

Interdisciplinary Workshop

Addressing Nutrition Challenges in Developing Countries

21 November 2018

The Maxwell Centre, University of Cambridge



CAMBRIDGE
GLOBAL
CHALLENGES



Global Challenges SRI (CGC) and Cambridge Global Food Security IRC (CGFS) wish to support interdisciplinary research addressing specific challenges relating to malnutrition in Official Development Assistance-target countries. The TIGR²ESS project in India, in which both CGFS and CGC are involved, and emerging CGC partnerships in Eastern and Southern Africa, have enabled the identification of specific malnutrition challenges.

Isaac Newton Trust funds have been awarded to run this workshop and seed-funding competition. Small grants of up to £3,000 will be available to attendees, on a competitive basis, to fund either travel or equipment to investigate early-stage ideas.

The aims of this workshop and seed funding are:

- i) to bring together new interdisciplinary teams of researchers who will work collaboratively, and
- ii) to develop new research ideas to the point where larger applications to established funding bodies are feasible, for continuation of the research on a larger scale.

MORNING AGENDA

9:15	Registration and coffee/ pastries
9:30	Introduction to aims of the workshop <i>Dr Sara Serradas Duarte, Cambridge Global Challenges SRI; Jacqueline Garget, Cambridge Global Food Security IRC</i>
9:40	Talk 1: Revival of millets in crop systems of improved nutrition and economic security in Odisha <i>Professor Srijit Mishra, Nabakrushna Choudhury Centre for Development Studies, India</i>
10:20	Talk 2: Improving food security and nutrition in Ethiopia using novel technologies to irrigate from groundwater, process crops, prepare food and enhance market access <i>Dr Seifu Tilahun, University of Bahir Dar, Ethiopia</i> Talk 3: Responding to chronic maternal and child undernutrition in Ethiopia <i>Dr Hirut Assaye, University of Bahir Dar, Ethiopia</i>
11:00	Coffee and networking
11:20	Talk 4: Challenges in achieving healthy nutritional security for people of India: a physiological strategy <i>Professor A Hemantaranjan, Banaras Hindu University, India</i>
12:00	Rapid group challenge
12:30	Lunch and networking
13:30	Introduction to format of afternoon and seed fund <i>D Sara Serradas Duarte, Cambridge Global Challenges SRI; Jacqueline Garget, Cambridge Global Food Security IRC</i>

AFTERNOON AGENDA

13:35	BioScience Impact Team support <i>Dr Vibhuti Patel, University of Cambridge</i>
13:40	Two-minute flash presentations by Facilitators
13:50	Group discussions Part 1: idea generation
14:50	Tea and networking
15:10	Group discussions Part 2: project definition and seed fund applications
16:10	Feedback to group
16:30	Close

SPEAKERS



Professor Srijit Mishra

Nabakrushna Choudhury Centre for Development Studies, India



Professor Srijit Mishra is Director, Nabakrushna Choudhury Centre for Development Studies. He researches and teaches on development-related issues. Some of his recent works are on [crisis in Indian agriculture](#), a refinement of the [human development index](#) and in spearheading the policy-relevant action research on [Odisha Millets Mission](#).

Talk: Revival of millets in crop systems for improved nutrition and economic security in Odisha

In September 2018, the Indian Government launched a mission on nutri-cereals for the promotion of millets and to improve nutritional security. The launch highlighted the successful initiative of Odisha Millets Mission, which won a SKOCH Award (December 2017) from among the top 30 Transformational Innovation Projects in India. The Odisha millet intervention began in 2017 and will run for five years. It facilitates improved agronomic practices, has initiated a procurement process to pay cost price to farmers who grow millets and has also introduced minor millets into state nutrition programmes on a pilot basis. The aim is to revive millets in crop systems, and improve their productivity for a marketable surplus thus enhancing farmers' income. The programme also aims to increase household consumption of millets, reducing hunger and improving nutrition.



Dr Seifu Tilahun

University of Bahir Dar, Ethiopia



Dr Seifu Tilahun is an Associate Professor of Hydrology within the Faculty of Civil and Water Resources Engineering of Bahir Dar Institute of Technology, Bahir Dar University. He has a PhD from Cornell University, and has been working research on watershed management and sustainable intensification since 2012. He currently holds a Scientific Director position at Bahir Dar Institute of Technology.

Talk: Improving food security and nutrition in Ethiopia using novel technologies to irrigate from groundwater, process crops, prepare food and enhance market access

Since 2015 Bahir Dar University has supported a Small Scale Irrigation (SSI) and Sustainable Intensification (SI) innovation lab as part of an international Feed the Future initiative. This consists of research interventions to introduce dry period irrigation with two farming communities that previously practiced rain-fed agriculture. The key findings were that farmers gain multiple benefits with a range of incentives to adopt new technologies. Irrigators have higher household dietary diversity (economic access to foods) and irrigation improved child growth (reduced stunting). In order to promote dry period irrigation, however, reducing

labour (including household task) through technologies is critical to increase profit and transform livelihoods through intensification. The intervention also found that irrigated fodder was feasible, both as a cash crop and for small farm use. While the results of this intervention are promising, if food security and sustainable livelihoods for Ethiopian farmers is to be achieved, further research is needed to evolve context-appropriate technologies for irrigation, farming, food processing and preparation and market access.



Dr Hirut Assaye
University of Bahir Dar, Ethiopia



Dr Hirut Assaye is an Assistant Professor in Food Science and Nutrition. She obtained her PhD from Addis Ababa University, Ethiopia. Hirut has been Head of the Department of Applied Human Nutrition, Bahir Dar University, Ethiopia since February 2016, and has been teaching, supervising MSc students and working research on human nutrition since 2016.

Talk: Responding to chronic maternal and child undernutrition in Ethiopia

Despite the progress made in recent years, Ethiopia still has one of the highest levels of chronic undernutrition (stunting and underweight) in the world. Micronutrient deficiency is also a serious public health problem in the country as more than 50 thousand children die each year due to vitamin A, iron and folic acid deficiencies. Ethiopia's GDP is depressed by 1.42% due to current levels of anemia, vitamin A and folic acid. The Government of Ethiopia finds this situation unacceptable and has decided to focus on ending child undernutrition by 2030 with a commitment to the 'Seqota' Declaration. The current situation regarding maternal and child nutrition in the country will be discussed, along with the challenges and opportunities to improve the situation, and strategies and programs being developed and implemented in response.



Professor A Hemantaranjan
Banaras Hindu University, India



Akhouri Hemantaranjan is Professor of Plant Physiology at the Institute of Agricultural Sciences, Banaras Hindu University, India; Formerly University Head of the Department. Professor Hemantaranjan is the recipient of UGC and CSIR prestigious fellowships and honours including the "Research Scientist" Award. His research focuses on the areas of abiotic stress and the significance of micronutrients in plant regulation.

Talk: Challenges in achieving healthy nutritional security for people of India: a physiological strategy

FACILITATORS

Group 1: Cropping systems

Lesley Boyd, NIAB; Chris Gilligan, Plant Sciences

Group 2: Nutrition and female health

Lara Allen, Cambridge Global Challenges; Dora Pereira, Pathology

Group 3: Mobilising communities – translation and outreach

Shailaja Fennell, Development Studies

ORGANISERS

Jacqueline Garget

Programme Manager, Cambridge Global Food Security

jg533@cam.ac.uk

www.globalfood.cam.ac.uk

@GlobalFood_Camb

Sara Serradas Duarte

Coordinator, Cambridge Global Challenges

sbas2@cam.ac.uk

www.gci.cam.ac.uk

Niina Valbuena

CambPlants coordinator and assistant to Cambridge Global Food Security

niv21@cam.ac.uk

www.cambplants.group.cam.ac.uk

with thanks also to:

Rose Eichenberger

TIGR2ESS Programme Manager

re305@cam.ac.uk

tigr2ess.globalfood.cam.ac.uk

Sophie Mower

Business and Operations Manager, Centre for Global Equality

Sophie.mower@centreforglobalequality.org

centreforglobalequality.org

DELEGATES

Name	Affiliation	Email
David Aldridge	Zoology	d.aldridge@zoo.cam.ac.uk
Lara Allen	Global Challenges SRI	lva20@cam.ac.uk
Rekha Bhangaonkar	Development Studies	rab229@cam.ac.uk
Lesley Boyd	NIAB	lesley.boyd@niab.com
Anthony Bridgen	Plant Sciences	ajb312@cam.ac.uk
Anyela Camargo Rodriguez	NIAB	Anyela.CamargoRodriguez@niab.com
Rosy Cousins	Land Economy	rc748@cam.ac.uk
Nelzo Ereful	NIAB	nelzo.ereful@niab.com
Shailaja Fennell	Land Economy	ss141@cam.ac.uk
Nick Fradgley	NIAB	nick.fradgley@niab.com
Chris Gilligan	Plant Sciences	cag1@cam.ac.uk
Carol Ibe	Plant Sciences	cni21@cam.ac.uk
Lili Jia	Engineering	lj340@cam.ac.uk
Huw Jones	NIAB	huw.jones@niab.com
Diane Lister	Archaeology	dll1000@cam.ac.uk
Giulia Loffreda	Epidemiology	ml856@medschl.cam.ac.uk
Matthew Milner	NIAB	matthew.milner@niab.com
Chloé Orland	Plant Sciences	orland.chloe@gmail.com
Vibhuti Patel	Bioscience Impact Team	vibhuti.patel@admin.cam.ac.uk
Charlotte Payne	Zoology	charlotte.payne@gmail.com
Dora Pereira	Pathology	diap2@cam.ac.uk
Sumantra Ray	Elsie Widdowson Lab	sr506@cam.ac.uk
Longzhu Shen	Zoology	ls771@cam.ac.uk
Anuprita Shukla	International Development, UEA	a.shukla@uea.ac.uk
Richard Sidebottom	Development Studies	ris25@cam.ac.uk
Pallavi Singh	Plant Sciences	ps753@cam.ac.uk
Shreya Sinha	Geography	ss2587@cam.ac.uk
Katherine Smart	Chemical Engineering and Biotechnology	ks895@cam.ac.uk
Lydia Smith	NIAB	lydia.smith@niab.com
Allyson Walsh	Cambridge Infectious Diseases	alw83@cam.ac.uk
David Willer	Zoology	dw460@cam.ac.uk