

FROM THE EXECUTIVE CHIEF'S DESK



The Biennial Report of the Nepal Public Health Foundation 2019–21 presents major highlights of all the activities of the Foundation carried out in the two consecutive fiscal years. This time period has been particularly challenging because of the menace of the COVID-19 Pandemic and the difficulty of getting new projects to sustain the activities of the Nepal Public Health Foundation. However, NPHF continued its journey in this period as a developing institution, learning how to cope with adverse situations and building new connections to explore collaboration opportunities with the government and academic institutions within Nepal and consolidating its networking with regional and international research organizations.

We successfully completed the second phase of the Farmer's Health and Education (FHEN) project, which studied the health effects of pesticide use and encouraged farmers to apply Integrated Pest Management and move towards organic farming. We also completed the Highly Hazardous Pesticide Poisoning-Gathering Requisite Information for Decision Making (HOPE-GRID) project on pesticide-related suicide. The findings of both the FHEN project and the HOPE GRID research were made public in this period.

The exemplar U5MR reduction project was also circulated in this period. NPHF worked with partners in health (USA) and the University of Global Health Equity (Rwanda) to conduct research to understand the factors that led to such achievements despite enormous geographical, political, and institutional problems. I may add here that the other exemplar project, Drivers of Stunting Reduction in Nepal, completed the previous year, has received wide attention globally, and a scientific paper based on this study has been published in the American Journal of Clinical Nutrition. A Tranexamic acid project for managing postpartum bleeding, supported by the Wellcome Trust, has also been completed.

With these projects, we have developed a strong working relationship with our aforementioned partners. We are also developing partnerships with Bangladesh (icddr,b), Oxford University Global

Health Network, Public Health Foundation, India, and Boston University. NPHF is a member of the South-East Asian Public Health Educational Institution Network (SEAPHEIN) and is also on the advisory board of the Global Health Institute at Xian University, China.

NPHF works closely with the government in every project, in areas ranging from policy dialogues to flood-related disaster management and the prevention of epidemics. NPHF as an institution and its individual members worked closely with the government, providing expert opinion in dealing with the challenges presented by the COVID-19 pandemic in Nepal. There is an impressive range of articles and interviews given by these members, which are archived on our website. COVID-19 is going to stay in Nepal for a long time, and we need to adapt ourselves to a new normal created by it.

Alongside, WHO's recent editorial on COVID-19 and their recommendation for a resilient health system is a very informative article and a good resource, which is why we found it necessary to include it to our appendix.

With these words, I would like to thank Neshan Rai, Prakriti Sharma, Basudev Bhattarai, Nikita Pradhan, Jagriti Poudel, Prapti Sharma, and Manisha Pokharel, Kripa Pradhan, Sabrina Guruacharya, and Pranjali Dahal for their effort in preparing this report and all those who have contributed in various ways to the activities of the NPHF. Also in this period, the executive power of the Chair of the Board has been shifted constitutionally to the Executive Chief. It is a pleasure and an honor to work alongside an exceptionally proficient NPHF board and dedicated staff in their determined efforts to take NPHF to a new high.

Dr. Mahesh Kumar Maskey
Executive Chief
Nepal Public Health Foundation

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Abbreviations

AFU	Agriculture and Forestry University
AGM	Annual General Meeting
AHF	Alternative Health Financing
AI	Appreciative Inquiry
AMR	Anti- Microbial Resistance
ANC	Antenatal Care
BUSPS	Boston University School of Public Health
CBHI	Community Based Health Insurance
CDDEP	Centre for Disease Dynamics, Economics and Policy
CDP	Centre for Disaster Philanthropy
COI	Conflict of Interest
CPHE	Continuing Public Health Education
CSC	Central Steering Committee
CSR	Corporate Social Responsibility
D(P)HO	District (Public) Health Office
DCC	District Coordination Committee
DDA	Department of Drug Administration
DEPROSC	Development Project Service Centre
DHO	District Health Office
DRI	Drug Resistance Index
ECG	Electro Cardiogram
EPI	Expanded program of Immunization
FCHVs	Female Community Health Volunteer
FGD	Focus Group Discussion
FHD	Family Health Division
FHEN	Family Health and Environment – Nepal
FSP	Fulbright Specialist Program
GARP-Nepal	Global Antibiotic Resistance Partnership - Nepal
HCWs	Health Care Workers
GDP	Gross Domestic Product
GPS	Geographic Positioning System
HFOMC	Health Facility Operation Management Committee
HHPs	Highly Hazardous Pesticides
H-MG	Health Mother’s Group
HMIS	Health Management Information System
icddr;b	International Centre for Diarrhoeal Disease Research, Bangladesh
ICER	International Conference on Epidemiologic Research
IEC	Information Education Communication
IMAM	Integrated Management of Acute Malnutrition
INGOs	International Non- Governmental Organization
IOM	Institute of Medicine
IPM	Integrated Pest Management
KU	Kathmandu University
MG	Mother’s Group
MG-H	Mother’s Group for Health
MIRA	Mother and Infant Research Activities
MNCHN	Maternal, Neonatal, Child health and Nutrition
MOLD	Ministry of Livestock Development
NCE	No Cost Extension
NDHS	Nepal Demographic and Health Survey

NePHEIN	Nepal Public Health Education institute Network
NGOs	Non- Governmental Organization
NHEICC	National Health Education, Information and Communication Centre
NHRC	Nepal Health Research Council
NPHF	Nepal Public Health Foundation
NPHL	National Public Health Laboratory
NVC	Nepal Veterinary Council
OP	Organo-phosphorus Poisoning
OPD	Out Patient Department
OTC	Outpatient Therapeutic Center
PAHS	Patan Academy of Health Sciences
PHCC	Primary Health Care Centre
PPE	Personal Protective Equipment
UGHE	University of Global Health Equity
U5M	Under Five Mortality
PIH	Partners in Health
SAM	Severe Acute Malnutrition
SC	Stabilization Center
SWC	Social Welfare Council
TB	Tuberculosis
UGHE	The University of Global Health Equity
UNICEF	United Nations International Childrens Emergency Fund
UHC	universal health coverage
WHO	World Health Organisation

About Nepal Public Health Foundation

Introduction

Nepal Public Health Foundation (NPHF) was established in April 2010 by a group of public health specialists and activists as an independent, autonomous, non-political, and non-profit organization. It was founded with the mission of ensuring civil society's pro-active participation in public health via coordinated public health action, research, and policy dialogue for health development, particularly of the socioeconomically marginalized population. NPHF aims to prioritize public health action and research areas and facilitate interventions in collaboration with national and international partnerships, with special emphasis on building community capacity for healthcare. Through high-quality research, NPHF is committed to strengthening the health system by generating quality evidence for the policy formulation process. Health policy and system research, social determinants of health, nutrition, maternal, child, and sexual and reproductive health are its major focus areas. Since its inception, NPHF has taken initiatives to advocate for the relevant public health issues at the national and regional levels. Besides, it has established good linkages with academic institutions, civil society, and different non-governmental organizations.

Focus Areas of NPHF

- Health Policy and Systems Research
- Human Resource Development
- Communicable Disease Control
- Non-Communicable Disease Control
- Nutrition Research
- Maternal and Child Health
- Disaster Prevention and Management
- Coordination, Advocacy, and Communication
- Social Determinants for health
- Health Economics
- Health Technology Research
- Epidemiology, Biostatistics, and Demography
- Health Promotion and Social Mobilization
- Environmental Health and Hygiene research

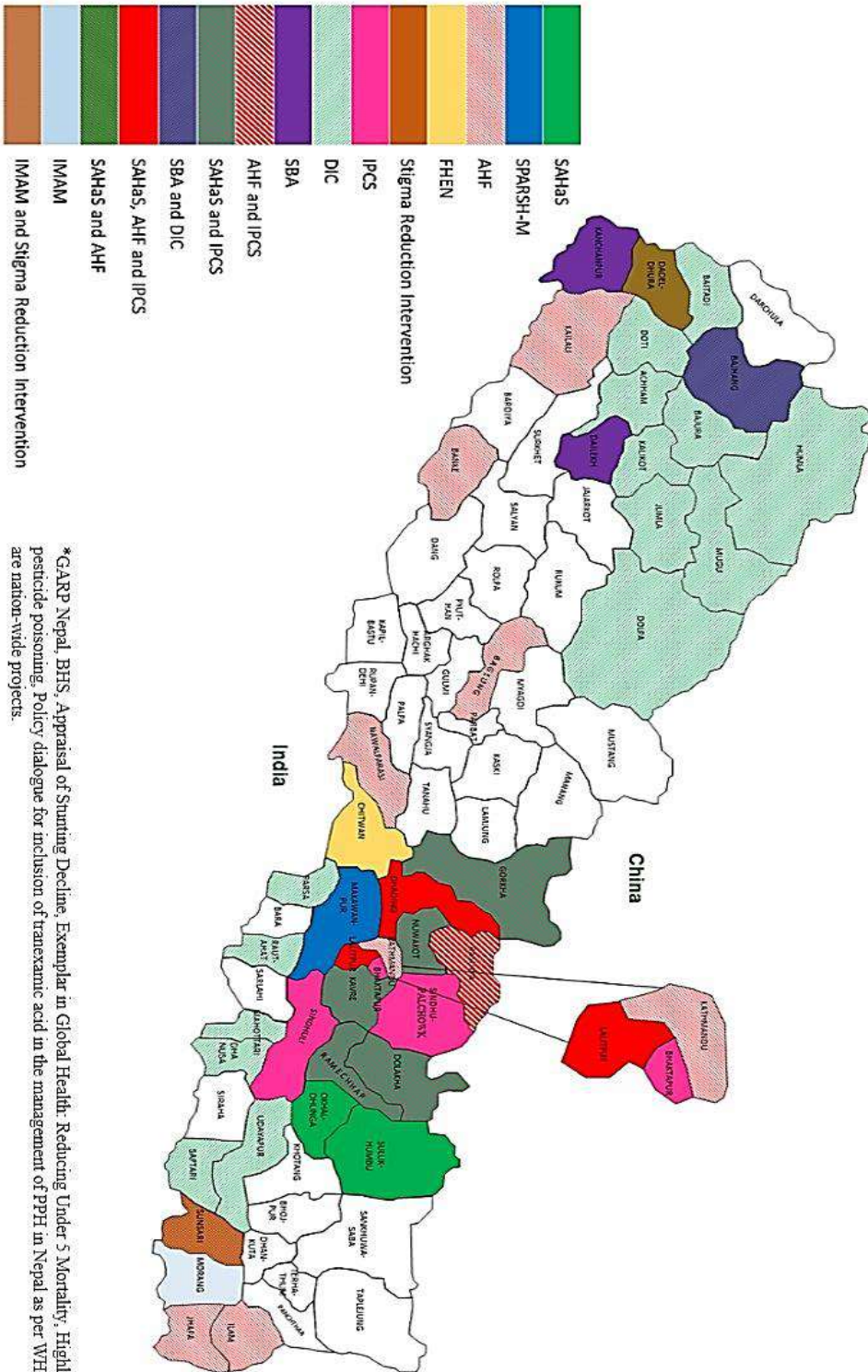
Objectives of NPHF

- Engage public health stakeholders for systematic review and analysis of existing and emerging health scenarios to generate policy recommendations for public health action, especially in the context of the changing physical and social environment, the increasing health gap between the rich and the poor, and the impact of other sectors on health.
- Prioritize public health action and research areas and facilitate pilot interventions in collaboration with national and international partnerships, with special emphasis on building communities' capacity.
- Strengthen the health system through systems thinking to effectively respond to the problems of public health.
- Support and establish existing or new community-based public health training institutions.
- Ensure continuing public health education (CPHE) by disseminating the latest advancements in public health knowledge and research. We publish books, monographs, educational materials, and self-learning manuals.
- We provide research funds for deserving researchers and public health institutions, with priority given to community-based institutions.

Project List

1. Farming Health and Environmental Nepal (FHEN) (2017-2020)
2. Policy Dialogue for inclusion of tranexamic acid in the management of PPH in Nepal as per WHO guidelines (2017)
3. Highly Hazardous Pesticide Poisoning - Gathering Requisite Information for Decision Making (HOPE-GRID, Nepal) (2018)
4. Association of pesticide exposure and pregnancy outcome from a tertiary care hospital in Chitwan District, Nepal (2019)

Districts Covered by NPHF Projects



*GARP Nepal BHS. Appraisal of Stunting Decline. Exemplar in Global Health: Reducing Under 5 Mortality. Highly hazardous pesticide poisoning. Policy dialogue for inclusion of tranexamic acid in the management of PPH in Nepal as per WHO guidelines are nation-wide projects.

Farming Health and Environment Nepal (FHEN)

The issue of pesticide use in agriculture is a serious but often ignored public health agenda. Suicide attempts, poisoning from contaminated food, unintended accidents, and injuries that result in death are all health issues associated with pesticides. Pesticides are also linked to several acute and chronic health problems, more noticeably in developing countries, including Nepal. The Farming, Health, and Environment Nepal Project (FHEN) is unique in that it combines agriculture and health aspects to create healthy farms and food. It has adopted "**Participatory Development and Multisectoral Approaches**" for all its work activities.

The project is built around the core spirit of the "**Pesticide Minimization Movement**". It aims to engage, empower, and mobilize diverse groups and sectors to create a mass movement to advocate for ensuring our right to pesticide-free foods.

After the successful completion of FHEN (Farming Health and Environment Nepal) phase II, we are moving on to the third phase of the project, starting in the fiscal year 2078. The overall aim of the project, titled "Farming Health and Environment—a multi-sector approach to reducing pesticide hazards in Nepal," is to create an environment in Nepal that enables sustainable use of chemical pesticides with minimized harm to the public and the environment. As it was in the previous phase, the project is built around the concept of Integrated Pest Management (IPM) and will rely heavily on participatory development and a multisector approach to fulfill its objectives. With this continuation, we hope to increase the number of target audiences that will benefit directly or indirectly through our program.

An important aspect of the project will be the inclusion of consumers' groups and the agromarket sector, two extremely important components that FHEN phase II was not able to address in the past. Keeping citizens' rights to safe farming and food at its center, the project will work with farmers, pesticide spray workers, retailers, school teachers, health workers, marketplaces, farmers' organizations, and the local government. Our advocacy will also be scaled up to provincial and federal levels with this project. We hope that by the end of this project, the responsibilities of maintaining the spirit of the "pesticide minimization movement" will be taken up and sustained by the local government and farmers' cooperatives themselves, and that we will be able to push for the adoption of an operational strategy for a multisector approach to pesticide poisoning prevention at the federal, provincial, and municipal levels.

Project objectives:

- Enable local government and farmers' cooperatives to enhance IPM compliance among farmers, spray workers, and retail workers in Chitwan District, Nepal.
- Establish consumer forums that advocate for pesticide-free food through lobbying among politicians and fellow citizens.

- Define an operational strategy to prevent pesticide poisoning that has a multisector approach and can be adopted at the federal, provincial, and municipal levels.

Project area:

70 wards across 7 municipalities of Chitwan District

Supporting partner:

Danish Society for Occupational and Environmental Health (DASAM) and DIálogos

Activities

We worked broadly in 3 major areas namely research, community-based interventions, and advocacy.

1. Research
2. Community-Based Interventions
3. Advocacy



1. Research

The FHEN project has research as one of the major work components since it believes in evidence-based program interventions and advocacy. The researches conducted by the project were:

- Situation assessment of pesticide use and its health effects at Chitwan District 2017 - Baseline survey
- Situation assessment of pesticide use and its health effects at Chitwan District 2020 - Endline survey
- A study on pesticide exposure and pregnancy outcomes

As for phase three, 3 types of researches will be conducted in collaboration with national/international organizations/research institutes and universities.

- Exposure to chemical pesticides and effects on pregnancy outcome and other non-communicable diseases
- Baseline survey to assess the situation of pesticide use and health problems before project interventions.

- End-line survey to assess pesticide use and health problems after project interventions and to evaluate the project outcome and impacts scientifically.

2. Community-based interventions

Based on the findings of our research and other literature reviews, we designed community-based interventions to address the issue in different settings and for different groups. Our interventions are broadly categorized as sensitization programs and training programs.

▪ Sensitization programs

These are mainly targeted to create awareness among the general public and consumers about the harmful effects of chemical pesticides on foods and ways to reduce their harm.

- a. **Street drama** focused on larger groups of people and consumers, they were mostly conducted in public places like vegetable markets.
- b. **School health programs** through the mobilization of school teachers to help students learn about the harmful effects of pesticides on foods and how they can contribute to their reduction, Students took part in speech competitions, practical demonstrations, and street dramas for participatory learning. The objective was also that they communicate the message to their parents and neighbors for safer production and consumption.
- c. **Training programs:** They were targeted to different groups namely farmers, pesticide retailers, pesticide sprayers, health workers, FCHVs, and school teachers.



Farmers



Pesticide Spray Workers



Pesticide Retailers

Farmers

FHEN considers Integrated Pest Management-Farmer Field School (IPM-FFS) training as a powerful tool to empower farmers to learn about alternative approaches to chemical pesticides through theoretical sessions, practical demonstrations, and field exercises. FHEN conducted 18-22 weeks of IPM FFS in five places in the Chitwan District with the attendance of approximately 150 farmers.

Pesticide retailers

Taking advantage of the fact that the majority of farmers seek advice on pests and pesticide-related matters from pesticide retailers, the project provided training to them about the safe handling of pesticides. The assumption was that pesticide retailers could be resource people to support and empower farmers in the judicious use of pesticides. Also, they can protect their health since they are one of the most vulnerable groups to pesticide exposure.

Pesticide spray workers

Pesticide sprayers are daily wage workers on farms who spray pesticides on a daily basis in their communities. They are the most vulnerable groups because of their high and prolonged exposure to pesticides, poor education, and socioeconomic status. The project aimed to provide them with knowledge regarding pesticide safety alongside personal protective equipment.



FCHV



Health Workers



School Teachers Training

Health workers

Health workers, especially those working in the periphery, can play a crucial role in discouraging the irrational use of pesticides and reducing the harm associated with them. They are the ones whom farmers visit for various pesticide-related complaints. Furthermore, they have the capacity to mobilize health teams to identify such vulnerable groups in larger communities and provide counseling for the safer practice of pesticide use. However, our study found that the health workers were not adequately oriented to the problem of pesticide exposure and, therefore, were skipping interrogation about such exposure while taking clinical history. This could be one of the reasons why farmers receive only short-term symptomatic treatment and continue to face the same health problems due to exposure to hazardous chemicals.

FHEN provided a three-day training to health workers to raise awareness and skills in identifying, managing, and preventing pesticide exposure, including acute poisoning. The training sensitized the health workers and informed them about their crucial role, which could be a milestone in improving the health of the farmers.

Female community health volunteers (FCHVs)

FCHVs play a crucial role in the health system and are mainly responsible for preventive care and health education at the grassroots. Thus, FCHVs could be one of the major information sources to reach wider communities to make them aware of the safe handling of pesticides. Additionally, most of the FCHVs are also engaged in farming. Therefore, a two-day training program was developed to help them learn about the safe handling of pesticides and motivate them to practice it.

School teachers training

School is a useful platform for students to learn new knowledge, acquire skills, and get inspiration to change their behavior. School teachers play a crucial role in educating communities and driving social campaigns. Pesticide usage in communities is also a significant social concern. Suicide attempts by adolescents are also increasing with the use of pesticides since they are easily available at home and can be bought without a prescription. School teachers could be one of the major information sources to reach students, their parents, and wider communities to inform them of the adverse effects of pesticides and their safe handling. Therefore, the training was provided to them to motivate them to practice pesticide-free farming and convey the message to students and parents.

Activities/Trainings	Frequency	Participants
Integrated Pest Management Farmers Field School	5 groups	148
Training to pesticide spray workers	2 times	107
Pesticide retailers	2 times	41
Health workers	1 time (11 HFs)	25
FCHVs	4 groups	103
School teachers	2 groups	43
Follow up/community sensitization	100	1000
Street drama	24 places	6000

In phase three, tried and tested community-based interventions (from the experience gained in FHEN I and II as well as other literature reviews) will be implemented. Training, equipment support, and seed distribution will be provided to farmers. Retailers and pesticide spray workers will also be trained. This training will be targeted at new individuals and groups that were not involved in the previous phase. At the same time, previous trainees will be empowered and reinforced through exchange programs and shared learning activities. We will also work to capacitate farmers' cooperatives and district offices by providing them with manuals and training materials so they can manage and conduct regular IPM-FFS on their own in the future.

This project will put an equal amount of emphasis on consumer forums. We will forge alliances with them and develop a common agenda and programs to reach out to policy-makers and the public. We will also collaborate with other change agents, such as health workers, teachers, and marketplaces, to empower these groups to communicate pesticide harms and mitigation strategies.

3. Advocacy

FHEN uses advocacy as one of the key public health tools to influence policy-making processes. We work with the government at different tiers to create an enabling environment to minimize the use of chemical pesticides in food.

At local and provincial levels

We conducted a series of workshops with the local and provincial governments for the pesticide residue measurement laboratory installment in the Chitwan District to assess the Maximum Residual Limits (MRLs) in vegetables. We facilitated the formation of a task force in Chitwan district and coordinated with the Ministry of Land Management, Agriculture, and Cooperatives, Province 3 to develop and endorse pesticide minimization guidelines.



At central level

We organized a national conference on pesticides and health with the theme "**Multi-sector Partnership for Healthy Farming – Healthy People through Reduction of Pesticide Use**" on January 9th and 10, 2020.

We conducted a webinar on August 12th, 2020, with the theme "**Addressing Pesticides and their Associated Harms through a Multisectoral Approach**" to advocate for the federal government of Nepal to work jointly on the issue of "pesticide and health" so as to prevent and reduce the harm associated with it.



FHEN has created a "**FHEN digital resource center for pesticide and health**" (www.fhen.org) with the objective of making all research findings and resources easily available to the public and activists on this agenda. This digital resource center aims to gather evidence from around the world in the areas of pesticides and health.

Impact on farmers

The majority of the farmers, after the training, were encouraged to extend their farming to commercial vegetables following the IPM principles. Farmers' use of the IPM method, notably in the preparation of organic pesticides, has been a significant influence of the project. These farmers/groups also served as a form of IPM dissemination, and it is expected that this type of activity will have a multiplier effect in society, including other groups. In all, 148 farmers were trained, with the majority of them adopting IPM practices. After the training, the change in knowledge of farmers regarding pesticide use and its proper application increased by 28%. According to the follow-up records, 32 farmers, i.e., 21 percent of the trained farmers, are now preparing waste decomposers and using them. About 78% of farmers prepared botanical pesticides and used traps to manage the insects and pests.



Furthermore, trained farmers shared their knowledge with their peers and neighbors and established new farmer groups to do IPM farming on a group basis. The objective was to produce the IPM vegetables with the least use of chemicals and make them available to the public.

Four IPM farmer groups formed were

S.N.	Name of farmers group	Location	Total members
1	Sakriya IPM farmers group	Geetanagar, BMC-13	31
2	Shrijansil IPM farmers group	Jutpani, Kalika-7	25
3	Matribhumi Multipurpose IPM group	Padampur, Kalika-3	25
4	Safal IPM farmers group	Geetanagar, BMC-6	25

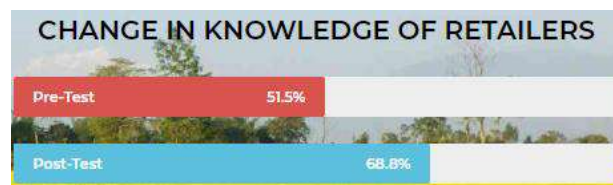
Impact on pesticide spray workers

They increased their use of personal protective equipment, and some had also shifted to other jobs. In total, 21 spray workers were trained, and after the training, the change in knowledge regarding pesticide use and its proper application increased by 10%. The biggest change seen in sprayers was that they began to notice the pesticide label and its indications.



Impact on pesticide retailers

In total, 24 pesticide retailers were trained, and after the training, the change in knowledge regarding pesticide use and its proper application increased by 27%. They started to recommend the use of traps and safe-label pesticides to the farmers. Retailers themselves have started to use masks and gloves while staying in retail shops.



Impact on school teachers and students

Teachers, students, and parents have learned about the effects of pesticides, and they are now demanding that this issue be included in their course curriculum as well.

Impact on health care service providers

Most health facilities have put IEC materials in their waiting rooms for patients and visitors to read. They have also maintained a database of pesticide-related cases. The history-taking process has improved, with health workers asking more questions about the origins of symptoms that may be related to pesticides.

Impact on the local and provincial government

All seven municipalities in the Chitwan District have allocated the budget and designed programs for pesticide minimization under regular annual programs. A pesticide residue measurement laboratory was established in the Chitwan District. A guideline on pesticide minimization was submitted to the Ministry of Land Management, Agriculture and Cooperatives, Province 3 for endorsement.



One of the three main objectives of the project is to scale up the core spirit of the "Pesticide Minimization Movement" to provincial and federal levels by engaging multi-sector stakeholders. In phase three, we will be working closely with all seven municipalities in the Chitwan district and engage them in the planning, monitoring, and evaluation process. As the municipalities are under the District Coordination Committee Office (DCC) Chitwan, they will be engaged throughout the process of project implementation. The DCC can also advocate for the provincial government on local issues. Evidence generated from our project will be presented to relevant stakeholders such as policymakers, the media, and politicians to influence the policy-making process on the issue of chemical pesticides and health in Nepal.

Highly Hazardous Pesticide Poisoning Gathering Requisite Information for Decision-Making (HOPE-GRID)

Project Objectives:

- Identify burden of pesticide-related admissions and mortality in Nepalese hospitals.
- Study the spectrum of pesticides responsible for poisoning-related admissions and deaths
- Study the spectrum of pesticides available in the pesticides shops
- Determine the quantity of deaths due to pesticides in the district from non-hospital data sources i.e. Central Police Forensic Science Laboratory (CPFSL) and National Forensic Science Laboratory (NFSL)

Project Areas:

Kathmandu, Dharan, Janakpur, Chitwan, Butwal, Pokhara, Nepalgunj, Dhulikhel

Supporting Partner:

Centre for Pesticide Suicide

The HOPE GRID project, with support from CPSP at Edinburgh University, was started with the aim of identifying highly hazardous pesticides currently responsible for the majority of pesticide suicides in Nepal, as intentional pesticide poisoning is a significant clinical and public health problem here. In 2016, the WHO estimated that Nepal has a suicide rate of 8.8 per 100,000 populations. According to the national statistical report, poisoning has been the second-most likely method of suicide in Nepal since the 1980s, and most of the poisons consumed are presumably pesticide products. Restricting access to means of suicide is a critical component of suicide prevention. Evidence gathered from some countries has shown that a ban on HHPs on a national level significantly reduced deaths and illness from pesticide exposure without affecting agricultural yield. Restricting access to HHPs may aid in lowering the suicide rate.

This research study project collected clinical and pesticide data for pesticide poisoned patients presenting to 10 hospitals around Nepal. Supplementary data on patients who die before hospital presentation was collected from post-mortem reports in the National Forensic Science Laboratory (NFSL) and the Central Police Forensic Science Laboratory (CPFSL). Additionally, information on the pesticides for sale in local shops was also collected. This data was analyzed and is in the process of being presented to pesticide regulators in Nepal so that decisions about priority pesticide regulation can be informed.

Activities carried out:

☐ Celebrated world suicide prevention day

As CPSP's main agenda is a reduction in the global pesticide suicide rate, and HOPE GRID as an extension of the program that aims to identify HHPs responsible for suicide in Nepal, World Suicide Prevention Day represents a prominent date for the project. As a result, the project holds some programs to commemorate this day each year. This year, the project team participated in a walkathon organized by the Epidemiology and Disease Control Division (EDCD). It was done with the aim of raising awareness about mental health and suicide prevention in Nepal.



☐ Formation of Pesticide Poisoning Resource Center

The Pesticide Poisoning Resource Center was established as a means for sharing information and fostering an understanding of the status of pesticide use and regulation among policymakers and the general population. The resource center serves as a one-stop archive of pesticide and suicide materials, both from agricultural and mental health perspectives. Materials include, but are not limited to, research papers, government publication documents, audio/visual resources, newspaper articles, and other forms of web content such as informative blogs.



☐ Completion of data collection

Data was collected retrospectively from 10 hospitals around Nepal. These hospitals were selected based on their proximity to agricultural areas with high pesticide self-poisoning rates, size, capacity, involvement in handling poisoning cases, and interest in our project. Supplemental data were obtained from the Central Police Forensic Science Laboratory (CPFSL) and the National Forensic Science Laboratory (NFSL), ensuring that patients who died prior to hospital presentation were not excluded from the study.

Additionally, information was also collected on the pesticides available in four different pesticide shops in Chitwan, Nepalgunj, Dhulikhel, and Kathmandu. This was done to identify pesticides likely available for self-harm, so the role of market regulation could also be highlighted from the project.

➤ **Steering Committee meeting**

A final meeting of the project's steering committee was conducted on August 31, 2020. Project status, final results of the study, and further plans for the project were discussed among the committee members. The common consensus was that the study results were of vital importance and that the project was an important step towards suicide prevention by pesticide poisoning in Nepal. A step-up program based on the findings of this research study that can be implemented in the community was suggested by the members.



➤ **Data analysis and end-of-project report**

All the data collected has been analyzed and the findings summarized to be disseminated among the respective stakeholders. The end-of-project report has been written and further editing is underway following suggestions from steering committee members. A final draft is being written, incorporating all the suggestions and feedback.

Outcome of the project so far:

With the data obtained from the HOPE GRID project, CPSP has already been able to assist the Government of Nepal (GoN) in banning some HHPs in Nepal. Along with aluminium phosphide, five other HHPs have been banned. As aluminium phosphide was responsible for most deaths in this research study as well, this move by the GoN is bound to reduce suicide rates to some degree in Nepal.

□ **Advocacy to strengthen pesticide policy on federal and provincial levels**

Mr. Jyoti Baniya, Supreme Court Advocate was working as a consultant in Nepal Public Health Foundation to work on the advocacy to strengthen Pesticide Policy. Under this activity, the assignments that were included were:

1. Conducting a study of pesticide policy in province 3 in Nepal:

A study/review of pesticide policy and the pesticide act of Nepal was conducted. The policy and act were translated into English by our organization.

2. Interview and organize a consultative meeting with different stakeholders:

Various programs were conducted in Chitwan district, Province No. 3's capital, Hetauda, after the collaboration with the provincial and agriculture sector members. Local-level stakeholders were also included in the discussion program. The main objectives of this program were to identify the factors influencing pesticide-related policy as well as create awareness about pesticide and suicide prevention at the provincial level. An interview was conducted with the selective stakeholders to get feedback regarding the pesticide reduction strategy. Agriculture planning and policy were analyzed to include new policies and plans (to ban certain pesticides, restrict their sale, and reduce suicide through pesticides) in the draft of the pesticide policy/act. The program was conducted in 3 different places with different stakeholders.

➤ District Coordination Committee, Bharatpur, Chitwan district

Our team from HOPE-GRID, along with consultant Mr. Jyoti Baniya, hosted a meeting at



*Mayor, Bharatpur Municipality
delivering his speech*



*Agriculture experts and students in
Rampur campus*



Program conducted in MoALD

the District Coordination Committee, Bharatpur. The program was initiated by a meet and greet with government officers, local-level stakeholders, pesticide sellers, and farmers. A short review of the national pesticide policy and act was carried out and thereafter, collected feedback that needed to be added to the new policy draft.

➤ Agriculture and Forestry University, Chitwan

Another interactive discussion program was conducted at AFU, Rampur, where agriculture experts and students studying agriculture subjects were involved in the discussion. The participants shared their opinion on the current pesticide policy and act of Nepal. Suggestions from the participants were taken to be added to the new draft of the policy/act.

□ Ministry of Agriculture and Livestock Development(MoALD), Hetauda

Lastly, our team headed towards Hetauda, where government officers were interviewed about the current situation of the suicidal act due to pesticide intake. The pesticide policy/act of Nepal was discussed among the participants. They shared their experiences and opinions regarding preparing a new pesticide policy or act draft.

3. Developing a pesticides policy on the provincial level:

After collecting all the suggestions and feedback, our consultant, Mr. Jyoti Baniya, prepared a draft of the pesticide policy. The draft was then translated into English and reviewed. Lastly, our prepared policy draft was then handed over to Dr. Yogendra Karki, Secretary, Ministry of Agriculture and Livestock Development, Province 3, Hetauda. The draft has now been forwarded to the provincial and federal governments for further processing.

Association of Pesticide Exposure during Pregnancy and Low Birth Weight babies in the catchment area of a tertiary care hospital

The Nepal Public Health Foundation formulated a research project based on identifying the effect of pesticide exposure on pregnancy outcomes. The project was rolled out in May 2019 and carried out till August 2020. Chitwan was chosen as the study site to perform the study since the majority of households use pesticides on a daily basis. Bharatpur Hospital was prioritized because of its affordability and because the hospital provides incentives (delivery allowance) to the incoming pregnant women depending on the area they are from.

Project Objective:

To identify the association of pesticide exposure and pregnancy outcome visiting in Tertiary Care Government Hospital in Chitwan District, Nepal.

Project Area:

Chitwan District

Supporting partner:

Nepal Public Health Foundation

To our knowledge, there are no studies so far regarding pesticide exposure and adverse pregnancy outcomes in Nepal. Therefore, this study aims to explore the adverse effects of maternal exposure to pregnancy outcomes, i.e., low birth weight. As a result, this study is expected to inform policymakers as they develop plans, policies, and programs to reduce pesticide exposure.

Activities carried out

Research Data Analysis and Preparation of the research report

After the data collection, data analysis was done in one month time period. Analysis was done through SPSS software. The research report of this project has been prepared by the end of August 2020.

Research Outcome

Pregnant women who are exposed to pesticide spray during pregnancy have a 2.25 times (125%) higher risk of delivering low birth weight infants as compared to the unexposed pregnant women group. Control of selected confounding variables also showed similar effect sizes with borderline statistical significance. It is recommended that pesticide use be drastically reduced for the safety of babies growing in the womb.

Pregnant women younger than 20 years should be particularly protected from exposure to pesticides, as the study shows women younger than or equal to 20 years had a nine-fold higher risk of delivering LBW babies.



Checking data for validity



Policy dialogue for inclusion of tranexamic acid in the management of PPH in Nepal as per WHO guidelines

Introduction

Postpartum hemorrhage (PPH) is one of the most common causes of maternal deaths in Nepal. Tranexamic acid (TXA) is an anti-fibrinolytic medication that works to improve blood clotting and helps prevent excessive blood loss during postpartum bleeding, heavy menstrual bleeding, or other surgeries. Though available and frequently used, there is no policy to guide TXA use in the management of PPH as per the recent recommendation of the World Health Organization. To date in Nepal, TXA, although widely available and relatively inexpensive, is used erratically, generally following WHO's outdated guidelines of 2012. The Policy Dialogue project intends to

- i) Raise awareness within the scientific community and with policymakers in Nepal on the global evidence regarding the effect of TXA in reducing maternal deaths.
- ii) Encourage the inclusion of this medicine in national policy guidelines for the management of PPH.

The key goal of the project is to reduce PPH-related deaths in Nepal through facilitating dialogue between experts and policymakers with the aim of updating the Nepalese guidelines and protocols on the treatment of PPH.

Project Updates and Activities conducted

Dr. Buddha Basnet is the Principle Investigator of this study, Dr. Swaraj Rajbhandari is the Lead Researcher, Dr. Mahesh K. Maskey is heading the Advisory team, and Dr. Sameer Mani Dixit and Mr. Basudev Bhattarai are the Coordinators of the Study.

This policy dialogue project formally started on February 1, 2020 after getting approval from the Social Welfare Council (SWC). This study has been endorsed by the Safe Motherhood Sub Committee at the Family Welfare Division (FWD) and the Ministry of Health and Population (MoHP). Then, after the expert group was formed to provide counsel at regular intervals on this study.

Project Objectives:

To reduce PPH-related deaths in Nepal through facilitating dialogue between experts and policy makers with the aim of updating the Nepalese guidelines and protocols on the treatment of PPH

Training of health care professionals on the treatment of PPH at the pilot districts and assessment of the impact of policy changes and policy changes with the training.

Project Area: Kathmandu

Supporting partner: Wellcome Trust

The actual deadline of this project was from February 1 to April 30, 2020, but due to the COVID-19 pandemic, GoN started a lockdown and the activities of this project were seriously affected. Four expert meetings have been conducted to date. The first expert meeting was conducted on February 9 and the second on February 20. Due to the lockdown and social distancing issues, the other remaining meetings were conducted via the online platform Zoom. The total number and dates of all meetings conducted are as follows:

1. Feb 9
2. Feb 20
3. July 8
4. July 12 (Dinner Meeting)
5. July 22
6. August 10
7. August 24
8. September 16

Major Activities conducted:

1. Steering Committee and Expert Group were formed and consultants were hired.
2. Obtained baseline data (via. Online literature and reports) on PPH-related deaths and utilization of intravenous TXA.
3. Conducted Inception meeting with policymakers and OB GYN experts.
4. Developed policy guidelines and the protocol for the use of TXA to treat PPH in various settings.
5. Knowledge about TXA, its uses, and administration based on the 2017 WHO guidelines were shared with the governmental bodies and policymakers.
6. Reports and other supporting documents (Meeting minutes summary, Interactions outcome summary, prepared one-pager on “TXA policy brief”) were prepared and submitted to the Department of Health Services and Ministry of Health.
7. The addendum for the inclusion of Tranexamic Acid on the PPH bundle in RH protocol for the treatment of Postpartum Hemorrhage was signed and approved from the Secretary level.
8. Proposal for the Second Phase of TXA was prepared and submitted to the Wellcome trust by the team.



Fig: Dr. Swaraj Rajbhandari (Consultant) and Dr. Sameer M. Dixit speaking on Zoom online meeting (TXA policy Dialogue Project)

Collaboration with MOHP

Epidemiological features of covid19 in Nepal; a retrospective cohort national findings from Nepal

The study was undertaken by the Nepal Public Health Foundation with the collaboration of the Ministry of Health and Population, Nepal. An analysis of such data will be beneficial in the management and control strategies of COVID-19. With the emergence of new variants of SARS-CoV-2 and the second wave in the neighboring country, Nepal has just experienced a similar situation to India. Therefore, understanding the predictive factors of COVID-19 mortality in Nepal is even more important than before for patient management and containing the second wave. To our best knowledge, this study will be the first of its kind in Nepal.

This study aims to describe the epidemiological features (time, place and person, age, sex, health staff versus non-health staff) of Covid-19 deaths in Nepal.

Activities:

- Extraction from the available health records using a structured checklist.
- Data cleaning, recoding, and management
- Descriptive analysis of the data and preparation of the spatial map.

Coordination with Maternity hospital on research activities

Nepal Public Health Foundation (NPHF) is coordinating with Paropakar Maternity Hospital on a research project looking at the impact of COVID-19 on maternal and newborn outcomes. In a voluntary position at present, NPHF is helping with proposal writing, data collection, data analysis, and manuscript writing. After the successful completion of this project, the findings will be applied towards planning new research projects that will be more comprehensive, innovative, and informative on the topic of maternal health and COVID-19 in the context of Nepal.

PROGRAM LIST

National Conference on "Pesticide and Health"

Farming Health and Environment Nepal (FHEN), one of the projects of Nepal Public Health Foundation, organized a national conference on January 9th and 10th, 2020, focusing on multisector partnerships for healthy production in agricultural farming through the reduction of chemical pesticides to ensure the better health of the public. The conference had three different sessions over two days. On day one, we had 2 sessions, namely the pre-conference plenary session and the inauguration session. In the first session, organic farming activists Mr. Krishna Poudel and Mr. Chandra Prasad Adhikari were the keynote speakers and talked about organic farming with different stakeholders from WHO, MoHP, and Plant Quarantine and Pesticide Management Centre. This conference was inaugurated by the chief guest, the honorable Agriculture and Livestock Development Minister, Mr. Ghanshyam Bhushal, where he expressed his commitment to prioritizing the agenda of organic farming during his tenure.

Day two of the conference consisted of three scientific sessions. The first scientific session started with the topic "Pesticide use and its effects", where a situation analysis of pesticide use in Nepal and South Asia along with its detrimental health and environmental effects was discussed. The second scientific session was about the multisectoral responses to minimize the use of pesticides in agriculture, where the crucial roles of health, education, cooperatives, the media, and consumers were discussed. The third session was on the topic "Advocacy and policy implications for health". The advocacy experience of NPHF and different stakeholders for the establishment of a laboratory and the development of pesticide minimization acts and guidelines in Nepal were discussed. The two-day conference ended with building solidarity among different groups of stakeholders for more integrated and synergistic efforts to address the irrational use of chemical pesticides in farming, thus ensuring the better health of the public.



Tenth Annual General Meeting (AGM)

Nepal Public Health Foundation (NPHF) organized the 10th Annual General Meeting on September 18, 2019, at Hotel Shanker, Lazimpat, under the chairmanship of Dr. Mahesh K. Maskey, Executive Chair of NPHF.

The meeting began by welcoming our honorable chief guest, Dr. Usha Jha. Welcome remarks were delivered by our Executive Chief, Dr. Mahesh Kumar Maskey. This year's lifetime achievement awards were given to two well-known individuals, Dr. Nirakar Man Shrestha and Dr. Dibyashree Malla. The first session ended with remarks by the chief guest, Dr. Usha Jha. As Program II was started, Dr. Sameer M. Dixit, General Secretary of NPHF, outlined the updates of each project's activities and financial statement for the fiscal year 2019/2020. He concluded his remarks by thanking the staff for their contribution and dedication towards their work, hoping for similar commitment and enthusiasm in the years to come. This was followed by a presentation on the annual plan for the fiscal year 2019/20 of NPHF by Prof. Dr. Lochana Shrestha. The AGM endorsed the bylaws (administrative and financial) and amendments to the constitution. This year, Dr. Rita Thapa is nominated for President and Dr. Aruna Uprety is nominated for Vice-President of the Nepal Public Health Foundation. After the discussion about further approaches to NPHF, the meeting was adjourned.



. 10th Annual General Meeting

Eleventh Nepal Public Health Foundation Lecture

Nepal Public Health Foundation has been organizing public health lectures as its core activity every year, inviting eminent people on June 30th to foster collective action of people around common agendas of public health. The inaugural lecture of the year 2019 was delivered by Mr. Kul Chandra Gautam, a former Deputy Executive Director of UNICEF and Assistant Secretary-General of the United Nations. Then, lectures by other eminent personalities working in public health were delivered.

The program started with the welcome address of Dr. Rita Thapa, President of NPHF. She also introduced the keynote speaker of the program. This year we have invited Dr. Benu Bahadur Karki, an eminent personality in public health, to deliver the lecture on "**Public Health Development in Nepal; Challenges and Opportunities**".

This year, we conducted this lecture series during the phase of the COVID-19 pandemic. Therefore, due to physical and social distancing and restrictions, we held the session through Zoom. While most of the members joined the lecture via Zoom, Dr. Karki highlighted recent challenges and opportunities in the public health development sector. He also shared his own experiences in the field of public health.

The program was well attended by representatives from different NGOs, INGOs, educational institutions, doctors, and clinical medicine students via ZOOM. After the lecture by Dr. Benu Bahadur Karki, there was a virtual discussion session on various issues highlighted by his lecture. The session was moderated by Dr. Sharad Onta, a founding member of the Nepal Public Health Foundation. The program ended with a vote of thanks by Dr. Mahesh Kumar Maskey, Executive Chief of the Nepal Public Health Foundation.



11TH Annual General meeting

The 11th annual general meeting of NPHF was held on October 14, 2020 via Zoom. The program was initiated with a welcome remark from Dr. Rita Thapa, president of NPHF. This year, Dr. Gauri Shankar Lal Das and Prof. Geeta Pandey were felicitated with the Lifetime Achievement award. Since project FHEN and HOPE GRID Nepal were concluded this year, all the project staff were presented with a letter of appreciation by Dr. Sharad Onta. Dr. Abhinav Vaidya delivered the vote of thanks and finally, Dr. Rita Thapa delivered closing remarks, bringing the inaugural session to end.

During the closed session of the program, Dr. Abhinav Vaidya, general secretary of NPHF, presented the secretary's report for the year 2076/77. Other agendas such as amendment of bylaws, approval of programs and budgets, etc., were also discussed among the board members. This program was closed with remarks from Dr. Aruna Upreti.

12th Nepal Public Health Foundation Lecture

Nepal Public Health Foundation has been holding public health lectures as one of its main activities, organized every year where distinguished figures are invited to share their opinions, while at the same time ensuring a culture of debate that would lead to consensus for the common agenda of public health.

The 12th lecture series of 2021 was delivered by Prof. Dr. Sharad Raj Onta, an outstanding public health expert, on "My Unfinished Journey of Learning." Dr. Onta is a pioneer in public health and is currently the President of Physicians for Social Responsibility Nepal (PSRN). He has published several scientific publications both in national and international journals and has also served as the chair of the Resource Centre for Primary Health Care and was also the former Assistant Dean of the Institute of Medicine (IOM). Additionally, he is one of the founding members of the Nepal Public Health Foundation as well as the Member Secretary of the Nepal Health Research Council (NHRC) and has been involved in many other national and international forums and organizations.

The lecture gave us a glimpse into a deep reflection of his development and experiences, as well as a valuable insight that will be extremely useful for health professionals and students who are just beginning their journey into the world of public health. Due to the current COVID-19 pandemic situation and its restrictions, the 12th lecture series was carried out via Google Meet video conference. The program was attended by officials from different NGOs, INGOs, educational institutions, doctors, and students from clinical medicine backgrounds, from the IOM and also other public health colleges. A welcome speech was given by the executive chief, Dr. Mahesh K. Maskey, along with the introduction of the keynote speaker, Prof. Dr. Sharad Onta.

After the lecture, there was an interactive discussion between the participants and the keynote speaker. A vote of thanks was conveyed from the vice president, Dr. Lochana Shrestha, and the program was formally concluded by Dr. Aruna Upreti, President, Nepal Public Health Foundation.

ACTIVITIES

Press meet on "Say NO to Junk food"

The Say No to Junk Food press release was hosted by the Nepal Public Health Foundation on December 26th, 2019. The conference was led by Dr. Rita Thapa and Dr. Aruna Upreti. Media personnel were invited. The purpose of the press release was to state clearly that the challenges of overcoming malnutrition in Nepal not only involve the promotion of the use of the healthy food available in the country but also the healthy production of sufficient food and reversing the habit of promoting the use of junk food and drinks.



Dr. Aruna and Dr. Rita Thapa on the press meet.

Interaction program with the Wellcome Trust CEO

Dr. Jeremy Farar, CEO of Wellcome Trust, visited Nepal Public Health Foundation on Monday, October 21st, 2019. This interaction meeting was attended by 20 members, which included members from the Nepal Public Health Foundation, professionals from various fields, etc. During the interaction meeting, Dr. Jeremy Farar delivered a short lecture. He introduced the focus areas of the Wellcome Trust: Climate Change, Infectious Disease, and Mental Health. He also mentioned how one can improve organizational quality and performance through governance, leadership, transparency, and focus. He stated that there should be close coordination between the executive and the board in the planning and execution of programs and office work. The executive should plan, and the board should monitor and lookup the activities performed. Every organization should have a limited focus area to specialize in those particular tasks. Organizational leadership requires active measures to work with different groups and individuals. A leader must understand the strengths and weaknesses of different professionals before making a plan of action to improve the effectiveness of the organization. The organization should focus on the quality of services and should have transparency.



Interactive Meeting with the delegates

During the time period of November-December 2019, dengue cases were very high in Nepal. Dharan District was highly affected by dengue. The Nepal Public Health Foundation conducted an interactive meeting with renowned public health experts to have an interactive discussion on the increasing dengue cases in Nepal. The discussion in the meeting was mainly to find the potential added risk posed by global climate change to dengue transmission. The idea of mosquito infestation in Dharan and its correlation to road conditions in Dharan for the accumulation of water was discussed in the meeting. According to the meeting presentation, "There is an increase in epidemic potential, which indicates that a smaller number of mosquitoes can maintain a state of disease where dengue virus is introduced." A comparison from 1931 to 1980 reveals that the average temperature increase across the three GCMs was 1.16 degrees Celsius, with a further 1.16 degrees Celsius anticipated by 2050. The temperature in regions already at risk of aggregated potential across three areas rose on average between 31 and 47% (range: 24-74%). Many climatologists believe that if climate change occurs, it will increase the epidemic potential of dengue-carrying mosquitoes, but they have to keep susceptible human populations in mind."

Farewell program to Dr. Jos Vandeleer, the WHO country representative

On October 1st, 2020, NPHF organized a farewell program for Dr. Jos Vandeleer, World Health Organization (WHO) country representative. Dr. Mahesh Maskey, along with Dr. Rita Thapa, Dr. Buddha Basnyat, Dr. Sameer Mani Dixit, and Dr. Abhinav Vaidya, attended the program to bid him farewell and thank him for his support and expertise in helping Nepal achieve better health for all people. For over 60 years, WHO has been assisting the Government of Nepal in achieving its goals and targets by working closely with ministries and local partners and providing technical assistance. Dr. Maskey conveyed his gratitude for the effort that WHO and Dr. Vandeleer provided to Nepal and wished him the best for his future endeavors. Other NPHF staff also attended the event and helped organize it.

18 point recommendation submission

On July 21, 2021, the NPHF released a statement with an 18-point recommendation for managing the COVID-19 pandemic and preparing for its third wave in Nepal to the Prime Minister, Sher Bahadur Deuba. The recommendations mention an urgent appointment of a Minister of Health and a full dose of the vaccine coverage above 18 years of age to be achieved as soon as possible. And to have prepared and ready management of essential medicines and oxygen supplies, hospital beds, ICU, and ventilator capacity. The 18-point recommendations were then provided to the different news media for public awareness.

Meeting with MOHP

The Nepal Public Health Foundation had a meeting with the Health Emergency Operation Center (HEOC), Ministry of Health and Population (MOHP) for the trend analysis of the COVID-19 deaths. As preliminary findings, data were analyzed and a spatial map was created, which was then shared with the MOHP team. After collaboration with MoHP, a proposal was sent for the grant.

Board Meeting, NPHF

Every two months, the Nepal Public Health Foundation holds a board meeting to update on implemented plans, assist with planning, brief on current activities, plan future activities, and more. In the fiscal year 2019/20, a total of 7 board meetings were held. The board committee consists of nine executive board members; Dr. Rita Thapa, the president; Dr. Aruna Uprety, the vice president; Dr. Mahesh Kumar Maskey, the executive chief; Dr. Sameer Mani Dixit, the general secretary; Dr. Lochana Shrestha, the treasurer; and the board members; Dr. Karuna Onta, Dr. Rajendra BC, and Dr. Abhinav Vaidhya.

NPHF's approach towards COVID-19

NPHF has been at the forefront of the struggle against COVID-19 in Nepal--from providing expert advice to the health ministry, the prime minister's think tank policy research institution, and civil society mobilization for public health in dealing with the Corona challenge, to initiating dialogue between the media, the health ministry, and health-related UN agencies, communicating with Nepalis through media interviews and articles, presenting Nepal's case in the Oxford University Global Health Network, and working with ward leadership in providing food security.

At the same time, NPHF urges the government and all Nepalis that there are numerous public health issues in Nepal that need to be addressed that are equally significant and more damaging in terms of human health and life, but which can be dealt with for a fraction of the cost and effort that Nepal has been investing in the Corona Pandemic. Both communicable and non-communicable diseases, along with natural and man-made disasters, can be handled with proper preparedness, management, and public health approach. NPHF stands ready to support the government, academia, and civil society organizations towards this end. Lessons from COVID control should be institutionalized since Nepal may have to face other waves of viruses and bacteria in the future along with epidemics of non-communicable diseases.

NPHF has been critically analyzing the COVID-19 situation nationally as well as internationally. From the very beginning, our team has been preparing COVID graphs describing its trends and status in Nepal, its border states, SAARC, South East Asia, and some of the Western countries.

Multiple meetings with Public Health Experts

NPHF has organized two interaction programs related to COVID-19 with public health experts.

On March 4, 2020, the major issues of discussion were global and contextual situation analysis of COVID-19, its pressing issues in Nepal like preventive approach involving the community, case detection, infection prevention and control in healthcare settings, critical care capacity, contingency planning from public health authorities for different scales of the outbreak, and finally strategies and planning against



the challenges of COVID-19 in Nepal. The major outcome of the discussion was to prepare an evidence-based supporting document regarding COVID-19, which could be useful for government officials to plan further actions.

Similarly, on March 19, 2020, another major interaction program was held. The major issues discussed were issues related to the context of COVID and other public health problems, planning for preparation on reducing COVID transmission, and the responsibility of civil society and public health groups for the prevention and management of the current pandemic. Also, exploring various strategies and planning against the challenges of COVID-19 in Nepal and issues of government preparation and planning for its management were the major concerns of the meeting.

And the major outcome of the discussion was to raise a voice in an organized way and provide awareness to apply basic preventive measures like regular hand washing and using sanitizers. Applying home-based self-quarantine to suspected people having a travel history and identifying schools, colleges, and other public buildings as places for patient isolation and treatment was suggested. And lastly, encouraging people to use the COVID-19 surveillance app would help with the tracking and management of people suffering from this pandemic. Based on these discussions, NPHF drafted a statement in order to advise the government of Nepal about the public health emergency and the way forward.

42 points suggestions to Government of Nepal

Dr. Rita Thapa, President of the Nepal Public Health Foundation, handed over a 42-point memorandum on four different issues to the Minister for Health and Population, Bhanubhakta Dhakal, on June 11, 2020.

Those suggestions are related to health education, information and communication sector organizations, lockdowns, and the general public. Dr. Thapa said that for COVID-19 effective prevention and control, a high-level committee should be formed including senior public health experts and non-governmental organizations, and the scope of PCR testing, quarantine, contact tracing, and isolation should be expanded.

NPHF has suggested the Government of Nepal test all individuals who are in quarantine and isolation via the PCR method. Also, infected people who are staying in quarantine and isolation should be sent only when their PCR results will be negative.



Social Responsibilities

Nepal faced lockdown in order to manage and take precautions against COVID-19 transmission. Many people faced numerous difficulties in meeting their basic needs, such as food. April 25, 2020, Nepal Public Health Foundation took a step to support the needy people of ward No. 4 by distributing food packages as per the standards of the government of Nepal. The distribution was done by Dr. Mahesh Maskey, Executive Chief of NPHF, and Dr. Aruna Upreti, Vice President of NPHF, in the presence of Mr. Mohan Bista and all the leadership of Ward No 4. Er. Ramesh Maskey and other representatives from the respective ward were also present. At that event, a total of 125 food packages (100 from NPHF and 25 from another social worker lady) were distributed in that event, maintaining the social distancing.



Daily COVID Graphs

NPHF has been collecting data from the beginning of the COVID-19 pandemic and interpreting this data into informative COVID graphs routinely, showcasing the COVID-19 trends in Nepal. Critically analyzing and following the course and patterns in the hotspot areas and districts was done by our NPHF team. Regularly checking up on the inclinations and declinations and analyzing them could lead to the prediction of possible outcomes and scenarios which could help plan interventions accordingly. Based on these trends and patterns, suggestions were given out as statements. These COVID graphs have been used in many media outlets and interviews to inform the public about the COVID situation in Nepal.

Proposals submitted to Boston University

Nepal Public Health Foundation, with the collaboration of Tribhuvan University Teaching Hospital (TUTH), submitted a research proposal entitled "Predictors of Mortality in Patients with COVID-19 in Nepal: a Retrospective Hospital-Based Cohort Study" to Boston University. This study aims to identify the risk factors for mortality among the hospitalized populations with COVID-19 infection in a tertiary hospital in Nepal. This will be a retrospective cohort study. For the study, COVID-19 patients who received treatment at the COVID19 unit of Tribhuvan University Teaching Hospital (TUTH) from May 2020 to July 2021 will be selected as study participants.

The possible outcome of the study is given below:

- Demographic predictors of deaths due to COVID-19
- Association of clinical and laboratory parameters with COVID-19 mortality.
- The effect of specific therapies/medications on hospitalized patients' survival
- The relationship between hospital admission specific factors and hospitalization outcome
- The difference in hospitalization outcomes between the first and second waves of the COVID-19 pandemic

ANNUAL PLAN AND STRATEGY

Nepal Public Health Foundation Lecture Series

Nepal Public Health Foundation has been organizing public health lectures as its core activity every year, inviting eminent people on June 30th to foster collective action of people around common agendas of public health. The inaugural lecture of the year 2010 was delivered by Mr. Kul Chandra Gautam, a former deputy executive director of UNICEF and assistant secretary-general of the United Nations, who highlighted the "10+2 agenda for public health". In 2011, Prof. Dr. Mathura Prasad Shrestha, advisor of NPHF, delivered a lecture on "Understanding Public Health: Conceptual and Philosophical Foundation". In 2012, Dr. Mrigendra Raj Pandey presented his lecture on "Control of Non-communicable Disease: Scientific, Social, and Spiritual Perception". In 2013, Dr. Hemang Dixit presented his lecture on "Public Health in the Past, Present, and Future." In 2014, Dr. Rita Thapa, advisor of NPHF, presented on "Changing Public Health Paradigm-Improving Family Planning-Maternal and Child Health in Nepal". In 2015, Dr. BD Chataut, a founding member of NPHF, delivered a lecture on "Unveiling the Debate on Euthanasia". In 2016, Dr. Buddha Basnyat, vice-president of NPHF, delivered a lecture on "From a reluctant researcher to public health advocacy: My life and times." In 2017, Dr. Badri Raj Pande, a founding member of NPHF, delivered a lecture on "Switching to Public Health from Clinical Pediatrics – a Reminiscence." In 2018, Dr. Dharma Sharma Manandhar delivered a lecture on the topic "My Adventure in Public Health Research." Dr. Suniti Acharya delivered the 10th lecture in our series in 2019 with the topic "Health Development, Equity, and Universal Health Coverage in Federal Nepal". In 2020, Dr. Benu Bahadur Karki delivered a lecture on "Public Health Development in Nepal: Challenges and Opportunities".

Total budget: Rs 100,000

It covers the cost of a token of love, etc.

Source of fund: NPHF main account

Health Policy Dialogue

The Nepal Public Health Foundation was established with a mission to have concerted public health action, research, and policy dialogue for health development, particularly targeted at a marginalized population. There is a need for NPHF to focus on pertinent public health issues and act as a pressure group, engaging in continuous evidence-informed policy advocacy based on research conducted by NPHF and others on policy implications.

NPHF members are nominated to key policy-making committees such as the High-Level Health Advisory Committee, thematic groups of the New Health Policy 2014, and thematic group of health for all. This involvement gives members the opportunity to engage in policy dialogues. Members have also taken lead roles in advocating for public health policy matters.

From this fiscal year, it has been planned to organize a health policy dialogue once every three months, inviting policymakers and government officials. The World Health Organization will be the supporting partner for this activity.

Public Health Foundation Website and Social networking

Official website

Nepal Public Health Foundation has its own official website: www.nphfoundation.org, which provides updates on all the ongoing activities, updates, and completed projects of NPHF. In 2017, the old website was redesigned and published. The materials are also updated regularly. Further, coordination will be done with the Nepal Health Research Council (NHRC) for the exploration of the possibility of establishing a digital library.

As we are already planning to involve all of our current projects in this digitalization system, we are also planning to initiate a mapping structure of all our working areas (districts) on the website.

Modular Lecture

A modular lecture program will be conducted once every month, which will last for one week, mainly targeting bachelor and masters level students as well as fresh graduates in medical and allied health disciplines. On average, NPR 5000 will be charged per participant for a week-long course. Assuming an average of 15 participants per course, the expenses and income are as follows:

Expenses per program: Rs. 40,000 (making a total of Rs. 4,80,000 in a year)

Income per program: Rs. 75,000 (making a total of Rs. 9,00,000 in a year)

Interaction with Health Journalists

An interaction program will be conducted four times a year where current health issues will be discussed.

Total Budget: Rs. 10,000 per program, making a total of Rs. 40,000 for a year.

This cost covers the refreshments, the hall rental, and transportation and communication costs.

Institutional social responsibility

NPHF field office

The Nepal Public Health Foundation has initiated a field program in Namobuddha VDC of Kavre District with the aim of improving the socio-economic status of the community along with the nutritional status of children. Basically, the whole program is based on the concept of community empowerment. The vision is to establish an exemplary farm that will uplift the status of the community people.

Approaches

Animal husbandry has been conceptualized to achieve this aim. Agriculture and allied activities have been the core livelihood for the majority of the rural people in Nepal. A farm will be established in a ward of the VDC, engaging the community in taming cows. The milk produced will be distributed to the community school located over there, and the surplus products will be sold in the market. The profit gained will be used to buy eggs to feed the schoolchildren daily and also for the sustainability of the project. In the end, the farm will be handed over to the community.

Total budget: Rs. 10,000 per visit (Total in a year: Rs. 500,000)

This budget covers the transportation costs and refreshments for the staff visiting the field site. The field visit will be done twice a month. There is a separate budget for the implementation of the project.

Working Partners

The working partners for all the activities of this fiscal year

International/Multinational

- ICDDR, Bangladesh
- Nepal Health Research Council
- Boston University School of Public Health
- University of Edinburgh
- Oxford University
- DIALOGOS, Denmark

Local Partners:

Nepal Health Research Council
Prayas Nepal
Tusal Youth Club

National Academic Partners:

Patan Academy of Health Science
Tribhuvan University, Institute of
Medicine

Flexible office hours proposed for FY 2019/20

- During summers: 09.00-17.00 or 09.30 to 17.30 or 10.00 to 18.00
- During winters: 09.00-16.00 or 09.30-16.30 or 10.00-17.00

Major reforms anticipated for FY 20120/21

- Formation of fundraising committee with representation of board members)
- Roster preparation for mapping potential collaborators/consortium
- Departmentalization within NPHF
- Formation of Health Alliance
- Endorsement/amendment of organizational policies in different areas (e.g. administrative and financial by-laws, anti-fraud policies, constitution [amendment in areas such as account handling, etc.], COI policies, etc.)
- Exploration of collaboration with universities and councils to launch accredited courses with the long-term aim of starting a university degree course.

Appendix

WHO recommendations for resilient health systems

On 19 October 2021 the World Health Organization (WHO) launched its position paper Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond to support countries in recovering from the pandemic. The launch took place amid unprecedented public and political calls for greater resilience in health systems. Despite our collective experience with public health emergencies, the coronavirus disease 2019 (COVID-19) has demonstrated that national health systems were poorly prepared for a pandemic of this scale. While examples exist of good practice and innovation that kept mortality or case counts relatively low, this apparent success often came at the expense of economic activity, mental health or personal freedoms. Globally, deficiencies in coordination, transparency and timeliness of data sharing prevented us from moving quickly, learning from each other and supporting each other. The current and protracted lack of equity in access to vaccines demonstrates the need for global preparedness, including the development of pre-crisis international agreements on access to innovation.

COVID-19 has exposed the weaknesses in health, economic and social systems worldwide, with countries experiencing significant disruptions and massive economic losses due to the pandemic and response efforts. No country is unaffected, and wealth did little to insulate countries against the negative effects of the pandemic. As with previous public health emergencies, the indirect deaths associated with health and social service disruptions and economic breakdown may surpass those directly caused by the virus. As always, the brunt is borne by the most vulnerable populations, including those in countries under protracted conflict. The pandemic has demonstrated that health is the foundation of socioeconomic development and that we are only as safe as the most vulnerable among us. We have seen that when health is at risk, all other sectors are at risk. Health systems are a vital first line of defence, not only against pandemics but against the physical and mental health issues that prevent us from reaching our full potential, both individually and collectively.

Unfortunately, at the beginning of the COVID-19 outbreak, much of what was learned from past experiences with the severe acute respiratory syndrome, Middle East respiratory syndrome or Ebola virus and other public health emergencies had not been applied in many health systems. Many countries did not prioritize health emergency preparedness, with many lacking the capacities required under the International Health Regulations (2005). Fragmented approaches to policy, planning, programming, implementation, and monitoring and evaluation continue to cause inefficient use of resources and perpetuate critical foundational gaps in health systems. Health investments have often been misaligned with needs, with prioritization of individual health care over public health interventions, emergency response often superseding preparedness, prevention and promotion, and with little emphasis on primary health care or on communities as the centre of decision-making.

Issues beyond the health sector such as changing demographic patterns, climate change, changing land use, deforestation and increased animal-human proximity, coupled with increasing population density and globalization are increasing the likelihood of further pandemics or other crises. Now is the time for all sectors to work together on health. The delivery of COVID-19 vaccines in under a year as opposed to the

usual 10–15 years demonstrates the astounding progress that is possible when attention and resources are focused on a common task.

Therefore, still amidst this pandemic and its economic, social and health consequences, we have the duty to do things differently. The only choice is to invest, making smarter and more intelligent use of all our resources, to create fairer and more resilient health systems that will be able to prevent and prepare for future pandemics. Doing so will demonstrate that we have learnt the lesson of this pandemic – that health is not a cost to be contained, but an investment to be nurtured. Given the massive return in terms of avoiding future economic and social losses, investing in resilient health systems that provide high-quality essential health services should not be considered a luxury anymore, but as the foundation of social, economic and political stability.

WHO calls on leaders and policymakers within health, finance and other sectors to act on the seven recommendations of the position paper on building health systems resilience to: (i) leverage the current response to strengthen both pandemic preparedness and health systems; (ii) invest in essential public health functions including those needed for allhazards emergency risk management; (iii) build a strong primary health-care foundation; (iv) invest in institutionalized mechanisms for whole-of-society engagement; (v) create and promote enabling environments for research, innovation and learning; (vi) increase domestic and global investment in health system foundations and allhazards emergency risk management; and (vii) address pre-existing inequities and the disproportionate impact of COVID-19 on marginalized and vulnerable populations.

Source: Ghebreyesus TA, Jakab Z, Ryan MJ, Mahjour J, Dalil S, Chungong S, Schmets G, Mcdarby G, Seifeldin R, Saikat S. WHO recommendations for resilient health systems. Bull World Health Organ. 2022 Apr 1;100(4):240-240A. doi: 10.2471/BLT.22.287843. PMID: 35386565; PMCID: PMC8958831.

ANNEXURE

Advisors

Mathura Prasad Shrestha
Badri Raj Pande
Kul Chandra Gautam
Suniti Acharya

Legal Advisor

Badri Pathak

Executive Board Members

Rita Thapa (President)
Aruna Uprety (Vice President)
Mahesh Kumar Maskey (Executive Chief)
Lochana Shrestha (Treasurer)
Sameer Mani Dixit (Member)
Abhinav Vaidhya (Member)
Aruna Upreti (Member)
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Bishnu Chaoulagai

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Aarati Shah
Achala Baidhya
Alina Maharjan
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Ashok Bhurtyal
B.D. Chataut
Badri Raj Pande
Bhagwan Koirala
Bharat Pradhan
Binjwala Shrestha
Daya Laxmi Joshi
Dharma Sharna Manandhar
Gajananda Prasad Bhandari
I.M Shrestha
Kedar P Baral
Lonim Prasai Dixit
Nabin Shrestha
Narendra Kumar Shrestha
Nilamber Jha
Rajani Shah
Ramesh Kant Adhikari
Renu Rajbhandari

*Sharad Onta
Shanta Lal Mulmi
Shiba K Rai
Shrikrishna Giri
Shyam Thapa
Suresh Mehata
Tirtha Rana*

Staff Members

Basudev Bhattarai, Human Resource and Assistant Program Manager

Manisha Pokhrel, Program coordinator

Neshan Rai, Deputy Director of Programs

Nikita Pradhan, Program Officer

Satya Kripashree Pradhan, Program Officer

Prakriti Poudel, Project Officer

Prapti Sharma, Project Officer

Anoushka Shrestha, Assistant Program Officer

Sabrina Guruacharya, Project Officer

Pranjali Dahal, Project Officer

Jagriti Paudel, Research Assistant

Kaushar Khanam Admin and Finance officer

Rabin Nepal, Assistant Admin and Finance officer

Dilip Thakur, Communications Officer

Maya Lama, Office Assistant

Devraj Moktan, Driver

FHEN (Chitwan field Office)

Simrin Kafle, Project Manager

Neshan Rai, Project Manager

Amrit Pokharel, Field Officer

Sunil Dulal, Field Officer

Usha Neupane, Project Officer

Srijana Bhattarai, Agriculture Officer

Kamala Gurung, Office Assistant