

Generating Sustainable Human and Institutional Capacity in Nepal

Looking Beyond a Decade of Accomplishments in Nutrition
NIL Legacy Event | September 17th, 2021

Keith West, Jr.

Swetha Manohar

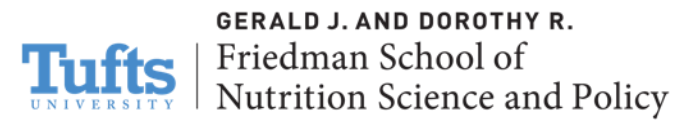
Ram Shrestha

Kedar Baral

Intended and Unintended Successes of the Nutrition Innovation Lab's Research Capacity Building Initiatives in Nepal



Swetha Manohar, RD PhD
Johns Hopkins University
Photo Credit: Onion Films



WHERE IT ALL BEGAN

DEFINE CONTEXT

This would involve **taking stock of existing information and experiences, noting ongoing research and intervention activities** addressing domains of interest specified under the CRSP-Nepal, **across areas of agriculture, household income/expenditures, food consumption patterns, etc., and identify essential gaps in knowledge required to advance knowledge acquisition, policies and programs.** This may require undertaking a literature review, conducting key informant interviews, and **convening workshops or meetings with key stakeholder researchers and institutions.**

ESTABLISH DIALOGUE WITH STAKEHOLDERS

There would need to be agreement among key, participating stakeholders, including relevant GON ministries, USAID/Nepal, the Global CRSP-Asia team, to **prioritize major research gaps needed to be filled** or other key purpose(s) for which baseline data is to be collected. This process should lead to specification of aims and the rationale for conducting additional research.

SPECIFY STUDY OBJECTIVES

This is **a key step and stakeholder buy-in and agreement are vital to this process because the study or survey objectives will, to a large extent, dictate sampling methodology, sample size, type of data to be collected, type of data collection instruments to be used, and respondent groups**



Scientific symposia

- Annual convening of multiple stakeholders to take stock of ongoing research on ag-nut pathway
agriculture -> food security -> nutrition
- Facilitated discussions on prioritization of research needs
- Institutional collaborations: IOM, NARC, NTAG, UNICEF, National Planning Commission – Government of Nepal

WHERE WE LANDED – INTENDED SUCCESSES

Nutrition research capacity

Johns Hopkins Bloomberg School of Public Health Graduate Summer Institute of Epidemiology & Biostatistics training program

- Short, intensive courses in epidemiology and biostatistics
- Developed an understanding of the principles, methodologic strategies and practical aspects of epidemiological research

Early career researcher engagement

- Student workshops at the symposium
- NIL faculty guest lectures on nutrition research methodology to students & early career researchers from the MPH program at Institute of Medicine & Nepal Agricultural Research Council

NUTRITION RESEARCH CAPACITY



Sujay Bhattacharya
*Then: Nutrition Specialist @ Child Health Division
Department of Health Services*

Now: Head of Nutrition and Health Department @ Action Against Hunger, Nepal



Amod Poudyal
Then: Junior Faculty (2012) at the Institute of Medicine

Now: Head of the Central Dept of Public Health at IOM



Raman Shrestha
Then: MPH student

Now: Global Evidence & Insights Advisor at Marie Stopes International



Rajan Paudel
Then: Junior Faculty @ IOM

Now: Associate Professor of Public Health



KP Lamsal.
Then: New graduate - MSc Nutrition & Dietetics student

Now: Nutrition Specialist, Suahaara II



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AGRICULTURE- NUTRITION PATHWAYS SCIENTIFIC SYMPOSIA



2012



2013



2014



2017



2016



2018



2019



AGRICULTURE TO NUTRITION PATHWAYS: SCIENTIFIC SYMPOSIA

2012 - 2019





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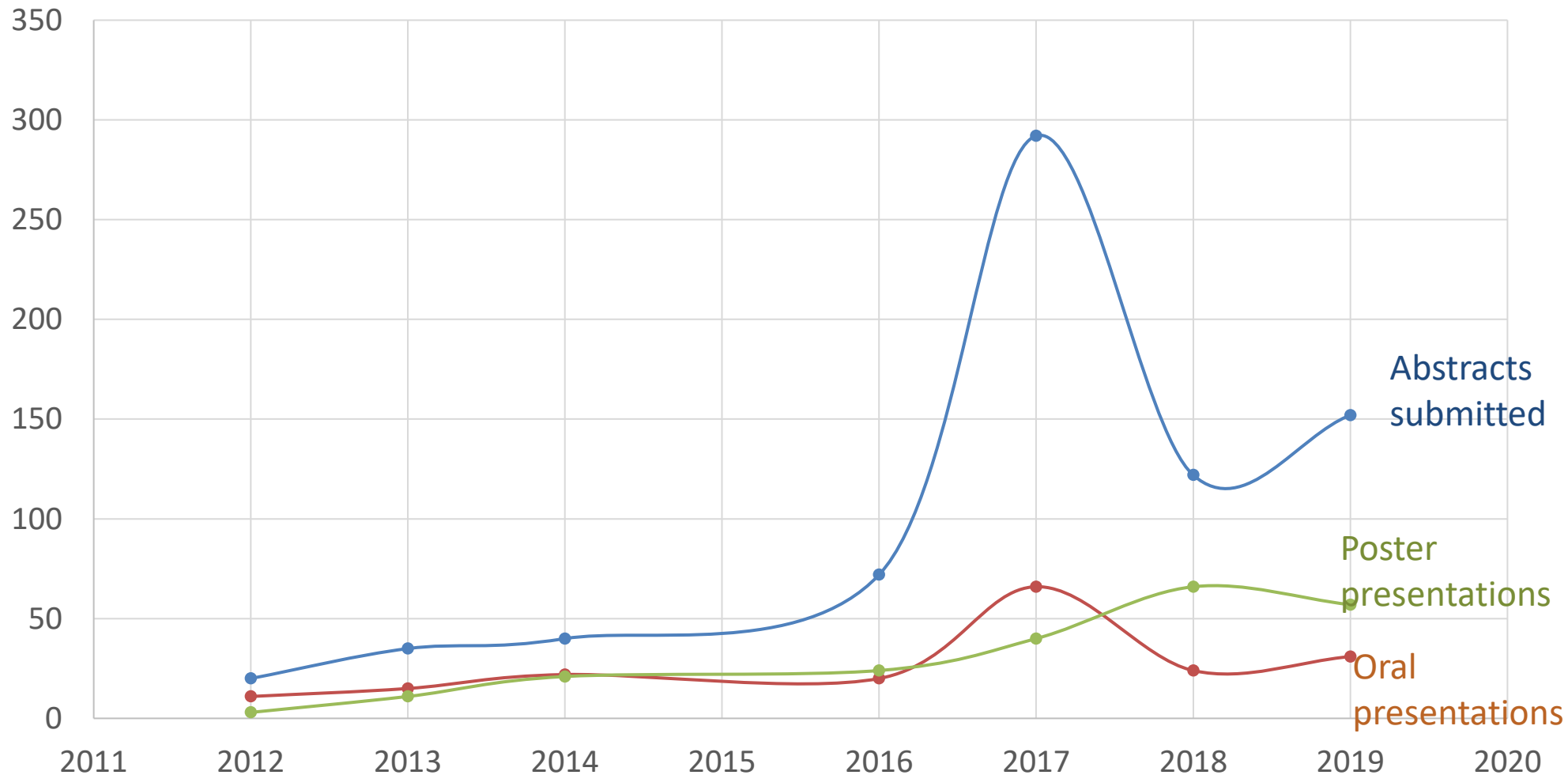




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QUANTITY & QUALITY



KNOWLEDGE SHARING & TRAINING

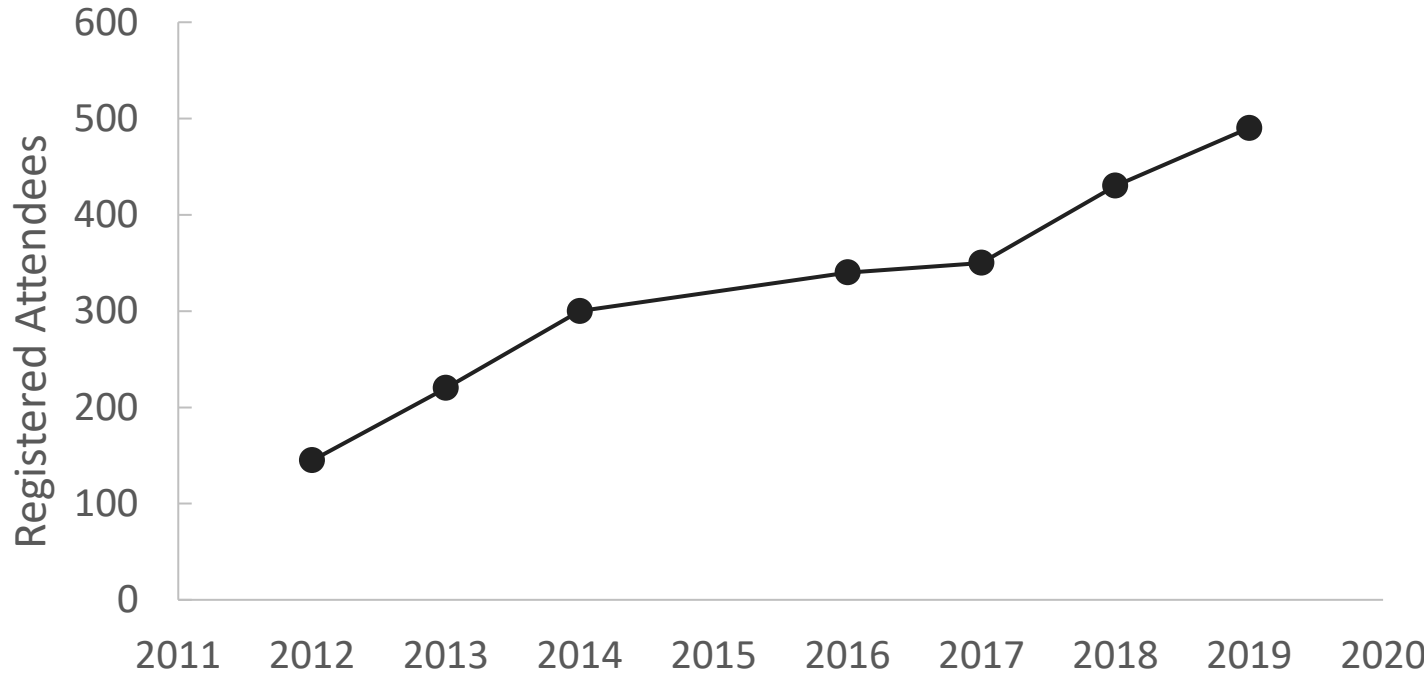
- Writing a winning research paper/ publication
- Crafting and refining a measurable research question
- Conducting food security assessments
- Anthropometric assessment & standardization
- Using STATA to analyze dietary and nutritional status nutrition data
- What is ODK? ODK and its utility in conducting research
- Setting up a dietetics accreditation program
- Nutrition surveillance in urban and semi-urban areas
- Identification of neglected, indigenous and underutilized crops and their role in improving diets
- Novel methods to measure physical activity
- Use of fertilizers and pesticides: Protecting or engendering food production
- Assessing aflatoxins ensure safe food environments
- Equity analysis in nutrition and health- equity and access in nutrition intervention



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INCREASING INTEREST & PARTICIPATION



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Friedman School of Nutrition Science and Policy



JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH



NARC Nepal Agricultural Research Council



immana Innovative Methods and Metrics for Agriculture and Nutrition Actions



Nepal Technical Assistance Group NTAG

LCIRAH Leverhulme Centre for Integrative Research on Agriculture and Health

PURDUE UNIVERSITY



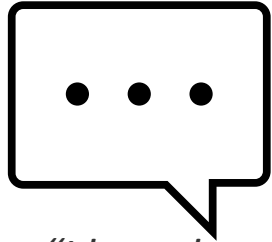
LANSA Leveraging Agriculture for Nutrition in South Asia

CGIAR RESEARCH PROGRAM ON Agriculture for Nutrition and Health Led by IFPRI

LONDON SCHOOL of HYGIENE & TROPICAL MEDICINE



UKaid from the British people



FEEDBACK FROM THE AUDIENCE

"I have been attending the symposium since 2013, when I was pursuing a Master's Degree in Food Technology. The two-day symposium was very fruitful and continuously notified me about future NIL events. The best aspect of NIL symposium are the panel discussions among different stakeholders. NIL symposia also focus on student related sessions which I find very useful for them to get exposure with academics from other universities."

- Abhishek Khadka, Young Professionals for Agricultural Development

"It provides an opportunity to understand the dynamics of agriculture-nutrition pathways in addressing malnutrition. You can relate and translate the evidence and insights shared during the symposia into action, both at your personal and professional front."

- Sabnam Shibakoti, Ministry of Agriculture and Livestock Development Government of Nepal

"Nutrition Innovation Lab's Scientific Symposium is an international rostrum that feeds into the growing research demand within Nepal and helps set development goals on agriculture-nutrition-health. I encourage participants to not miss the opportunity to learn about research advances and its linkages to development."

- Dikshit Poudel, Agriculture Forest University

UNINTENDED SUCCESSES OF PLANNED ACTIVITIES

Population-based research methods

- PoSHAN Community Studies: annual & seasonal sites
- Conventional anthropometric standardization methods



- Student Research Exchange
- Mentor- peer relationships:
 - peer-review papers
 - statistical analysis of data: PoSHAN-Nepal data team & MPH students



NUTRITION RESEARCH CAPACITY

PLOS ONE

 OPEN ACCESS  PEER-REVIEWED

RESEARCH ARTICLE

Prevalence of damaged and missing teeth among women in the southern plains of Nepal: Findings of a simplified assessment tool

Priyanka Agrawal , Swetha Manohar, Andrew L. Thorne-Lyman, K. C. Angela, Binod Shrestha, Rolf D. Klemm, Keith P. West



> [Asia Pac J Clin Nutr.](#) 2018;27(3):624–637. doi: 10.6133/apjcn.092017.04.

Pre-earthquake national patterns of preschool child undernutrition and household food insecurity in Nepal in 2013 and 2014

Sudeep Shrestha ^{1 2}, Andrew L Thorne-Lyman ^{1 2 3}, Swetha Manohar ^{1 2}, Binod Shrestha ², Sumanta Neupane ², Ruchita Rajbhandary ², Raman Shrestha ², Rolf Dw Klemm ^{1 4}, Bareng As Nonyane ², Ramesh K Adhikari ^{2 5}, Patrick Webb ^{2 6}, Keith P West ^{7 2}



PONE-D-20-29709R1

Factors associated with dietary diversity among pregnant women in the western hill region of Nepal: a community based cross-sectional study

Vintuna Shrestha, Rajan Paudel, Dev Ram Sunuwar, Andrew L. Thorne Lyman, Swetha Manohar, Archana Amatya

Why are farmers keeping cultivatable lands fallow even though there is food scarcity in Nepal?

[Uttam Khanal](#) 

[Food Security](#) 10, 603–614(2018) | [Cite this article](#)

CHALLENGES AND OPPORTUNITIES

- Sustaining momentum & interest
- What are incentives for collaboration?
- Institutional vs human capacity building and investments
 - ❖ Enabling environments in the face of inconsistent governance
 - ❖ Institutional memory
 - ❖ Assessing demand
- Addressing equity and inclusion
- The role of professional associations
- Peer to peer mentoring

ACKNOWLEDGEMENTS

- USAID: Ahmed Kablan, Maura Mach, Shanda Holmes, Hari Koirala, Debendra Adhikari
- NTAG: Deepak Thapa, Preeti Subba, Priya Shrestha, Prativa KC
- IOM: Dr. Sharad Onta, Dr. Narayan Wagle, Dr. Amod Poudyal, Dr. Madhu Dixit-Devkota, Dr. Archana Amatya, Dr. Binjwala Shrestha, Dr. Rajan Paudel, Dr. Ramesh Kant Adhikari
- NARC: Dr. Devendra Gauchan, Dr. Y.N. Ghimire
- NIL Team, Nepal : Abhigyna Bhattarai, Angela KC, Chandni Karmacharya, Arvin Saleh, Binod Shrestha, Dev Raj Kumar, Ashish Lamichanne, Ashish Pokharel
- NIL Team, US: Dr. Keith West, Dr. Rolf Klemm, Dr. Andrew Thorne-Lyman, Dr. Patrick Webb, Dr. Shibani Ghosh, Dr. Robin Shrestha
- National Planning Commission, GoN (past & present) : Dr. Usha Jha, Mr. Atmaram Panday, Dr. Geeta Bhakta Joshi, Dr. Mishra
- Child Health Division: Rajkumar Pokharel
- ANH Academy: Joe Yates, Suneetha Kadiyala, Jeff Waage
- UNICEF: Stanley Chitekwe, Sanjay Rijal, Pradiumna
- Our student volunteers



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Innovative Methods and Metrics for
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LANSA
Leveraging Agriculture for
Nutrition in South Asia



RESEARCH
PROGRAM ON
Agriculture for
Nutrition
and Health
Led by IFPRI

Institutional Capacity Building in Nutrition Education and Research: Perspectives from PAHS and Nepal

Dr. Kedar Baral, Patan Academy of Health Sciences

BACKGROUND

- ❖ NIL is a complex and multi-sectorial project
- ❖ It is difficult to succinctly summarize
- ❖ Fundamental question is how we understand and interpret capacity building
- ❖ My concern is whether or not the agenda of interest **percolate** into the big system both within MOHP and academia
- ❖ The measurement of capacity is a challenging task since it is a multidimensional & dynamic process
- ❖ I will be summarizing NIL through a series of illustrations

ILLUSTRATIONS

NIL is one the contributors under the leadership of ministry of health and population and academia.

1. BBNC participants are now catalysts in academia and practice wherever they are.
2. They are improving and strengthening nutrition science teaching
3. Greater number of students are choosing nutrition topics for their master's thesis
4. People from diverse disciplines are increasingly attracted towards research methodology training/workshop
5. Their engagement and networking motivates me to do more
6. Informal but functional networks of BBNC, training-workshop and symposium participants exist

ILLUSTRATIONS

1. Poshan study is unique in terms of methods and results. We learned a lot while designing and implementing this study.
2. Aflacohort is a very complex and ambitious community level study. The tools were questionnaires, measurement and samples collected at multiple time points. Samples transport and storage, including maintaining records, involved several personnel in different sites.
 1. Recruitment and mobilizing team, training and supervision, and implementation of activities
 2. Clinical sample collection, transport, appropriate storage, shipment and long term storage required multi-level meticulous work of developing and running a system mobilizing coordinated multi-skills personnel
 3. Data management
 4. Dealing and communicating ethics committees
 5. We successfully completed field work

WHAT IS HAPPENING IN NEPAL NOW?

1. Increased numbers of nutrition advocates in health and agriculture sectors
2. New program started and strengthened existing training programs
3. Leadership at MOHP and different institutions are more informed and engaged in nutrition program and activities
4. Continuous feedback being provided by nutrition advocates to the leadership
5. Mid-level trained personnel experienced in complex research are in market
6. PAHS, as a partner in all projects, has strengthened its nutrition training and research cycle management

Without a doubt, NIL is one of the major contributors to the growing movement in Nepal pushing for an improvement in nutrition status.

Beyond Workshops and Symposia: Impact of N-IL in Strengthening a Strong Foundation of Young Nepali Nutrition Professionals



Ram Shrestha, D.Sc. MS, MSc

APPLICATION OF CAPABILITY DEVELOPED

- More than 30 CAFODAT students participated in the NIL seminar and workshops organized in Kathmandu.
- Participants has improved their capability in conducting seminar, workshops, and quality research.
- After receiving the Bachelor as well as Master's degree, CAFODAT students work in the following organizations
 - A. Food and Dairy industry
 - B. Hospitals and clinics
 - C. Govt Health and Agriculture departments and labs
 - D. Public, Private, NGOs research organizations
 - E. Nutrition and Dietetics institutions

APPLICATION OF RESEARCH CAPABILITY DEVELOPED

CAFODAT College Master's in Nutrition and Dietetics Students applied their research, seminar, and workshop organization skills in the following areas:

1. Write a quality research proposal for Master's Thesis
2. Guide CAFODAT students to write and conduct Master's as well as Bachelor's Thesis research
3. Build skills in writing and publishing research articles in Nepali as well as international journals
4. Write research grant proposal for UCG as well as to other funding agencies
5. Write and secure a grant to research in the DFTQC lab
6. Encourage technical people of their department to write nutrition-sensitive proposals and conduct research
7. Lobby higher authority to allocate funds for nutrition-sensitive research
8. Organize quality nutrition and dietetics workshops and seminars (NDA and CAFODAT College)
9. Write a concept paper to conduct a workshop for developing protocol and guidelines for certification of a registered dietitian.
10. Established a research department in CAFODAT College



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**Tufts Professors Visit
CAFODAT College**



**Tufts Professors
Presentation**



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Student explaining importance of “Nutritious Nepali Thaal Meal” to Mr. Kedar Parajuli; Chief, Nutrition Section



CAFODAT and Central Home Science Department staff and students participating pre-workshop skype call with Tufts University , USA staff



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Q&A



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