24-28 JUNE 2019

HYDERABAD, INDIA

ANH ACADEMY WEEK 2019

UKaid from the British people

immana Innovative Methods and Metrics for Agriculture and Nutrition Actions

CGIAR Research Program on Agriculture for Nutrition and Health Led by IFPRI

London School of Hygiene & Tropical Medicine

International Food Policy Research Institute IFPRI

icmr Indian Council of Medical Research | NIN National Institute of Nutrition

Tufts University | Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy

LCIRAH The London Centre for Integrative Research on Agriculture & Health

Drivers of Food Choice Competitive Grants Program

ICRISAT International Crops Research Institute for the Semi-Arid Tropics

ANH Academy Agriculture, Nutrition & Health Academy

ABOUT THE **ANH ACADEMY**

The Agriculture, Nutrition & Health (ANH) Academy is a global research network in agriculture and food systems for improved nutrition and health to serve as a platform for learning and sharing.

The ANH Academy is part of the three workstreams of the Innovative Methods and Metrics for Agriculture Nutrition Actions (IMMANA) programme. It is also a broader partnership that aims to bring together researchers and users of research cutting across disciplines and sectors to tackle the complex interactions between agriculture, food systems, nutrition, health and environment. It is particularly focused on facilitating rapid sharing of innovative methods, metrics and emerging research findings and strengthening research capacity in this interdisciplinary area.

The ANH Academy is jointly founded and managed by the London Centre for Integrative Research in Agriculture and Health (LCIRAH), IMMANA and CGIAR Research Program on Agriculture for Nutrition and Health (A4NH).

The main objectives of the ANH Academy are to:

- Share innovative research in agriculture and food systems for improved nutrition and health;
- Stimulate the development and harmonisation of new research;
- Help strengthen the capacity of the research community to undertake inter-sectoral and interdisciplinary research; and
- Facilitate the uptake of robust evidence in policies and programming in agriculture and food systems for improved nutrition and health.

More information: ***www.anh-academy.org***

Bharati Kulkarni, National Institute of Nutrition, India

ORGANISING **PARTNERS**

The ANH Academy Week would not have been possible without the generous contributions from a range of partner organisations and individuals for whose support we are enormously grateful.

The 2019 ANH Academy Week is organised and funded by:

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ABOUT **ANH ACADEMY WEEK**

As a global community, we face daunting scenarios: growing populations; rapidly expanding cities; alarming increases in rates of overweight and obesity alongside stubborn levels of other forms of malnutrition; and environmental challenges including climate change, water scarcity, and pollution. To address these, a concerted effort cutting across sectors and disciplines is needed. There has never been a more important time for researchers working across disciplines to come together and focus on the complex linkages between agriculture-food systems, nutrition, and health. Working together, real progress can be achieved towards ensuring optimal and sustainable nutrition and health for all.

Recognising the need for researchers, donors, policy makers, the private sector, and others to have a place to come together and learn from one another, the Agriculture, Nutrition & Health (ANH) Academy and its partners have been convening the ANH Academy Week since 2016.

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 series is to foster knowledge exchange, innovation, and learning around ANH research.

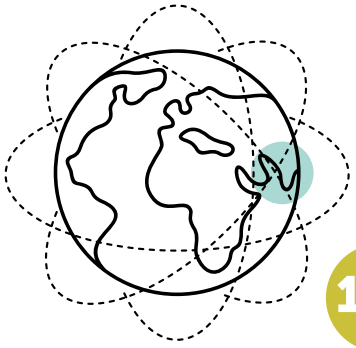
The ANH Academy Week consists of two interlinked components:

1. Learning Labs - a series of training sessions in interdisciplinary agriculture, nutrition, and health research;
2. Research Conference - an abstract-driven symposium featuring oral presentations, poster sessions, and keynote speeches, as well as plenary round tables, side events, and working group discussions.

The first ANH Academy Week took place in Addis Ababa, Ethiopia, in June 2016 and the second was held in Kathmandu, Nepal, in July 2017. In 2018, the conference returned to Africa, with attendees gathering in Accra, Ghana.

In 2019, with a range of new local, regional and international partners, ANH Academy Week has returned to South Asia. Nearly 350 participants from all over the world gathered for the five days of learning and networking, with many more tuning in and following along thanks to live webstreaming, the conference app, social media, daily newsletter updates, and same-day posting of session presentations.

THE WEEK IN NUMBERS



350 participants from 33 countries

160 institutions represented

96 speakers at the research conference

73 oral presentations

66 hours of Learning Labs

26 Learning Labs including 2 Master Classes

45 posters displayed

43 mini poster presentations

24 Competitive travel bursary awardees

PARTICIPANT FEEDBACK

95% rated the event as 'Excellent' or 'Very Good'

*"**This is hands-down the best conference I've been to** and I have so much praise: the learning labs, the intimate breakfast sessions and the format of the mini-poster presentations were all innovative and effective means of learning... sets the bar high!"*

*"The learning labs, which I believe **makes this conference so unique**, has taught me so much about different aspects of research that I previously had little exposure to."*

95% said the event matched their expectations

*"ANH did a good work in making sure **diversity and inclusiveness were respected** at different stages of the Week. The whole event was amazing, well executed."*

*"So much thought went into so many details. Loved the **environmental friendly** parts of it /Plastic free..."*

*"The 2 **keynotes blew it out of the park**. It will be really hard to top both of those next year!"*

99% said they would recommend the Academy Week to others

"I expect the experience to have lasting impacts in my own actions and research as well as for those of my colleagues at home. Some of the new connections I made at ANH are likely to last for longer-term collaborations, and I will be sharing the methods I learned with colleagues in my research team. As we embark on a new project, I expect to integrate several of the methods and tools shared at ANH."

69% of the participants will certainly or most likely attend next year

*"...ANH Academy Week has been an incredible learning experience for me. This is my first time attending, and **I've never experienced anything like it** and will definitely come next year."*

LEARNING **LABS**

A unique hallmark of ANH Academy Week is the programme of world-class Learning Labs that kicks-off the event each year. ANH2019 began with two days of these interactive sessions, delivered by international experts, covering a broad range of topics catered for a diverse audience working at the nexus of agriculture-food systems, nutrition and health. The aim was to strengthen practical skills, knowledge and capacity around key tools, methods, metrics and theories used in research and practice, with participants being encouraged to step outside their disciplinary zones in order to learn something new and useful.

Plenary Master Class on Open Data: What Does It Mean? How to Do It?

Presented by Medha Devare, CGIAR Platform for Big Data in Agriculture

In this session, Medha Devare gave an introduction to the concepts and practices of Big Data. In particular, Medha focused on CGIAR's three pillars needed "to turn data into real insights:" (i) the need to make open data well-organised, (ii) the need to convene the producers and analysts of open data, and (iii) the need to use open data to inspire cutting-edge research in agriculture and nutrition. In turn, open data must also be FAIR: Findable, Accessible, Interoperable and Reusable – with the last metric being a composite index of the first three. Medha presented CGIAR's GARDIAN platform, which presents a novel tool to make publications and open data FAIR, by storing metadata associated with user rights, data storage and any georeferenced locations associated with the data. By discussing the principles, practical requirements and pitfalls of open data, the session provided a timely reminder of the importance and benefits of open data for researchers, policy makers and stakeholders alike.

Plenary Master Class on Translating Research Into Policy

Presented by Purnima Menon, International Food Policy Research Institute

Purnima Menon invited attendees to reflect on how the research community can better translate research into policy. Research can influence each stage of the cyclical process of policymaking, including agenda setting, strategy development, financing, implementation and program learning. Using the case study of POSHAN, an evidence-to-policy initiative in India started in 2011, Purnima shared eight key lessons to help participants be more effective in the world of policymaking. These lessons drew on a recent systematic review. At the heart of the recommendations was a call to prioritise high-quality research that is accessible, relevant, timely and easy-to-digest, and for researchers to be 'honest brokers,' admitting gaps and weaknesses in data as advocacy goals are pursued. By re-framing 'policymakers' as a 'community of decision-makers' a more relational, humble, and effective approach to influencing key stakeholders can be achieved. Ultimately, attendees were reminded that using research to inform policy is a long journey, but what comes of it depends on what is invested into it.

Enabling People to Practice Positive Behaviours

Led by the US Agency for International Development

The goals of many agriculture, nutrition and health interventions can be achieved through effective social and behaviour change (SBC) programming. This learning lab covered the basic science and theories of SBC; shared tools for effective program design; and gave participants an opportunity to reflect on how better to incorporate SBC into their work. During the session, participants worked to better describe the science behind human behaviour and reflect on its application to designing effective behaviour change programs for agriculture, nutrition and health; recognise their own biases and the common myths around behaviour change; and learned about using complementary behavioural models to design behaviour change programs. As a result, they improved their understanding of the importance of using results from formative research to drive SBC design, through practicing a behavioural analysis, which is part of SBC program design, and gained an appreciation of the complexities of monitoring and evaluating SBC programs.

Agri-Food Tools for Research

Led by the London School of Hygiene & Tropical Medicine and the International Potato Center

This session introduced participants to the new Agrifood Multi-Criteria Decision Analysis tool for examining trade-offs in programme decisions for nutrition sensitive agriculture. The session familiarised participants with reasons for applying Agrifood, data inputs, analysis methods and outcomes. Participants had an opportunity to use Agrifood, through hands-on work in small groups, simulating the decision-making process using a case study example in which they simulated the process of weighting criteria based on the views of particular stakeholder groups. Next, participants identified foods or food combinations that should be prioritised for promotion based on their performance across nutrition and agricultural criteria, considering stakeholder value weightings; the implications for agriculture programming of selecting certain food combinations; and trade-offs to consider when promoting food-based recommendations in nutrition-sensitive agriculture programmes. Participants left the session understanding how Agrifood can be used to inform decision-making for nutrition-sensitive agricultural programme planning, while organisers obtained feedback on the potential applications of Agrifood in their current work and interest areas.

Systematic Reviews and Evidence and Gap Maps

Led by the Campbell Collaboration

The aim of this course was to provide an introduction to systematic review methodology and Evidence and Gap Map (EGM) in agriculture sector and social science. It combined lectures, group work and practical sessions to introduce key EGM concepts and examples, including developing the review question, literature searching, study selection and data extraction, and quality assessment and the critical appraisal of primary studies. Participants considered evidence resources and engaged in interactive discussions throughout the work. While this course was targeted to researchers conducting scoping studies, systematic reviews and/or impact evaluations, and users wanting to understand approaches to evidence mapping. The session was also useful for individuals and organisations which propagate an evidence-based policy agenda.

Affordability of Nutritious Diets

Led by Tufts University

In this learning lab, researchers, practitioners, and policymakers learned how to use existing data for measuring access to nutritious food. These indicators can be used for monitoring, or in the design and evaluation of nutrition-sensitive agriculture programs and policies. They worked through describing the basic sources and meaning of existing food price indicators and indexes; understanding the theoretical basis for the CoNA and CoRD indicators and price deflators, and identified potential data sources for these; interpreted the four indicators using real data, compared to other standard food price metrics; and described methods and potential for nutrition mainstreaming within national-level data sources and management systems collecting food price data. The discussion sessions throughout the lab ensured an understanding the indicators and how food price information can be applied to participants' work.

Innovative Technologies for Data Collection in Agri-Nutrition Research

Led by the National Institute of Rural Development, the University of Reading, and Natural Resources Institute

This session, which targeted nutrition, gender, and agriculture practitioners and researchers, provided participants with an overview of the current debate of the role of energy expenditure in agriculture in rural livelihoods. Attendees disentangled the rationale and protocol developed for using physical activity trackers in rural settings in low- and middle-income countries. The session provided an overview of the current debate on women's workload and maternal and infant nutrition outcomes, and gaps in existing tools to measure these. It introduced two innovative time use and dietary assessment tools: Image-Assisted Recall (IAR) using Life-logging GPS-linked wearable cameras, and computerised Interactive Voice Response Diaries (IVR). Organisers discussed the experience of trialling them with rural women in Eastern Uganda. Using plenary presentations, small group activities, discussion groups, question-and-answer intervals, and quizzes, the session

offered a range of opportunities to reiterate take-home messages, clarify doubts, and get a practical sense of the methodology.

Building Implementation Science for Agriculture, Nutrition, and Health

Led by Society for Implementation Research

In the first half of this learning lab, the organisers presented an overview of the development of implementation science in the fields of health and nutrition and propositions for an integrated framework. Participants drew from these presentations and their own experiences to generate examples of implementation-related challenges they have encountered and identify related learning needs. Part two of the learning lab featured two in-depth case studies of implementation research, after which participants responded to two key questions facing implementation science: How should program implementers, researchers, and other relevant stakeholders engage? And how do we gain the knowledge to be able to improve implementation?

Meaning of Linear Growth

Led by the University of South Carolina and the International Food Policy Research Institute

Participants in this learning lab explored the meaning of linear growth and the appropriate use of growth as a measure in development. In the process, they learned the history of using linear growth; came to understand the difference between methods of measurement, measures, and indicators; and developed an appreciation for the importance of defining the purpose of using measure and indicators. They asked themselves, is the purpose to make statements about individuals, versus groups of individuals? Is the purpose to estimate the prevalence, to monitor, assess impact, target, or to do something else? They also learned about how the available evidence changes how stunted linear growth should be used in development.

Proposal Writing and Scientific Collaborations

Led by UK Research and Innovation

Considering challenges universities are currently experiencing in funding scientific research, it would be useful for academics and researchers working in interdisciplinary teams to collaboratively access funds through appropriate responses to grant-awarding bodies. To build capacity in this area, this session led by UK Research and Innovation (UKRI) highlighted current research priority areas by participating awarding bodies; examined key approaches in designing useful, innovative researches for both developed and developing countries, through discussing key UKRI principles and guidelines, particularly aiming at attaining SDGs; and highlighted the importance of researchers in low- and middle-income countries in identifying priority research objectives and designing joint projects in an equitable manner. Participants were able to share experiences with successful joint research applications and consider how to avoid common mistakes in applications.

Introduction to the Principles of Research Ethics in Ag-Nutrition Research

Led by University of Malawi

Understanding the principles of research ethics is critical for conducting research in the fields of agriculture and nutrition. In this learning lab, participants learned the three universal principles and how they are applied to the conduct of ethical research, particularly among vulnerable communities and in low- and middle-income countries. They discussed why these principles were developed: to prevent abuse of research participants and provide guidance of ethical conduct to ensure participants' well-being is always considered. In interactive group discussions, they reviewed why informed consent is necessary and learned how to design a meaningful and ethical informed consent process. They also learned how the design of a research study impacts on ethics and what elements must be considered when designing a sound study that protects participants and the larger community. The discussions brought up a number of different perspectives, and participants also presented examples of their own research work.

Sustainable Diets

Led by Wageningen University & Research and the London School of Hygiene & Tropical Medicine

When working on issues related to sustainable diets, understanding the methods and metrics available is crucial. This learning lab helped participants develop an awareness of the environmental footprints of foods, as well as an understanding of common methods in food-environment analysis. Participants played an innovative card game and gained experience with estimating environmental footprints of diets to understand potential trade-offs with health. Finally, participants discussed how environmental sustainability can be incorporated into food based dietary guidelines and left with a strong appreciation of diet-related aspects of planetary health. The feedback suggested participants particularly enjoyed how interactive the session was and felt it was a good overview of a complex topic. There was a high level of interest in the card game, which is now being refined for use in other settings.

System Dynamics in Researching Markets for Nutrition

Led by the London School of Hygiene & Tropical Medicine and SOAS

The session, designed for participants who (i) want to know more about system dynamics (SD), (ii) are deciding whether SD is an appropriate method for their research, or (iii) want to convert qualitative systems knowledge to practical SD modelling, had both conceptual and practical learning objectives. On the conceptual side, participants developed an understanding of when systems thinking and modelling is appropriate, developed and applies systems terminology to different agricultural, nutritional and health settings, and became confident developing and interpreting qualitative systems tools in agricultural contexts. From a practical standpoint, they built and simulated simple system dynamics models using the online InsightMaker tool, learned how to diagnose problems and errors in an SD model, and how to investigate model sensitivity and system leverage points through simple explorative scenarios.

Managing Trade-Offs: Methods and Tools for Policy Decision-Making

Led by ANH Academy and Chatham House

When considering policy decision-making, how can trade-offs be managed? In this learning lab, participants were introduced to a Chatham House decision tree under development to better inform decision makers as they aim to improve nutritional, economic, social and environmental bottom lines through the sustainable production of livestock and aquaculture. This included the process of decision tree development, why a decision tree is a suitable solution, and possible applications. They were also introduced to the 'Collaborate' game developed by ANH Academy, including why it suits the sustainable diet conundrum, how it is played, and other applications. They discussed how these techniques can be applied in different settings and for different context and developed ideas for proposals for future activities. Feedback indicated that more than 90 percent of participants would be likely or very likely to employ at least one of these tools in future.

Qualitative Methods 101

Led by Institute of Development Studies and London Centre for Integrative Research on Agriculture and Health

In this session, participants learned about the foundations of qualitative methods, the different purposes and types of qualitative research, and general application to the agriculture-nutrition-health space. They learned the basics of interviewing, including how to design an interview question, and different types of interviewing, and practiced interviewing with a partner. They then learned the basics of coding an interview transcript, practiced coding and shared findings with the group. The session provided a foundation for participants to engage in further qualitative training, and to have informed conversations with qualitative collaborators.

Measuring Empowerment in Nutrition-Sensitive Agricultural Development Projects Using WEAI and WELI

Led by the CGIAR Research Program on Agriculture for Nutrition and Health

Many agricultural development projects aim to empower women – but how do we know which strategies work best to reach this goal? If we aim to empower women – to improve their ability to make strategic life choices – we need indicators that can measure the many dimensions of empowerment. In this session, Agnes Quisumbing, Alessandra Galie, and Elena Martinez delved into two sets of qualitative and quantitative tools that are being developed to measure women's empowerment in agricultural development projects: the project-level Women's Empowerment in Agriculture Index (WEAI) and the Women's Empowerment in Livestock Index (WELI). After learning about the tools, attendees practiced calculating the pro-WEAI using Stata and coming up with qualitative and quantitative research questions to better understand different dimensions of empowerment.

Harnessing Peer Learning, Collective Decision-Making, Problem-Solving, and Solidarity Through Participatory Approaches

Led by Ekjut and Digital Green

Effectively engaging communities is essential for successful nutrition and agriculture programs. In this learning lab, Nirmala Nair, Suchitra Rath, Ronali Pradhan, Naba Kishor Mishra, and Shibanath Pradhan introduced approaches for engaging communities through participatory meetings to build knowledge of health, nutrition, and agriculture. Attendees learned about the Participatory Learning and Action approach, practiced and demonstrated participatory meetings, evaluated their participation in the exercises, learned about different aspects of how agricultural videos can be made nutrition sensitive, and experienced a video generated from the strategies prioritised by the communities being used in various contexts.

Drivers of Food Choice

Led by University of South Carolina

Understanding what drives food choices in low- and middle-income countries is key for researchers as they work to improve nutrition and health. As a result of this learning lab, participants are now able to describe the process of food choice and implications for health and well-being, and the relationships between changing food environments and food choice that have implications for health and well-being. They also worked to identify and describe policy and program actions to promote healthy food choice.

Economic Evaluation of Multisectoral Interventions to Improve Nutrition and Health

Led by ANH EEWG

In this learning lab, Carol Levin and William Masters introduced types of economic evaluations that can be used to measure the costs and benefits of multisectoral nutrition and health interventions and how to use these methods to generate evidence for informing policies and programs. Participants then delved into these tools, practicing using a variety of online resources for economic evaluation; identifying costs and benefits along program impact pathways; and interpreting evidence from published economic evaluations.

Global Tools for Dietary Data Dissemination

Led by the Food and Agriculture Organization of the United Nations

This learning lab introduced a variety of tools for disseminating, collecting, and harmonizing dietary data, including the Food and Agriculture Organization of the United Nations (FAO)/ World Health Organization (WHO) Global Individual Food Consumption Data Tool (FAO/WHO GIFT), the Global Dietary Database (GDD), the INDDEX24 dietary data collection tool, the Gallup Global Diet Quality Project, and the FoodEx2 food classification and description system. Then, attendees zoomed in on the FAO/WHO GIFT platform, practicing how to find information about existing individual quantitative food consumption surveys worldwide, compute ready-to-use indicators, and download and share dietary data.

Household Water Insecurity Experiences (HWISE) Scale: Development, Uses, and Application of a Cross-Culturally Validated Household Water Insecurity Tool

Led by Northwestern University

This learning lab introduced participants to the Household Water Insecurity Experiences (HWISE) Scale, a household-level measure of water insecurity. Sera Young of Northwestern University outlined the motivations for creating this measure and the process of developing the scale. Attendees then had the opportunity to practice administering the survey; learned how to use survey results to calculate the scale and identify households facing water insecurity; and discussed the challenges of using this tool.

After the Paper is Written: Communicating Research

Led by CGIAR Research Program on Agriculture for Nutrition and Health

In a fast-paced attention-deprived world, how can you ensure your research makes it into the hands of the people who need to see it? This learning lab addressed identifying your audiences and messages, including ways to get into the conversation; dove into different tools for outreach; and took a close look at presentation skills suited to different environments and situations. With opportunities to discuss brainstorm, and share experiences, attendees came away with a better understanding of what communications tools are available, and concrete ideas for broadening the reach of their work, as well as considerations for tailoring messages, visuals, and language to different types of audiences.

Aquatic Food Systems

Led by University of Stirling

In many contexts, fish and other aquatic food play an important role in agriculture, nutrition, and health. This session explored the role of aquaculture in influencing food availability, diets, and nutrition. Bauke de Roos, Nanna Roos, Gulshan Ara, and Abdullah-Al Mamun opened the session by introducing a case study connecting farmed seafood systems and nutrition in Bangladesh. Then, participants worked together to map the connections between aquaculture production systems, food availability, diets, nutrition, and health and analyze gaps in the current research in this area.

The Women's Empowerment in Nutrition Index (WENI): Measuring Nutritional Empowerment for Better Diagnostics

Led by Indira Gandhi Institute of Development Research and University of Texas

Nutritional empowerment is the process by which individuals acquire the capacity to be well fed and healthy, in a context where this capacity was previously denied to them. This process entails acquiring knowledge about, and a say over, nutritional and health practices; gaining access to and control over intake of adequate and nutritious food; and being able to draw support from both family and other institutions to secure and maintain an adequate diet and health. In this learning lab, Sudha Narayanan and Erin Lentz introduced the Women's Empowerment in Nutrition Index (WENI), a survey-based measure of nutritional empowerment that has been developed and adapted to the Indian context. Attendees interviewed each other using an abbreviated version of the WENI and practiced calculating individual-level WENI scores. Finally, Narayanan and Lentz shared their findings from a study that administered the WENI in India and tested the robustness of the index.

Choice Experiments for Measuring Intra-Household Dynamics and Bargaining Power

Led by the International Center for Tropical Agriculture and the University of Florida

This session delved into intrahousehold dynamics and bargaining power – how do men and women make food choices? To introduce participants to this topic, the group played a choice experiment game, choosing snacks individually and with a partner to learn about this methodology, and discussed how bargaining power played a role in this exercise. Then, organisers Jennifer Twyman, Juliana Muriel, and Elise Talsma presented an analysis of the results of the exercise and concluded the session by discussing design elements of choice experiments and how results link to intra-household dynamics and bargaining power theory.

Designing a Smartphone Application

Led by Wageningen University & Research

The proliferation of smartphones provides unique opportunities to collect data and monitor programs. In this learning lab, Jos van den Puttelaar and Ireen Raaijmakers introduced a smartphone-based application that allows researchers to collect data about food consumption, consumer behaviour, and choice motivation. Participants learned about the process of designing and developing the app about food consumption and then practiced using these steps to design their own apps.

RESEARCH CONFERENCE

Following two days of intensive Learning Labs, the Research Conference was held in plenary and parallel sessions over three days. Eleven abstract-driven sessions reaching across disciplines anchored this portion of the week, which also featured mini poster presentations, panel discussions, keynote speeches, and networking opportunities.

WELCOME PANEL AND INAUGURAL REMARKS

The Research Conference opened with welcome remarks from Dr. Suneetha Kadiyala, who set the agenda for the week in asking the audience, how do we guide changes in agriculture and food systems to nourish the world's population in a way that is healthy, sustainable, equitable, and just? She stressed the importance of having evidence-informed actions to solve these challenges and noted the ANH Academy has been at the forefront of innovative collaborations in this area.

Attendees were also welcomed to India, and to Hyderabad, by national and local officials. Dr. Renu Swarup noted that agriculture, nutrition, and health are critically important for India's health, and it is essential to engage all stakeholders in this area. She added that the Department of Biotechnology is working through a wide variety of initiatives to develop and connect farmers with innovative agricultural technologies, and also collaborates with many other government departments to connect this work to health, nutrition, and other areas. In a message conveyed by Dr. Preeti Reddy, Sri Chamakura Malla Reddy shared that if our agricultural system is not good, we will not get sufficient food. He added that the government in Telangana is committed to improving the nutrition situation of the entire population and recognises the need to bridge the gap between agriculture and nutrition, work together across sectors, and give due recognition to women as farmers and caregivers.

KEYNOTE ADDRESSES

Wanjiru Kamau-Rutenberg, African Women in Agricultural Research and Development

Wanjiru Kamau-Rutenberg, Director of the African Women in Agricultural Research and Development (AWARD), delivered a keynote addressing empowering women in academia. AWARD enables African female researchers to build their leadership skills, so they can not only remain in research, but also thrive. Through training and mentoring programmes, the aim is to build powerful women, who can succeed themselves and inspire others to do the same. Kamau-Rutenberg remarked, "Women must show up as decision makers, not as tokens, they must deserve their place at the table." To end a personal, emotive and inspiring talk, she posed a question to the ANH Academy: how can we ensure we create the positive path, to make African women in research feel like they belong, and not be the negative voice?

Peter Menzel, photojournalist, and Faith D'Aluisio, writer

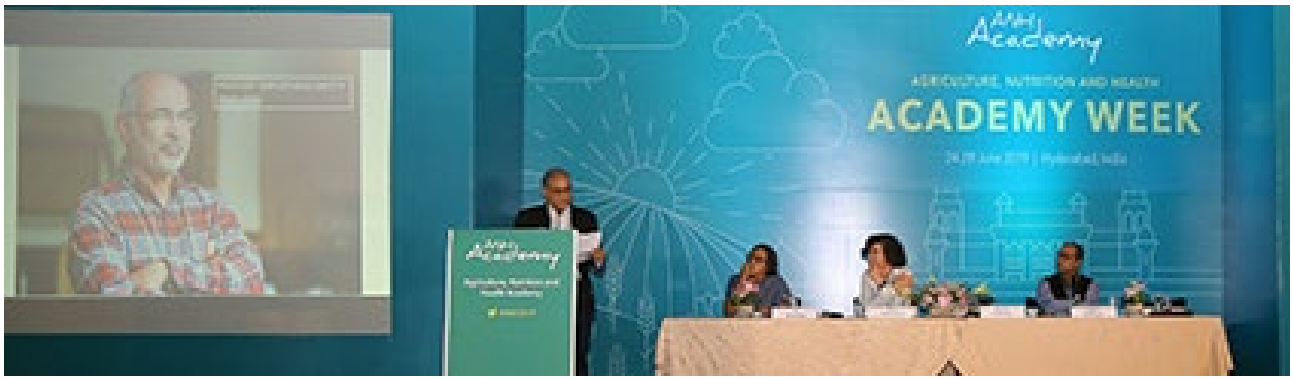
The variety between diets around the world is a complex mix of policy, personal taste, culture and geography. Peter Menzel and Faith D'Aluisio, a photographer and writer team, have spent two decades exploring and documenting what people eat around the world. Their work affords people the opportunity to explore diets globally in an intimate and non-judgmental way. Their photos and stories recording a week's worth of food for a family, or even a day's worth of food for an individual, can be informative for readers of the book but also for the families and people documented themselves. This captivating look at their work, and first-hand account of what it's like to learn and tell these stories, brought researchers and other attendees a new perspective on the world's diets, nutrition, and health.

Fireside Chat on Aquaculture

The Academy Week's first "fireside chat" featured 2005 World Food Prize Laureate Modadugu Gupta, former Assistant Director General of WorldFish, in conversation with David Little of the University of Stirling (pictured above). From his early beginnings in Calcutta, to the Mekong Delta, and finally the global dominance of tilapia, Gupta relayed his forty-year journey as a leader in aquaculture research. At the core of his work is the principle of "farmers first": empowering social change from grass roots -- even, for example, the role pond aquaculture has played in building women's empowerment in rural Bangladesh. As Stirling noted, "fish as a force for social change."

Tribute to Prakash Shetty

In late 2018, the global ANH community mourned the loss of colleague, mentor, and friend Prakash Shetty. His absence loomed large at ANH Academy Week 2019, and attendees took time out to reflect on the important research and personal contributions Shetty made to the field and to generations of researchers. They shared experiences of studying under him and working alongside him, peppered with humourous and touching reflections on small, personal moments that loom large in memories (pictured below). Reflections were followed by a photo montage, eliciting laughter, tears, and smiles from those in attendance.



PANELS

Panel Discussion: Engaging with the Private Sector: A Dialogue Among Multidisciplinary Researchers to Navigate the Contested Space

Four panelists took to the stage in this session chaired by Srinath Reddy, to discuss the complicated topic of researchers engaging with the private sector. Inge Brouwer, Simón Barquera, Jan Low and Francis Zotor (pictured left) distilled key insights from their experience in their opening remarks. The dominant emerging themes included a reminder that the public sector is not a homogeneous entity, ranging from the smallholder farmer to multinationals. Experiences of working with the private sector also vary immensely, from researchers being called terrorists in Mexico to examples of companies having clear and transparent codes of conduct and data sharing. The panel grappled with the central question of how the research community can protect credibility and integrity when partnering with the private sector, especially in the context of public funding drying up and the simple reality that working without the private sector is not an option.

Examples of best practices and steps towards solutions included the use of private sector pooled funding, setting clear ground rules for cooperation, actively seeking out companies with a sense of corporate social responsibility and willingness to work with smallholder farmers, using research to create consumer demand for healthier products, and better equipping students as future employees in the private sector.

The session wrapped up with a reminder that researchers must ensure all society's resources are brought together for the common good, including all sections of industry. This involves clearly defining and communicating what the common good is, and bringing in government, the private sector, researchers and civil society to help monitor progress in the controversial yet essential domain of public-private partnerships, perhaps best redefined as 'partnerships for public purpose.'

Panel Discussion: Lessons Learnt in Food Systems Impact Evaluation and Implementation Research

This discussion (pictured below) focused on where researchers and practitioners need better guidance with randomised controlled trials (RCTs). The panel included Shibani Ghosh from Tufts University, Silvia Alonso of the International Livestock Research Institute, Grace Marquis from McGill University, and Agnes Quisumbing of the International Food Policy Research Institute (IFPRI), with Jef Leroy of IFPRI as chair. The panel shared their experiences designing, implementing and evaluating RCTs.

The session was accessible and exciting for those familiar as well as less familiar with RCTs, with the audience interactively voting on seven questions about the merits of RCTs in agriculture, nutrition and health. Whilst the audience vote was spread, the panellists were generally united about the strengths and weaknesses of RCTs. In particular, Ghosh noted, "the one thing that I learned from designing RCTs is you really need to spend time defining your question and understanding the underlying context", whilst Leroy commented that "[whilst] RCTs are a strong design, if you don't add extra components such as process evaluation or qualitative research, you essentially end up with a result that may be lacking some causal explanations."

Keeping in theme with the rest of the Academy Week, the panel provided an engaging, critical and topical discussion around a major methodological technique in the agriculture, nutrition and health world.

ABSTRACT SESSIONS

IMMANA SPECIAL SESSION

UNDERSTANDING PATHWAYS BETWEEN AGRICULTURE AND NUTRITION:

AN EVIDENCE AND GAP MAP OF TOOLS, METRICS, AND METHODS DEVELOPED AND APPLIED IN THE LAST TEN YEARS

In recent years, there has been growing interest and funding in ANH research. More and more metrics, methods and tools have become available, but the complex and interdisciplinary nature of the research means they can be difficult to navigate.

Thalia Sparling of Tufts University presented this IMMANA special session to address these issues. Sparling and her colleagues have developed an interactive evidence gap map for innovative tools, methods and metrics used in agriculture, nutrition and health research. The aim is to help the community understand the existing landscape and explore where more focus is needed.

The map has been built through a systematic search process with over 600 peer-reviewed studies included. It was further refined through consultation with experts in the relevant areas. The gap map has been formatted to an online interface that allows users to view the existing evidence and has a comprehensive indexing system to search based on thematic area, project source, location and more.

There is significant interest in this work, which will be very useful for the community, and gratitude was expressed to the team for taking on this enormous task. The gap map will be publicly available online later in 2019.

SESSION 1

ECONOMIC DRIVERS OF FOOD SYSTEMS AND DIETS

What are the costs of healthy and sustainable diets? Are nutritious diets affordable for unskilled labourers? What is the impact of input subsidies on household food availability or that of international trade on nutrient inequalities? This session considered economic drivers of food systems and diets. Five speakers presented their research to answer these important questions at the global or country levels. They looked at the costs of healthy and sustainable diets using different definitions, while another study suggested that while affordability in India has improved over time, the recommended diet is still highly unaffordable. Researchers shared a study which looked at the impact of gendered participation in an input subsidy programme on household food availability, and another which showed that while food availability has been more equality distributed, the inequality of production has increased, implying that international trade has contributed to improving the global distribution of nutrients with variation by time and nutrients.

SESSION 2A

EMPOWERMENT, EQUITY, AND GENDER

Empowerment, equity, and gender are areas of interest that cut across disciplines. The presentations in this session delved into how gender inequities and women's empowerment play a role in nutrition-sensitive agriculture. Some studies outlined and tested frameworks for understanding inequities, including looking at a framework for understanding how equity considerations influence participation in and the success for nutrition-sensitive agriculture programs, a systematic review based on a framework of gender inequities that might influence nutrition and food security, and work on adapting the project-level Women's Empowerment in Agriculture Index to measure empowerment among milk traders in peri-urban Nairobi. Other studies used econometric methods to look at associations between gender and nutrition outcomes, such as assessing women's workloads and nutrient intake in eastern Maharashtra and considering associations between women's empowerment and nutrition outcomes in Kenya using DHS data.

SESSION 2B

POLICY ANALYSIS

Understanding the current policy environment and identifying gaps in research and data are crucial to improving policy not only in the areas of agriculture, nutrition, and health individually, but also across sectors. Evidence-based research is crucial, and more is needed, particularly on multi-sectoral approaches. In many jurisdictions, policies regarding food and nutrition already exist and are relatively 'good,' but are poorly implemented: a greater focus on implementation is needed. Research presented in this session explored multi-sector programming for nutrition at district level, considered whether farm input subsidy programmes improve dietary diversity, and looked at the impact of advocacy coalitions and healthy food environment policies.

SESSION 3A AND 3B

RESULTS FROM NUTRITION-SENSITIVE AGRICULTURAL PROGRAMMES

Ensuring an emphasis on nutrition has become a key priority in agricultural development programs, with many lessons to be learned across projects. Two concurrent sessions on this topic included 12 examples of such work, including new studies on homestead food production and its effects on food insecurity and dietary diversity; comparing traditional agricultural systems and cash crop households to reveal trade-offs between intake patterns, income, and other things; linkages between land, gender and diets; sustainability of community-level approaches; unintended effects of interventions, such as the relationship between a food-assisted maternal and child health and nutrition program and postpartum weight retention; and how livestock ownership versus maize production affect maternal anemia.

SESSION 4

ENVIRONMENTAL SHOCKS, RESOURCE MANAGEMENT, AND SUSTAINABLE AGRICULTURE-FOOD SYSTEMS

Food systems and nutrition cannot be discussed without considering the importance of planetary health, and this session delved into this complex relationship. From a study conducted in India which looked at the influence of interstate cereal trade on agricultural water use, to a study in Senegal to see the potential effects of rainfall shocks on child malnutrition in rural areas, water use, management, and shocks are clearly on the minds of many. Other topics addressed in this session include how changes in GDP, population growth, and land would affect food systems and diets in Nigeria; the results of a scoping review on plastics in the food system, and a study looking at forests and changes in agricultural landscapes on diets in seven countries.

Special Introduction on Planetary Health

How can we ensure Earth is a healthy home for humanity? This was the key question posed by Lukasz Aleksandrowicz, on behalf of Modi Mwatsama, in the Wellcome Trust's special introduction to the conference session on Planetary Health. Aleksandrowicz noted that, while health and wellbeing have improved in the last century, the improvements have come at the cost of environmental disruption, leading to a changing planet. Recognising that food production is linked to climate change both as a contributor to and affected by, changing the system to focus on achieving healthy and sustainable diets will be key.

SESSION 5A

CLIMATE, ENVIRONMENT, AND RESILIENCE

The relationship between agriculture and climate and the environment is complex and deeply intertwined. While researchers look for ways to develop food systems that are sustainable, others are working to ensure farmers, particularly those in low- and middle-income countries, have access to climate-smart and resilient strategies and technologies. In this session, researchers presented on topics including how technologies like drought-resistant maize could help improve food security, opportunities to improve nutrition and promote sustainable agriculture by focusing on improving natural biodiversity, and how changing landscapes impact food consumption patterns.

SESSION 5B

NUTRITION AND HEALTH ISSUES AND ANIMAL SOURCE FOODS

Consumption of animal-source foods is seen as key for increasing dietary diversity and ensuring sufficient intake of essential micronutrients, yet ensuring access to them presents challenges and critical areas for research. In this session, three studies were presented on findings and lessons learnt. All three studies highlighted the understanding of contextual factors and the importance of involving multidisciplinary partners and factors to ensure sustainability. Animal welfare was also discussed key to ensure a successful implementation. The studies looked at chicken intensification and nutrition-sensitive social and behaviour change interventions in Ethiopia; farmers' awareness about zoonotic diseases in northern Nigeria and opportunities and pitfalls of disseminating knowledge through mass media; and evidence from Ethiopia on household and child dietary diversity and increased consumption of animal-source foods.

SESSION 6A

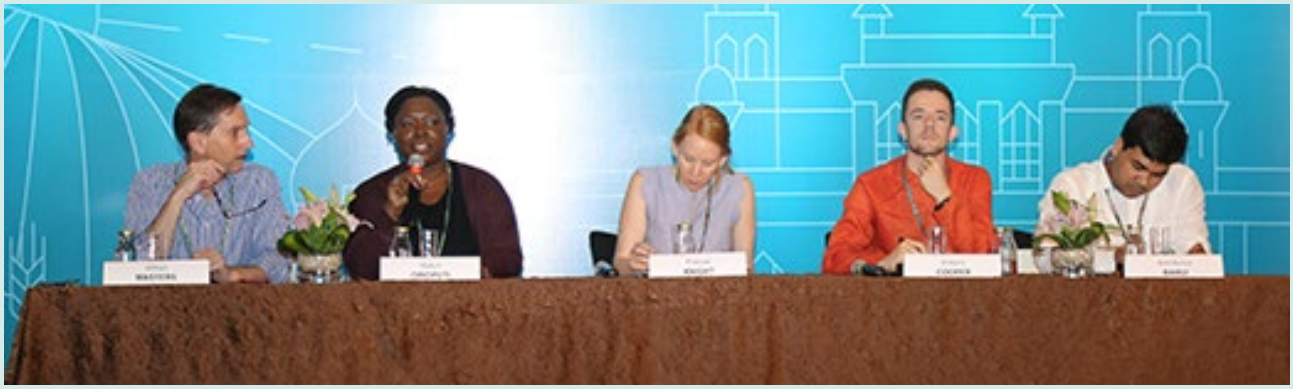
FINANCIAL INCENTIVES AND PREFERENCE ANALYSES FOR IMPROVED NUTRITION AND HEALTH

Financial incentives and technological developments provide an interesting array of potential ways to improve nutrition and health. In this session, speakers presented five very different and provocative approaches, including how combining technological, financial, and social safety net interventions can improve women's empowerment and children's nutrition; how crop insurance might be designed to be nutrition-sensitive; the effect agricultural and financial interventions have on dietary intake and the nutritional status of children living in HIV-affected households; how contract farming might be a potential pathway for improving the welfare of smallholder farmers in developing countries; and how exploring opportunities for expanding retail outlets might lead to improved dietary diversity.

SESSION 6B

HUMAN HEALTH AND FOOD SAFETY

Foodborne disease, according to the World Health Organization, constitutes a health burden comparable to HIV/AIDS, tuberculosis, or malaria. Concerns over food safety in low- and middle-income countries only continue to grow, as people have access to more food choices and value chains grow longer and more complex. Food safety also encompasses a wide range of issues and topics, presenting researchers with opportunities for shared learning across areas of study and intervention approaches. In this session, researchers presented work on how malaria among farming households impacts crop productivity; explored the relationship between aflatoxin and child growth, considering climate, diet, and seasonality; and how emotional drivers might improve food hygiene behaviours.



SESSION 7A AND 7B

TOOLS AND METHODS FOR SOLVING AGRICULTURE, NUTRITION, AND HEALTH CHALLENGES

The fields of agriculture, nutrition, and health are diverse in topic and scope, but bringing researchers together presents a unique opportunity to learn not just about work being conducted in other disciplines, but about the tools and methods used in some areas that might have broader application in other areas. Presentations spanning two concurrent sessions considered methods and tools ranging from Pile-sorting to explore nuances in couples' decision-making and to further conversations and overcome language barriers and cultural norms; decision-making tools to use with multiple stakeholders with diverse interests, such as in deciding types of food to promote in nutrition programming, agricultural programming and smallholder groups; system dynamics models to improve farmer access to markets; aflatoxin testing devices based on smart-phone technology; new indicators to help explore dietary diversity through underutilised species; a globally-applicable indicator to measure water insecurity; and emerging, highly-scalable, and relatively low-cost technologies for collecting dietary diversity data.

SESSION 8A AND 8B

FOOD ENVIRONMENT AND DRIVERS OF FOOD CHOICE

Understanding why consumers make the choices they do, how the food environment shapes those choices, and what interventions might improve the healthiness of diets are at the centre of research into food systems. The abundance of attention and interest resulted in two sessions on this topic, run in parallel. The research presented captured both positive and negative impacts of changing food environments globally, and looked at issues ranging from testing and localizing food-based dietary guidelines; ensuring diverse and perishable foods such as fruits and vegetables are available and affordable; people's preferences for local foods; the increasing consumer interest in food safety; impacts and challenges of rapid urbanization; and fast food, food eaten away from home, overcoming the lure of cheap, ultra-processed, and unhealthy foods in favor of healthy choices.

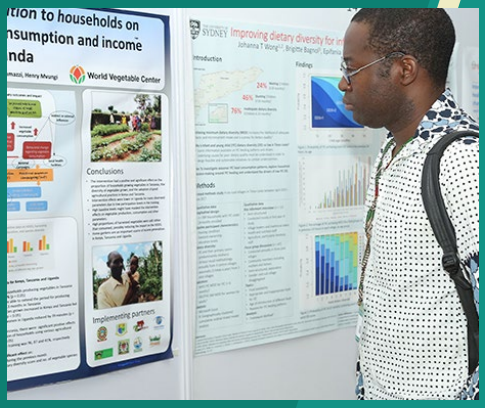
SIDE MEETINGS & NETWORKING OPPORTUNITIES

In addition to the Learning Labs and the Research Conference, ANH Academy Week 2019 offered participants ample opportunities to network informally and attend side meetings. This was made possible thanks to generous contributions from our partners and sponsors.

Side events held throughout the week included:

- Open Data Drop in session, IMMANA
- Drivers of Food Choice
- Nutrition issues and Planetary Health (Malnutrition and Climate change), LSHTM
- Global Challenges Research Fund (GCRF) Meeting
- Policy opportunities to support sustainable smallholder livestock and aquaculture production, Chatham House
- UKRI GCRF Action against Stunting Hub: Introduction and Overview, LIDC & NIN
- A4NH Equity Consultation
- Peter Menzel and Faith D'Aluisio Workshop: Using photography for research
- Ag2Nut Community of Practice India Chapter formation

Conference delegates had a chance to attend two official receptions, sponsored by Drivers of Food Choice, IMMANA and Wellcome Trust.



POSTER SESSIONS

A lively and popular innovation introduced by the organisers in 2016 and continued since, was a mini poster presentations where every poster presenter gets a minute to present their poster to entice delegates to visit their poster during the poster viewing session. Conference participants voted for the best poster and mini-poster presentation through the official conference app.

CLOSING AWARDS

Best poster:
Julia de Bruyn, IMMANA, Friedman School of Nutrition Science & Policy, Tufts University & Natural Resources Institute, University of Greenwich. Testing pictorial charts as a means of collecting participant-recorded data on diets and food access across seasons in a low-literacy community in central Tanzania

Best mini-poster presentation:
Johanna Wong, School of Life and Environmental Sciences, The University of Sydney, Australia; Centre for Global Health Security, Chatham House, London, UK. Improving dietary diversity for infants and young children in Timor-Leste

Best oral presentation (plenary):
Megan Deeney, London School of Hygiene & Tropical Medicine (LSHTM). Plastics in the food system: Human health, economic and environmental impacts - a systematic scoping review

Best oral presentation (parallel):
Archana Konapur, National Institute of Nutrition (NIN) (pictured below). Identification of food environmental factors hindering dietary diversification: A mixed methods study in rural south India

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Tigist Defabachew, A4NH, IFPRI

Zachary Gersten, The University of Michigan School of Public Health

ANH ACADEMY WEEK 2020
MALAWI - 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 to a different region each year. We are delighted to bring our event back to Southern Africa, adding exciting regional representation and perspectives to this global gathering.

The next ANH Academy Week will take place on 29 June - 3 July, 2020 in Malawi.

WITH **THANKS**

The ANH Academy Week would not have been possible without the generous contributions from a range of partner organisations and individuals for whose support we are enormously grateful.

THE 2019 ANH ACADEMY WEEK IS ORGANISED AND FUNDED BY:

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International Food Policy Research Institute IFPRI

Tufts University Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy

LCIRAH The London Centre for Integrative Research on Agriculture & Health

Drivers of Food Choice Competitive Grants Program

ICRISAT International Crops Research Institute for the Semi-Arid Tropics