board of Directors. The financial statements of the organization include Balance Sheet, Income Statement, Cash flow Statement, Statement of Changes in Equity and Notes to the Financial Statements. There is policy of formulating the annual plans and budget of the institute and implementing them transparently and effectively, and running its financial activities in pursuant to the prevailing laws.

PARTNER ORGANIZATIONS

Governmental Organizations

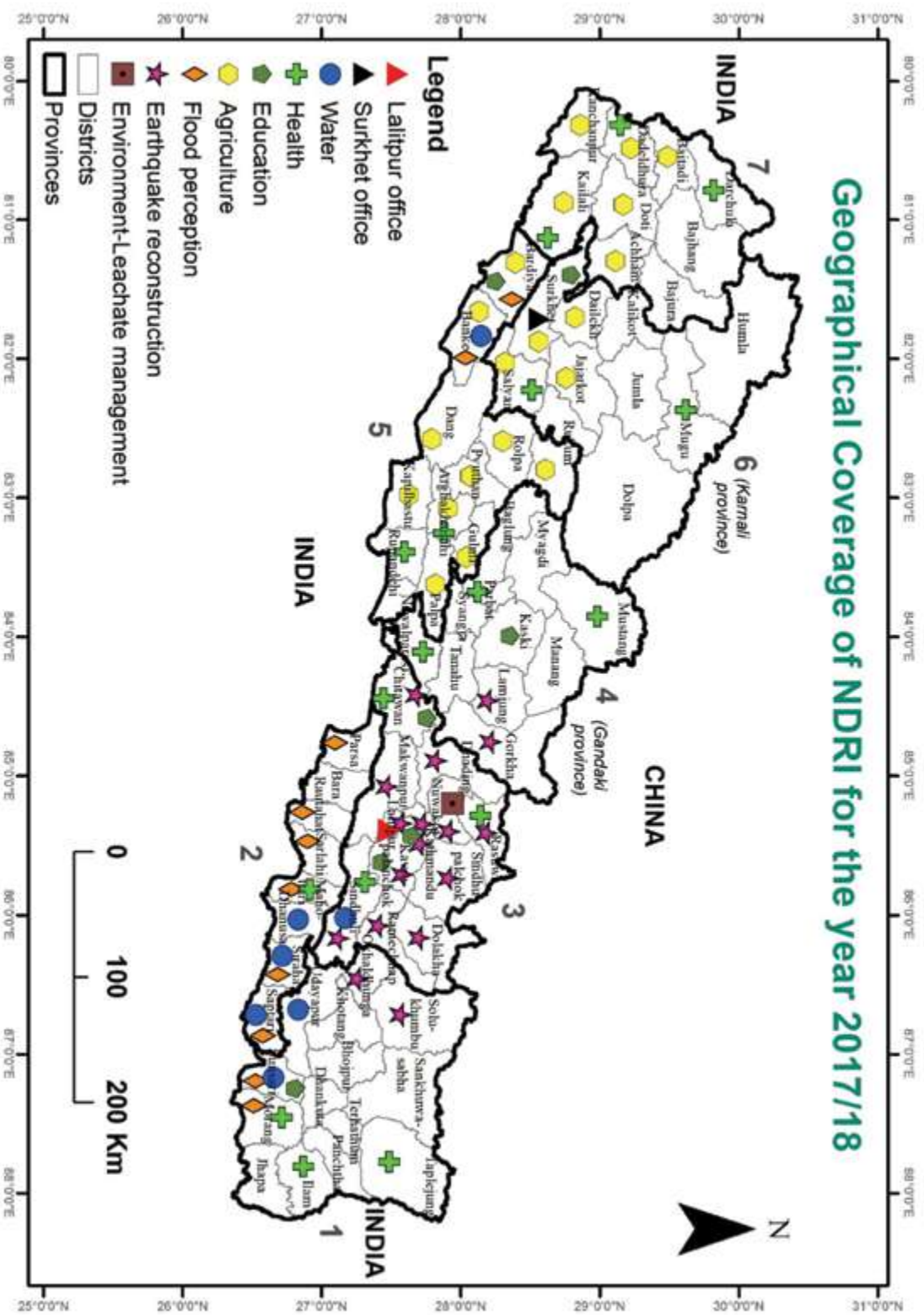
- ❑ Alternative Energy Promotion Centre (AEPC)
- ❑ Agriculture Information and Communication Centre (AICC)
- ❑ Department of Hydrology and Meteorology (DHM)
- ❑ Department of Agriculture (DOA)
- ❑ Kathmandu Metropolitan City
- ❑ Lalitpur Metropolitan City (LMC)
- ❑ Ministry of Energy
- ❑ Ministry of Agricultural Development (MOAD)
- ❑ Ministry of Federal Affairs and Local Development (MOFALD)
- ❑ Ministry of Finance (MOF)
- ❑ Ministry of Health
- ❑ Ministry of Population and Environment (MOPE)
- ❑ National Health Research Council (NHRC)
- ❑ Nepal Academy of Science and Technology (NAST)
- ❑ Nepal Agricultural Research Council (NARC)
- ❑ Tribhuvan University (T.U.)
- ❑ Water and Energy Commission Secretariat (WECS)

Non-Governmental Organizations

- ❑ Asian Disaster Preparedness Centre (ADPC)
- ❑ Asia- Pacific Network for Global Change Research (APN)
- ❑ Asian Development Bank (ADB)
- ❑ Asian Institute of Technology (AIT)
- ❑ Castalia Strategic Advisors France
- ❑ Climate Change, Agriculture and Food Security (CCAFS)
- ❑ Climate Change Strategy and Action Plan (CCSAP)
- ❑ Climate and Development Network (CDKN)
- ❑ Consultative Group on International Agricultural Research (CGIAR)
- ❑ International Centre for Tropical Agriculture (CIAT)
- ❑ Commonwealth Scientific and Industrial Research Organization (CSIRO)
- ❑ Department For International Development (DFID)
- ❑ Department of Human Ecology University
- ❑ Danish Hydraulic Institution (DHI)
- ❑ Department of Human Ecology (HUMECO), University of Tokyo
- ❑ Food and Agriculture Organization (FAO)
- ❑ Frost and Sullivan

- ❑ Global Climate Adaptation Partnership (GCAP)
- ❑ George Washington University
- ❑ Good Neighbors International
- ❑ Green Climate Fund (GCF)
- ❑ Helen Keller International (HKI)
- ❑ International Centre for Water Hazard and Risk Management Public Works Research Institute (ICHARM)
- ❑ International Centre for Integrated Mountain Development (ICIMOD)
- ❑ International Fund for Agricultural Development (IFAD)
- ❑ International Development Research Centre (IDRC)
- ❑ Kansas State University
- ❑ Massachusetts Institute of Technology
- ❑ Mercy Corps Nepal
- ❑ Mott MacDonald
- ❑ Norwegian Embassy
- ❑ OXFAM Nepal
- ❑ Project for Agricultural Commercialization & Trade Nepal (PACT)
- ❑ Plan Nepal
- ❑ Planete Enfants & Development (PE&D)
- ❑ Practical action Nepal
- ❑ Prakriti Resources Centre (PRC)
- ❑ PSI Nepal
- ❑ SAMARTH
- ❑ Swiss Agency for Development and Cooperation (SDC)
- ❑ Save The Children
- ❑ SOS Children's Village Nepal
- ❑ United Nations Development Programme (UNDP)
- ❑ United Nations Population Fund (UNFPA)
- ❑ United Nations Office for Project Services (UNOPS)
- ❑ United Nations Children's Fund (UNICEF)
- ❑ United Nations Resident Coordinator Office (UNRCO)
- ❑ UN Women
- ❑ United states Forest Service (USFS)
- ❑ United States Agency for international Development (USAID)
- ❑ World Food Programme (WFP)
- ❑ World Health Organization (WHO)
- ❑ WWF Nepal
- ❑ World Bank

Geographical Coverage of NDRI for the year 2017/18





NDRI

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