

9-13 JULY 2017  
KATHMANDU, NEPAL

# The Agriculture, Nutrition, Health Scientific Symposium and Academy Week

# 2017





# BEHIND THE SCENES



## THE CONTEXT

The scale and enormity of the consequences of malnutrition globally remain a persistent public health challenge with malnutrition and poor dietary practices among the most notable risk factors for the global burden of disease. Worldwide estimates reveal that 144 million children under five are stunted, 52 million children are wasted and 41 million are overweight. Further, it is estimated that close to half of all children in low and middle income countries and 468 million women globally are anaemic. This burden of malnutrition is staggering and, with rapidly changing dietary patterns that render diets more convenient-based, calorie dense and micronutrient light it is becoming clear that these inadequacies in nutritional status and diet contribute to increased risk of both communicable and non-communicable disease.

The reasons for poor nutritional status and diets can be attributed to evolving food systems, climate change, urbanization and persistent social inequities. Thus, the causes of malnutrition are multiple; spanning a range of social, political and economic determinants. Poor nutritional status in children can ultimately lead to poor cognitive development early in life and limited earning capacity later on, thus feeding into a cyclical pattern of undernutrition, poor health and poverty. Understanding the extent to which climate, agricultural production, dynamic markets and other health and nutrition interventions may influence these outcomes is critical to ensuring the promotion of nutritional well-being and health.

Exploring these complex pathways requires a broad understanding of these issues through several disciplinary lenses spanning agriculture, health, nutrition, environmental health, biological sciences, and economics. In the recent past, there have been increased investments in research linking agriculture to nutrition, aimed at addressing methodological and design challenges to ensure a generation of rigorous evidence that can inform policies and programs. Sharing novel ideas, critically thinking through existing literature and identifying gaps in research are key to solving these issues.





## ORGANISING PARTNERS

Over the past decade, concerted efforts have been made to bring together researchers and policymakers from different disciplines and sectors to explore the vital gaps along agriculture, nutrition and health pathways, and to stimulate new and innovative ways of leveraging agriculture and food systems for improved nutrition and health outcomes. Standing out among such efforts have been conferences and symposia convened under the umbrellas of the **Feed the Future Innovation Lab for Nutrition** (the Nutrition Innovation Lab) and the **Agriculture, Nutrition and Health (ANH) Academy**.

The Nutrition Innovation Lab's scientific symposium, held annually in Nepal since 2013, has been a forum for scientists to present country- and regionally-specific research to a diverse audience of policymakers, program implementers and academia on nutrition, agriculture and health. The event also serves as an opportunity to network and allow for an exchange of ideas across disciplines among those working within and outside of Nepal. The event, supported by the United States Agency for International Development (USAID), is organized by **Johns Hopkins University Bloomberg School of Public Health** and **Tufts University's Friedman School of Nutrition Science and Policy** at Tufts University with co-hosts the Institute of Medicine's Department of

Community Medicine and Public Health, at **Tribhuvan University (IOM)**, **Nepal Agricultural Research Council (NARC)** and the **Nepali Technical Assistance Group (NTAG)**.

Similarly, the ANH Academy Week is a series of annual events that bring together the community of researchers and users of research (practitioners and policymakers) working at the intersection of agriculture, nutrition and health. The objective of the ANH Academy Week is to foster knowledge exchange, innovation and learning around agri-health research. The annual event – rotated between Africa and Asia, is primarily funded by UKAid from the UK Government, through the **Innovative Methods and Metrics for Agriculture and Nutrition Actions (IMMANA)** program, and is organized by the **London School of Hygiene & Tropical Medicine (LSHTM)**. It builds on the successful legacy of five agri-health research conferences organized by the **Leverhulme Centre for Integrative Research on Agriculture and Health (LCIRAH)** as well as ongoing events and activities coordinated under the **CGIAR Research Program on Agriculture for Nutrition and Health (A4NH)**, which is led by the **International Food Policy Research Institute (IFPRI)**.

## THE COLLABORATION

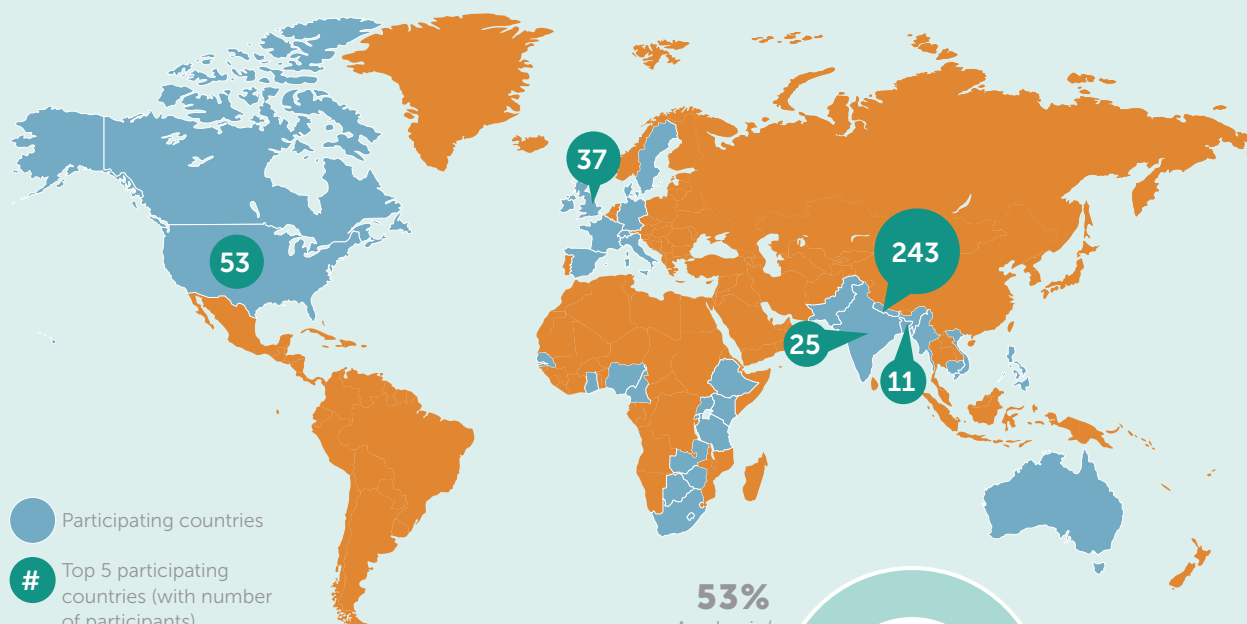
The formulation and structure of the Sustainable Development Goals (SDGs) highlights the ethos of collaboration required to address the myriad multidimensional and cross-sectoral challenges that both exist and are forecasted at local and global scales. It is in this spirit of collaboration that the Nutrition Innovation Lab and the ANH Academy, and their many key partners, decided to join forces to convene a shared series of events to facilitate learning and sharing among the global agriculture, nutrition and health research community.

Over the course of five days in July 2017, 430 people participated in an exciting program in Kathmandu, Nepal, that included interactive learning labs, panel discussions, abstract-driven scientific sessions, keynote speeches and more. It is testimony to the shared vision and

common missions of the many partners involved that a collaboration of this size and complexity was possible, but also to the research and policy community who work year round to advance the body of research and its agenda in these fields. It is these contributions that make such events possible in the first place.


This report provides insights into the joint Agriculture, Nutrition, Health Scientific Symposium and Academy Week that took place in Kathmandu from 9-13 July 2017; reflecting the broad range of science presented, discussions that took place, and connections that were made. For more information, including videos and other resources please visit the **ANH Academy** and the **Nutrition Innovation Lab** websites.

## THE WEEK IN NUMBERS



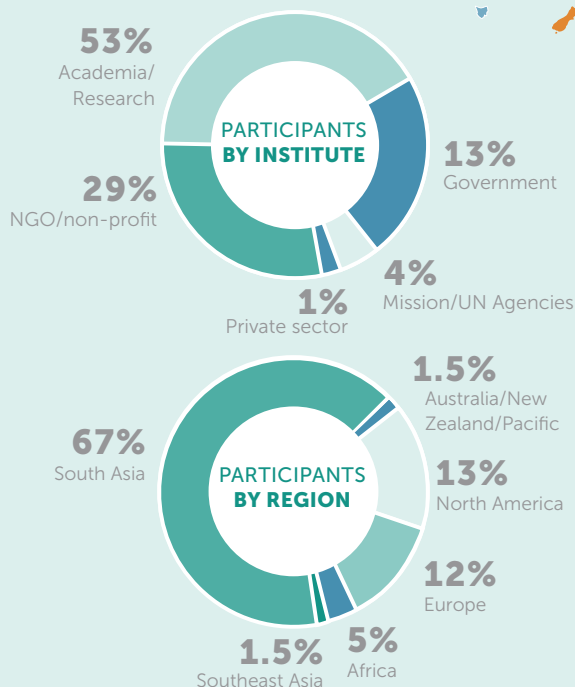
**430** participants  
FROM 31 COUNTRIES

**181** institutions  
REPRESENTED

 **61** speakers at the Symposium

 **45** hours of Learning Labs

 **59** posters presented



## PARTICIPANT FEEDBACK

We are grateful to everyone who managed to complete the feedback survey. We have taken into account all of your insights and guidance, which will help us to make future events even better!

Of the 140 participants who completed the feedback survey:



### >85% RATED THE EVENT AS 'EXCELLENT' OR 'VERY GOOD'

"I have gained good exposure of recent developments from skill labs and research of other scholars. I would use the skills, knowledge and approaches used in my future study."

"It is a great platform for sharing new ideas, views from different countries regarding nutrition and agriculture. Keep it up!!!!"



### >90% MADE USEFUL NEW CONNECTIONS DURING THE EVENT

"This was an interdisciplinary forum which provided me opportunities to interact with people of health, nutrition and social sciences, hopefully this will help me to plan new studies linking agriculture with nutrition and health"

"People from various disciplines who are involved in research, policy and academicians from various continents and countries. The policy and practice thereof and their effects on nutrition is one of my great learnings during the symposium as I begin to ponder about the same policy and practice in my own country."



### >65% ARE LIKELY TO ATTEND THE EVENT NEXT YEAR

"I have really gained a lot and hope to attend the next year. Thank you for the opportunity."





# LEARNING LABS

The week began with two days of interactive Learning Labs, delivered by international experts covering a broad range of topics with the aim of strengthening practical skills, knowledge and capacity around key methods, metrics and theories used in agriculture, nutrition and health research and practice. Participants had the opportunity to sign up for selected sessions in advance and were encouraged to step outside their disciplinary comfort zones in order to learn something new. At any one time there were up to five parallel sessions in progress.



## INTERDISCIPLINARY JOURNEYS

An opening plenary panel discussion kicked off the Learning Labs this year, exploring the challenges and benefits that early career researchers encounter when working across disciplines and sectors. Throughout the honest and lively exchange, the panellists touched upon their own experiences navigating between different university departments, government ministries, datasets, knowledge systems, and communications approaches and in doing so highlighted why such approaches are critical for agri-health research.



## INTRODUCTION TO ECONOMICS FOR AGRI-HEALTH RESEARCHERS

*Tufts University, Purdue University*

A key benefit of this year's joint event was the opportunity to explore new areas of study with the help of leading experts. In this session, advanced researchers in the field of agricultural economics explained key research methods and provided participants with case studies to practice new skills. Attendees used these analytical methods, to explain and predict behaviour related to food production and markets, such as dietary intake. Further examples used for empirical application were taken from Nepal and elsewhere, and included all socioecological levels.



## QUALITATIVE METHODS IN NUTRITION AND FOOD SYSTEMS RESEARCH

*Leverhulme Centre for Integrative Research on Agriculture & Health (LCIRAH)*

In this session participants were challenged to consider qualitative social research holistically, allowing them to then utilize qualitative methods used commonly to provide greater understanding of the links between agriculture, nutrition, and health. Following the discussion, these research methods were applied in designing and developing a case study through an interactive group exercise requiring the application of interdisciplinary principles.



## OPEN DATA FOR RESEARCH IN AGRICULTURE AND NUTRITION

*Global Open Data for Agriculture and Nutrition (GODAN)*

Food insecurity could be addressed more effectively through openly sharing information, data, and knowledge about food, agriculture, and nutrition. However, a large amount of information is inaccessible or unusable to researchers, program managers, and policymakers because of paywalls, unreachable sources or incompatible formats. The Global Open Data for Agriculture and Nutrition (GODAN) initiative used a session to introduce participants to the principles and concepts behind open data and lead them through developing and presenting their own plans for open data management.



## RESEARCH UPTAKE – WHAT IS IT, WHY BOTHER, AND ARE YOU GOOD AT IT?

*Leveraging Agriculture for Nutrition in South Asia (LANSA) & IMMANA*

What is the function of research if it is not picked up by other researchers or policymakers to guide evidence-based decision-making? This is just one question participants tackled during a discussion on research uptake. Led by LANSA and IMMANA, the conversation delved into key definitions, approaches, tools, and techniques used in research uptake, and introduced participants to the LANSA self-assessment tool as a means of assessing research uptake capacity – for themselves, their fellow researchers, team, or even organisation.



## NUTRITION-SENSITIVE FOOD SYSTEMS: FROM CONCEPTS TO PRACTICE

*United Nations Food and Agriculture Organization (FAO)*

Fuelled in part by the Sustainable Development Goals and the UN Decade of Action for Nutrition, governments and development partners have committed to nutrition-sensitive agriculture policies and programs. Participants learned about the tools, including guidelines and e-learning modules, produced by FAO for professionals who are responsible for developing and implementing these policies and programs. Using a case study, they were walked through a scenario and considered how the methodology could be used in different contexts.



## USING THE WOMEN'S EMPOWERMENT IN AGRICULTURE INDEX (WEAI) FOR NUTRITION-SENSITIVE PROGRAMMING

*CGIAR Research Program on Agriculture for Nutrition and Health (A4NH)*

The CGIAR Research Program on Agriculture for Nutrition and Health (A4NH) led an exploration of the Women's Empowerment in Agriculture Index (WEAI), a tool that allows researchers to systematically measure women's empowerment in different agricultural sectors. Participants discussed why understanding women's empowerment and gender is so pivotal for nutrition-sensitive agriculture projects, and used survey models to learn how project-level WEAI ("pro-WEAI") – currently in development – uses both qualitative and quantitative methods to measure empowerment.



## SUSTAINABLE DIETS

*London School of Hygiene & Tropical Medicine (LSHTM) & ANH Academy*

Agriculture and food production are key to life on earth, and have major implications for the environment, causing ~30 percent of anthropogenic greenhouse gas emissions and ~70 percent of global fresh water use. A food systems perspective shows how 'sustainable diets' can deliver co-benefits for both human and planetary health. In this session, participants explored standard methods of quantifying environmental impacts of diets and discussed how these data can inform policies that improve food system and diet sustainability.



## BIOLOGICAL MECHANISMS FOR AGRICULTURE TO NUTRITION: ROLE OF FOOD SAFETY IN ACHIEVING OPTIMAL HEALTH AND WELLBEING IN DEVELOPING COUNTRIES

*Tufts University & USAID Bureau of Food Security*

Food-borne diseases account for 33 million disability-adjusted life years (DALYs) and 420,000 deaths annually, and poor food safety reduces agricultural outputs and negatively impacts food security. Participants examined emerging issues in food safety, such as water, hygiene, sanitation, aflatoxins, and more, in the context of the UN's Sustainable Development Goals. Through interactive exercises and discussions, they explored how these risks are linked to poor nutrition and human and economic development.



## ANALYSIS FRAMEWORK FOR SOCIAL DETERMINANTS AND THEIR INFLUENCE ON FOOD INTAKE BY WOMEN

*Tribhuvan University, Institute of Medicine, Nepal*

The Learning Labs provided opportunities to not only learn new skills, but to build on existing ones. Here, participants built on their prior knowledge and experience and were trained in using a common framework to analyze social determinants of food intake by women. They first reviewed the analysis framework presented by IOM, and then worked together to derive proximate determinants and indicators. Finally, the group discussed appropriate approaches to information gathering and data collection, and concluded by generating case studies for the framework in different sociocultural contexts.



## LEVERAGING NUTRITION WITH ANIMAL-SOURCE FOODS (ASF) AND LIVESTOCK INTERVENTIONS: UPDATES AND EVIDENCE

*International Livestock Research Institute (ILRI), London School of Hygiene & Tropical Medicine (LSHTM), University of Sydney, Land O' Lakes*

Animal-source foods are important contributors of essential nutrients for women and children in poor households, and are tied to economic activities, such as livestock rearing. Using recent literature, participants reviewed, assessed, and evaluated different nutrition-sensitive agriculture interventions targeting animal-source food production or consumption. After presenting their group work and inviting discussion, participants worked to reach group consensus on processes that promote facilitating nutrition outcomes in livestock value chains.



## GETTING PUBLISHED

*Various*

In this illuminating dive into the world of peer-review publishing, Madhu Dixit Devkova of the Nepal Institute of Medicine moderated a spirited plenary debate with journal editors, discussing how early-career researchers can improve their chances of getting research published. Key takeaways included the importance of writing clearly for audiences, self-evaluation and taking on-board reviewer comments, and recognising the value of negative as well as positive results. The most recurring theme? 'Relevance, relevance, relevance!' - Attendees learned that identifying suitable journals for one's research is of fundamental importance.



## VALUE CHAINS FOR NUTRITION

*International Food Policy Research Institute (IFPRI) & Leveraging Agriculture for Nutrition in South Asia (LANSA)*

What is the role of the public and private sector in delivering nutrient-rich foods and improving the diets of vulnerable consumer groups -- and how should they do it? Malnutrition is a central and persistent challenge for global development. While there is increased interest in engaging the private sector, there are few successful examples. Participants learned how to assess challenges faced in agri-food value chains and identify entry points for interventions, while discussing best practices and common themes. They then used case studies to apply these concepts, methods, and frameworks.



## DIET DIMENSIONS POLICY GAME

*ANH Academy*

Games can provide a way to stimulate discussion, interaction, and creative thinking on policies for a range of topics. Here, participants from a wide range of backgrounds in food systems research and policy formed teams to develop, reassess, and evaluate sustainable food system and healthy diet project ideas for implementation in various contexts. **Learn how to play the game.**



## INDICATORS OF AFFORDABILITY OF NUTRITIOUS DIETS

*Indicators of Affordability of Nutritious Diets in Africa ( IANDA)*

Participants learned how food prices are measured and tracked around the world, and how existing data can be made more nutrition-sensitive. They then used national food price data generated from Ghana and Tanzania to construct simple indexes to monitor food and nutrition security, and discussed in groups and in plenary how to use the indicators in their own contexts.



## MEASURING FOOD INSECURITY AND MALNUTRITION

*Tufts University*

New tools and recently released materials offer targeted guidance on dietary-related food security indicators. Participants reviewed different data sources and calculations used by international agencies described in these guidance materials, and discussed in groups each type of indicator and data source, brainstorming best practices and recommendations for future priorities in research and policymaking in agriculture and health.



## DATA DIVE – MOBILE FOR NUTRITION

*World Food Programme & World Agroforestry Center*

To explore the strengths and limitations of mobile data collection, participants 'dove' into data collected through mobile technology in Kenya and Malawi. They experimented using a survey on their mobile phones and discussed other mobile tools, such as live calls and SMS. Participations were also able to observe the raw data, see mock visualisations, and discuss data interpretation.





# SCIENTIFIC SYMPOSIUM

After a fast-paced Learning Lab program came the Scientific Symposium, held in plenary over three days in order to facilitate the cross-pollination of ideas and evidence among the many disciplines represented by the participants. As well as nine abstract-driven sessions, this element of the week featured mini poster presentations, policy dialogues, evidence from major programs, and keynote speeches.

## OPENING ADDRESS

**Opening Remarks from Chief Guest.  
Hon. Prof. Geeta Bhakta Joshi,  
Inaugural Session Chair, Member,  
National Planning Commission**

In his address, the Hon. Prof. Geeta Bhakta Joshi reiterated the challenge of reducing stunting in Nepal and the Nepal government's focus on improving population nutrition through multi-sectoral approaches. Dr. Joshi highlighted the accomplishments of the Multi-Sectoral Nutrition Plan (MSNP) in developing a comprehensive nutrition plan at all governance levels, a digital database for all MSNP activities, and in doubling government expenditure earmarked for nutrition. The formulation of MSNP II was also fleshed out, with priorities on populations particularly affected by malnutrition, working to maximize the 1000-day golden growth window, developing strong working relationships with district governments, and emphasizing the accountability of implementation. Dr. Joshi also encouraged all partners present to focus on building local institutional capacity to further strengthen the role that evidence plays in policy formulation.



**Donor welcome from Monica Villanueva,  
Maternal and Child Health Team  
Lead, USAID. Deputising for Carrie  
Rasmussen, Director of Health,  
USAID Mission, Nepal**

Ms. Villanueva highlighted the symposium as a manifestation of the values shared by the many stakeholders who were present: a commitment to multi-sectoral approaches to improve nutrition and link research to policies, programs, and interventions. Nepal was identified as a leader in committing to push forward multi-sectoral approaches to nutrition issues, as well as a leader in integrating public health science into policy-making, resulting in policies that have contributed to a global base of evidence. Ms. Villanueva urged those present to continue their commitment to excellence in research and research-driven policy making.





## DIETARY TRANSITIONS

Multiple factors drive changes in global consumption patterns and data availability. Appropriate measures are key in understanding these drivers and their impacts on health and nutrition outcomes. This session presented evidence from ongoing projects exploring some of these factors and their role in the nutritional transition, from reduced consumption of animal sourced foods in Timor-Leste, to the globalisation of diets in Zambia, to the associated and ongoing epidemiological transition taking place in the Global South. The relative affordability of a nutritious diet and the price of foods emerged as key factors that can drive consumption patterns and health and nutrition outcomes.



## FOOD POLICY AND PRICE

Food policies and prices are critical links between agriculture and nutrition outcomes, as their impacts are evident throughout food systems. This session examined evidence from studies researching the links between agricultural and food policies and prices, and their impacts on agricultural productivity and consumption patterns. Some of the questions the studies seek to answer are: how can we determine when policies are misaligned with people's coping strategies and consumption behaviors? How can this disconnect be eliminated in order to achieve better nutrition and health outcomes?

## POLICY, FOOD SUPPLY AND FOOD PRODUCTION

What are the wider linkages between agriculture and health, particularly in the areas of policy and food security? This session's diverse presentations included the environmental and health impacts of palm oil production and consumption; the relationship between malaria and rice production in Nigeria; small scale vegetable production in Nepal; and comparing countries' diversification of food supply and diets. The evidence presented highlighted the need for greater policy coherence between the agriculture, nutrition and health sectors: they currently tend to operate on separate agendas, which obscures key impact pathways and influences programmatic outcomes and effectiveness on all levels.

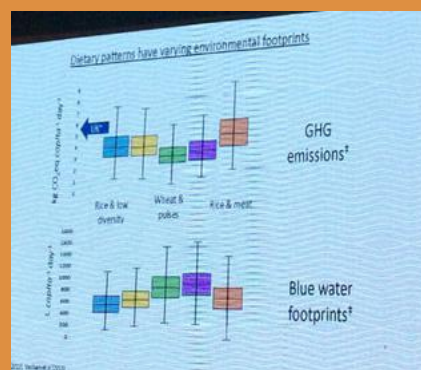


## NOVEL METRICS TO STUDY THE AGRICULTURE-NUTRITION PATHWAY: EVIDENCE FROM OBSERVATIONAL STUDIES

It is often challenging to find data to help answer agriculture-nutrition questions, and the data that is available tends to lack consistency to make comparisons and large-scale analysis. A general idea of the data's direction of bias exists, but not a sense of the magnitude. This session presented novel and innovative approaches, methods, metrics, and technologies to better capture nuanced and so-far neglected information to better understand impact pathways between agriculture and nutrition in rural areas in low and middle income countries. This paves the way for answers to critical questions like "Can locally available foods fulfil the requirements for major essential nutrients?" and "What are the possible impacts of an agricultural intervention on members of a rural household?" which will, in turn, improve programming and lead to better nutrition outcomes.

## CLIMATE, SEASONALITY AND ENVIRONMENTAL CHANGE

Climate change, seasonality and the external pressure of the environment have impacts on agriculture and consequent nutrition outcomes. This session considered the results of projects and studies that investigate different aspects of the climate-agriculture-nutrition nexus. Participants learned about seasonal influences on consumption of non-staple micronutrient-rich foods in different agroecological regions in Nepal; modelling of dietary changes in India to address future water constraints while meeting nutritional guidelines with minimal deviation from existing dietary patterns; child food insecurity and nutrition in the context of a changing climate in India; and seasonal effects on household food security levels in Ethiopia, considering the adequacy of food security indicators as a proxy for nutrition outcomes.





## HOUSEHOLD FOOD PRODUCTION AND NUTRITION LINKAGES

What are the links between household food production and nutrition? Speakers in this session presented studies from Ethiopia, Nepal, Myanmar, and Bangladesh, looking particularly at the relationship between diversity in production and diversity in diet. On the whole, most reported a positive relationship between greater production diversity and dietary diversity, but cautioned that it is not a simple cause and effect relationship. There are many other factors to consider, such as on and off-farm labor, land ownership, market systems, gender, and influences on production decisions.

## GENDER AND EQUITY

Gender and equity play an important role in agriculture, nutrition, and health research. In this session, presenters highlighted research about male out-migration, intra-household calorie distribution, trade-offs between income and health, and developing metrics to measure women's empowerment. Studies in Nepal revealed calorie allocation is often inequitable within households, and men tend to retain decision-making power via mobile phones even after migrating to another country. In addition, a study of female cotton pickers in Pakistan showed agricultural work during pregnancy can impact on maternal and infant health, while formative research was presented about factors to consider when measuring women's empowerment in nutrition.



## PROGRAM EVALUATIONS I

Research is designed to prove something, while evaluation is designed to improve something. Research looks at how something works, while evaluation looks at how well it works. Research aims to increase knowledge while evaluation can provide information for decision-making and implementation; research controls the setting as much as possible, while evaluation happens within a context of changing factors. With these contradictions as a backdrop, this session considered results of interventions and experiments including new approaches to behavior change communication, the potential of home gardens to improve nutritional security of smallholder farmers, and the effectiveness and trade-offs of intensive holistic interventions.



## PROGRAM EVALUATIONS II

The Program Evaluations discussion continued with focus turning to key elements of agriculture-nutrition programming, the importance of monitoring and evaluation of outcomes; and the use of lessons learned to improve future programming. In agriculture-nutrition programming, while the 'theory of change' is usually articulated at the outset of the program, the pathways of impact and underlying assumptions are often not validated during or at the end of the program. As a result, assumptions about multiple and very often complex impact pathways in agriculture-nutrition programming may not hold. A clearer understanding of stakeholder dynamics, coupled with a more systematic assessment of these integrated interventions, is necessary to discern the multidimensional factors that influence nutrition and health outcomes and move the field forward.



## OTHER SCIENTIFIC SESSIONS

### INNOVATIVE METHODS AND METRICS FOR AGRICULTURE AND NUTRITION ACTIONS (IMMANA)

Funded by UKAid to fuel and promote new research on agriculture and nutrition, IMMANA introduced its program workstreams and engaged participants in thematic breakout sessions. Principal Investigator Suneetha Kadiyala highlighted key outputs and future directions, then announced recipients of the second round of the Competitive Research Grants workstream and introduced research produced by ANH Academy working groups on food environments, sustainable diets, and food safety. William Masters, Director of the Post-Doctoral Fellowships workstream, introduced the Fellows' body of work and upcoming funded projects.

Two grantees, Christine Lamanna and Eike Luedeling of ICRAF, presented research projects exploring the use of mobile technology for climate-smart agriculture and probabilistic modelling for nutrition-sensitive agriculture programs, respectively. Sukhwinder Singh, a Round Two IMMANA Fellow, spoke about his interdisciplinary journey from agribusiness to food security and nutrition in India.

Finally, the session broke into groups focused on intra-household resource allocation; innovative large-scale survey methods; models and modelling for nutrition-sensitive agriculture; capturing prices, markets, and value chains; and working with user-generated data/ICTs, while a question and answer session was offered for Round Four IMMANA Fellowships.



### AN INTEGRATED APPROACH TO ADDRESSING MICRONUTRIENT DEFICIENCIES: POLICY OPTIONS FOR A WAY FORWARD

Over the past twenty years, Nepal has made some incredible gains in addressing micronutrient deficiencies, thanks to high coverage of nutrition interventions like vitamin A supplementation and universal salt iodization. However, dietary diversity is still low among women and young children in certain regions. The survey report from the 2016 Nepal National Micronutrient Status Survey (NNMSS) – the first and largest micronutrient survey collecting household data, biological specimens, and food samples (salt and wheat flour) – is expected at the end of 2017, providing updated statistics on the impact of public health programs on micronutrient status. Speakers and panelists from the Government of Nepal – Dr. Rajendra Pant and Dr. Matina Joshi Baidya, academics Dr. Madhu Dixit Devkota, Dr. Ramesh Kant Adhikari, Dr. Keith West and representatives from the UN, Mr. Naveen Paudel – called for more robust evidence on how to improve program implementation, including targeting vulnerable populations, investing in increased capacity to deliver nutrition education, and behavior change communication.



### EVIDENCE FROM THE FEED THE FUTURE INNOVATION LAB FOR NUTRITION

Researchers presented work conducted in Nepal in a session looking specifically at evidence generated through the Feed the Future Innovation Lab for Nutrition. This included results from a study on household food production and dietary diversity for young children, which focused on household wealth and child's age as mediating factors. In other presented work, the high prevalence of women's exposure to aflatoxins in Banke region was shown to be importantly linked to seasonality patterns. Elsewhere, some encouraging results were presented to the conference, showing reduced prevalence of child wasting following the 2015 earthquake in Nepal, hence indicating nutritional resilience. Finally, household agricultural production was shown in one study to have increased food security and reduced stunting among children, in particular for households growing vegetables.

### AGRICULTURE TO NUTRITION: IMPROVING NUTRITION OUTCOMES THROUGH OPTIMIZED AGRICULTURE INVESTMENTS (ATONU)

The **ATONU project** used the opportunity of having the research community present to share results of recent baseline studies conducted in Ethiopia and Tanzania, and to reflect on the experiences of implementing nutrition-sensitive interventions into agricultural development projects in these countries.



Image: LANSA

## DIALOGUE ON IMPROVING NUTRITION THROUGH RECOGNISING, PROTECTING AND PROMOTING THE RIGHTS AND WELLBEING OF WOMEN AGRICULTURAL WORKERS IN SOUTH ASIAN COUNTRIES

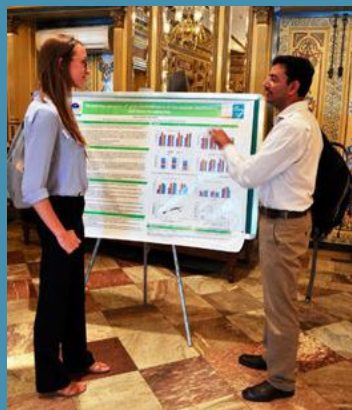
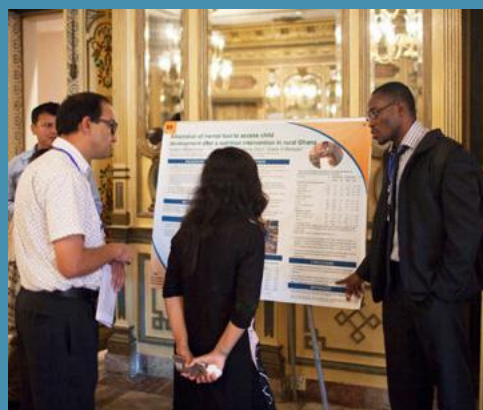
The LANSA-hosted plenary session raised the profile of a crucial yet neglected issue in South Asia: women's work in agriculture and the negative impact work has on a woman's own nutrition and the wellbeing of her family. The session's speakers echoed key evidence-based messages for policy authorities in South Asia. Nitya Rao, LANSA's Gender Crosscut Lead, presented LANSA findings and spoke on linkages between women's agricultural work and nutrition. Country representatives Nafisa Shah, member of the National Assembly of Pakistan; Khushi Kabir, Nijera Kori Coordinator, Bangladesh; Jatinder Kishitwaria, Director of the Central

Institute for Women in Agriculture for the Government of India; and Indira Dahal, Nepal Law Commission Joint Secretary, highlighted several messages. These included overall gender sensitisation in the patriarchal South Asia society, empowerment and the rights of women workers, entitlements that affect women's health and nutrition, to the need for female representation in governance, and the importance of grassroots voices reaching policymakers. Rachel Lambert, Senior Livelihoods Adviser, Agriculture Research, for the UK Government's Department for International Development (DFID), moderated the session.

## POSTER COMPETITION

**Winner:** Congratulations to Dipak Prasad Upadhyaya (pictured right) for winning the poster competition for his research titled: *Is Dietary Diversity Associated with Anemia during Pregnancy in Nepal?*

**Runner up:** Congratulations also to the runner up; Johanna Y Andrews-Trevino, for her poster titled: *Examining the Relationships Among Maternal Exposure to Aflatoxins, Birth Outcomes and Stunting in Nepalese Infants: Protocol for the AflaCohort Birth Cohort Study*





# KEYNOTE SPEECHES

Each day of the Scientific Symposium concluded with a keynote address, delivered by speakers from across the agriculture, nutrition, and health fields, on a range of subjects.



## **NAMUKOLO COVIC, IFPRI:**

### *Investing in Africa's Grey Matter Infrastructure*

Namukolo Covic's opening keynote speech reflected on Africa's progress in agriculture, nutrition, and health. While Africa has persistent undernutrition and increasing overnutrition problems, the continent is not lacking in initiatives. Policymakers seem hungry for evidence, particularly for the kinds of financial commitments that have been lacking to date, as well as evidence for policies to address malnutrition's impact on economic development – what the current president of the African Development Bank calls grey matter infrastructure. There are great opportunities for research to contribute to this momentum, yet across many different areas, progress is challenged by contextual bottlenecks, uncertainty about what drives choices within households, and decisions on policy direction. Dr. Covic made a plea to the symposium attendees to look at existing programs and find ways to enhance their agricultural and nutritional benefits to communities. If researchers can do this, regardless of whether they are working in Africa or Asia, they will contribute critical momentum to strengthening this critical *grey matter infrastructure*.



## **TAHMEED AHMED, BRAC UNIVERSITY:**

### *Nutrition and Food Security: What Does the Future Hold?*

Tahmeed Ahmed highlighted shared challenges that South Asian countries are facing, such as food insecurity, food poverty, and increased food prices, using evidence from Bangladesh to provide context. The severity of these challenges was illustrated with alarming facts, including that children with severe malnutrition are reported to have 170 families of bacteria significantly diminished, which, in turn, acutely limits their ability to absorb nutrients. Dr. Ahmed argued that there is a need for a three-pronged intervention approach: first, research that looks at increasing optimum utilization of food in the gut; second, improving water, sanitation and hygiene (WASH) infrastructure; and third, more research to increase yields from staples, livestock, and fisheries.

## **PATRICK WEBB, GLOBAL PANEL ON AGRICULTURE AND FOOD SYSTEMS FOR NUTRITION:**

### *Food Systems and Diets: Facing the Challenges of the 21st Century*

Patrick Webb first introduced a message from former President of Ghana John Kufuor, who urged attendees to connect passionate leaders with advocacy; drive development; and consider the lessons from the past, opportunities of the present, and potential of the future. Dr. Webb then discussed the **Global Panel Foresight report**, including the need for elevated attention on fighting malnutrition, which has increased in all its forms, affecting all regions worldwide. He highlighted the importance of understanding price elasticities, relative prices, and non-economic drivers to improve dietary patterns and food security. He stressed the need for more standardised data on actual diets globally, better defining and measuring healthy diets, and better designing metrics; and the importance of multi-country studies of entire value chains. Finally, he noted the need to consider dietary quality, not just food supply or individual nutrients; food systems, not just sectors in silos; and policy and program innovation to support choice of nutritious diets.



## A COLLEGIATE ENVIRONMENT

The Agriculture, Nutrition, Health Scientific Symposium and Academy Week was designed to give attendees many opportunities for networking, interacting, and making new connections. Some of those opportunities occurred when attendees could access information beyond the normal agenda of the conference. At this year's event participants made use of an "Interactive Zone" to view multimedia ranging from innovative research programs and local organizations to thoughts and testimonies from leaders in agriculture, nutrition and health. Examples included recorded remarks from Mr. John A. Kufuor, the former President of Ghana and Chairperson of the African Union; a demonstration by the Pakistan-based Collective for Social Science Research of novel methods used to convey research findings to communities; and media from the Nutrition Innovation Lab, IMMANA, LANSA and IOM. The Nepali Technical Assistance Group also displayed a small-scale model of an optimal Nepali smallholder farm.

### RECEPTIONS AND NETWORKING

Interaction also occurred during receptions, where participants, presenters, facilitators, and esteemed guests met informally to discuss the day's events and forge new connections for future work. The event's two receptions, sponsored by LANSA and the Wellcome Trust, were well attended and successful in their efforts to bring together the full global span of attendees, whose roles covered research, program management, and policy, and reflected backgrounds and experiences from all corners of the world.

The week culminated with an additional evening event, this one less focused on making professional contacts as on forging personal connections while learning more about the host country, Nepal. The cultural excursion to a local palace built by the Rana Regime more than 200 years ago introduced attendees to traditional Nepali and Newari cuisine and music.



## CLOSING ADDRESS



Rachel Lambert, Senior Livelihoods Advisor at the UK Department for International Development (DFID), closed the event with a summary of the week's proceedings. She expressed the unique roles that the ANH Academy and the Nutrition Innovation Lab play respectively, and reflected upon how important it is to bring together so many disciplines to take on real world issues.

It is hard to overstate the diversity that the conference represents, of different disciplines, regions, and career stages among participants. A noticeable shift is evident, towards new areas of research in agriculture, nutrition, and health. Next year, it would be good to hear more about food system dynamics and nutrition; rural and urban transitions; agricultural value chains; and how research can engage the private sector.

It is critical to engage policymakers, who can help shape policy-relevant research questions and co-identify entry points for change. The symposium demonstrated that a lot of progress has been made in filling evidence gaps related to agriculture, nutrition, and health, and it is an exciting time to be involved in these fields.

## LOOKING AHEAD

### ANH ACADEMY

The interest and enthusiasm around the first two Agriculture, Nutrition and Health (ANH) Academy Weeks has been overwhelmingly positive. There is clearly a very strong appetite among the global research and policy community to meet in such a forum to learn and share from one another.

#### *Save the date!*

As part of our mission to maximise opportunities for participation and engagement around the world we are committed to relocating the annual ANH Academy Week each year. In light of this, we are very pleased to announce that the next ANH Academy Week will take place in Accra, Ghana from 25 – 29 June 2018. Please follow our website closely for more news on this and other ANH Academy activities. If you are not already a member, please also consider joining for free when you visit. [www.ANH-Academy.org](http://www.ANH-Academy.org)

### NUTRITION INNOVATION LAB

The Nutrition Innovation Lab and its partners will continue its efforts to convene academics, policymakers and program implementers from Nepal and the region to assemble, critique and disseminate research that examines the pathways that link agriculture to nutrition. The next symposium will take place in the summer of 2018; dates will be announced shortly and the event will take place in Nepal. For updates on the symposium and other research, please visit [www.nutritioninnovationlab.org](http://www.nutritioninnovationlab.org)

# WITH THANKS

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