



# Cultivating Equality

Advancing Gender Research  
in Agriculture and Food Systems



GENDER  
Platform



## Cultivating Equality: Advancing Gender Research in Agriculture and Food Systems

12–15 October 2021

### Conference session descriptions and abstracts

The conference *Cultivating Equality* focusses on research that helps understand and advance positive synergies among sustainable and resilient agricultural, rural and food systems, and equality in societies globally.

#### Conference partners

- [CGIAR Gender Platform](#)
- [Wageningen University & Research as EU Gender-Smart partner](#)

Go online for our [conference website](#), [objectives](#), [themes and perspectives](#), and [the programme](#).

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## Tuesday 12 October 2021

### Tue 1.1 *Social Media for Productive Gender Research Communication*

*This workshop will help participants understand how to use some of the most popular social media platforms such as Twitter, Facebook and LinkedIn to get more visibility and support for your professional work, both through your own content as well as engaging in existing online conversations more productively. The workshop will provide tips and tricks on how to communicate gender research and insights in gender-sensitive, inclusive and productive ways as well as on how to build and engage a following, how to use social media in more intentional ways, and how to monitor and measure your results along the way.*

Moderator/organisers: Vivian Atakos and Marianne Gadeberg, CGIAR GENDER Platform

Delivered by Marchmont Communications

### Tue 1.2 *Research to Foster Gender Mainstreaming for Sustainable Rural Development and Food Security in the Mediterranean Area*

*The objective of this session is to bring concrete experiences and recommendations on the importance of including the sex and gender dimension into research and cooperation projects in order to improve the livelihoods of rural women in the Mediterranean countries; increase women's participation in natural resources management and the local agri-food value chains; and mainstream gender issues and promote women's empowerment within National policies, strategies and programmes.*

Moderator/organisers: Maroun El Moujabber, International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), Bari, Italy

#### Panelists

- Juan Antonio Sagardoy: Senior expert on Gender
- Nora Osama, Arab Women Organization (AWO)
- Patrizia Pugliese, CIHEAM Bari
- Roula Khadra, CIHEAM Bari
- Stefania Congia, Ministry of Labour and Social Policies, Italy

### Tue 1.3 *Gender-responsive Scaling*

*Interest in scaling of agricultural innovations is rising within the CGIAR and beyond, as reaching 'the numbers' is paramount to achieving desired development impacts. Scaling processes and massive use of specific agricultural innovations should not increase or perpetuate gender inequality or marginalize specific social groups in any way. Processes of scaling need to be inclusive; responsive to gender differences and constraints and tailored to the needs of diverse social groups. Scaling strategies should anticipate and mitigate possible negative consequences of wide-spread use of a certain innovation. In this session we will discuss scaling in relation to gender and propose and elaborate on a new tool – The Gender-Responsible Scaling Tool – developed by a team of scientists from the CGIAR, Wageningen University and UC Davis.*

Moderator/organisers: Anne Rietveld, Alliance of Bioversity International and CIAT

Cees Leeuwis, Wageningen University, Netherlands

#### **Reflections on responsible scaling and relevant diversity**

Erin Mcguire, UC Davis, USA

#### **First-experiences with the GRS Tool**

Vanya Slavchevska, Alliance of Bioversity International and CIAT, and Bela Teeken, International Institute of Tropical Agriculture (IITA)

#### **The Gender-Responsible Scaling Tool**

### Tue 1.4 *COVID-19 Experiences of Women Fish Processors and Traders in Africa: Insights from transdisciplinary research*

*The COVID-19 pandemic and accompanying responses to mitigate this health crisis worldwide, have resulted in substantial demand, production, distribution and labour disruptions in the fishery sector. These disruptions have severely impacted women processors and traders, who play a significant role in the post-harvest fisheries sector in sub-Saharan Africa. Despite this, the research and data emerging on COVID have continued to lack gender-responsiveness, often overlooking how COVID-19 and measures have exacerbated pre-existing gender barriers and gaps. This conference session highlights an innovative research response to the shock and gender-blindness in data*

through collaboration of a pan-African women's network (AWFISNET), a non-profit communications organization (On Our Radar), a university (Lancaster) and a CGIAR Centre (WorldFish). The work spans insights from women in West, Central, Southern and East Africa: Ghana, Tanzania, Kenya, Malawi, Nigeria, Zambia and Sierra Leone, Democratic Republic of Congo, Cameroon, Togo, Republic of Congo, Madagascar and Uganda.

Moderator/organisers: Cynthia McDougall, WorldFish

Panelists:

- Cynthia McDougall, WorldFish
- Eastina Marian Boimadi Taylor, On Our Radar
- Editrudith Lukanga, Environmental Management and Economic Development Organization (EMEDO) and African Women Fish Traders and Processors Network (AWFishNet)
- Libby Drew, On Our Radar
- Molly Atkins, University of Birmingham, UK
- Philippa Cohen, WorldFish and James Cook University, Australia

## Tue 2.1 *Design Approaches for Gender-inclusive Digital Tools*

We propose a capacity strengthening session with the objective to introduce inclusive design approaches for the development of gender and diversity-responsive digital tools within the CGIAR. Digital solutions for agricultural advisory or climate services, food security and decision-support for policy planning are on everyone's lips. But the positive expected benefits of digital tools often fall short. Often, these tools are not designed with specific user-needs in mind, especially with respect to ability, gender, language, culture, age, or other forms of human differences. This challenges sustainable adoption and scaling of digital tools and influences the expected positive impacts on key indicators as poverty or climate change adaptation. Design methods guide user-centered and inclusive design of digital tools throughout the whole development process. Inclusive design is an approach to design for a diversity of people, by considering specific user needs, e.g. in accessing information. These approaches are participatory by heart and include the user groups throughout the whole design process. Inclusive design means learning from diversity: we first design a solution for a specific group and afterwards extend to others. We developed a guidebook for gender inclusive digital design that can strengthen the capacities of researchers and digital developers within the CGIAR in developing (gender) inclusive tools.

Moderator/organisers: Anna Müller, The Alliance of Bioversity International and CIAT

Panelists:

- Anna Müller, Alliance of Bioversity and CIAT
- Berta Ortiz, Alliance of Bioversity and CIAT
- Jonathan Steinke, Alliance of Bioversity and CIAT
- Eileen B. Nchanji, Alliance of Bioversity and CIAT

## Tue 2.2 *Deconstructing Masculinities for Gender Transformative Research*

The session will have three main objectives which include: a) Sharing the experiences of working with men and boys to give participants ideas for adaptation in their work with men and boys towards gender equality; b) Exploring concepts of masculinity, vulnerability and how men relate to them in different contexts; and c) To present insights on how to create male allyship in research and policy development in support of gender equality initiatives. The key elements (content) of the presentation will include; \* What we mean by masculinities; \* Masculinities, gender relations and gendered social norms; \* Contradictions of gender and the Challenge to gender norms; \* Power & Privilege: Impact on decision-making & access to opportunities; \* Harmful masculinities & their consequences; \* Domains to focus on when addressing masculinities (giving examples of ADSOCK's experience in Kenya); \* Traditional norms –vs– Gender equitable norms; \* Paradigm shift; \* What to Do? Find the entry points; and \* Recommendations and conclusions.

Moderator/organisers: Philip Erick Otieno, Advocates for Social Change Kenya (ADSOCK)

## Tue 2.3 *Unlocking the Potential of Gender Research and Researchers to Influence Agricultural Research and Development*

There is a global growing momentum to strengthen agricultural research for development (AR4D) by integrating gender into research projects and development interventions. Agricultural scientists, managers and particularly gender researchers are at the core of these processes to ensure effective and appropriate responses to the needs and priorities of diverse groups of food system actors—including their most marginalized members, such as rural women. Achieving this balance calls for embedding the realities and experiences of differentiated groups as an integral part of

*the design, implementation, monitoring and evaluation of all AR4D work, so that all are represented equitably and benefit equally. Equitable AR4D requires gender researchers, working across AR4D institutes and embedded within multi-disciplinary teams, to be equipped to lead and influence processes of designing and implementing socially inclusive approaches towards transformative change in the agricultural sector. This session will explore some of the strategies that can enable gender researchers to lead socially inclusive approaches that can drive transformative change in the agricultural sector.*

Organizer: Dorine Odongo, African Women in Agricultural Research and Development (AWARD)

Moderator: Michèle Mboo-Tchouawou, AWARD

Panelists:

- Nicoline de Haan, CGIAR GENDER Platform
- Petra Abdulsalam-Saghir, Federal University of Agriculture Abeokuta (FUNAAB), Nigeria:
- Rosanne Diab, GenderInSITE, South Africa
- Titilope Fakoya, Gender and Social Development Specialist, Nigeria

## Tue 2.4 *Building Climate Resilience of the Most Marginalized through Feminist Transdisciplinary Approaches*

*Building Climate Resilience is the contemporary developmental agenda. However, this is easier said than done. In diverse climate hotspots, gender norms influence women's exclusion from productive agriculture, income secure livelihoods and decision-making at scale. Disparities by class, religion, caste and other contextual factors intersect and exacerbate gender inequality, as do economic, climate and other drivers of a growing poverty. Feminist researchers argue that transformative change requires the "view-point from below" – i.e. experiential, lived knowledge must inform and shape science solutions and R4D interventions. In the first section of this panel discussion, we will discuss how a feminist transdisciplinary approach calls for critically analyzing blatant and latent power-relationships in science and R4D. This presentation is followed by an interactive discussion on knowing and doing transdisciplinarity. Building climate resilience requires tackling gender-power inequalities in the face of dynamic, economic-social-ecological challenges. The matrix of these complexities requires tools that allow making sense of dynamic, inter-connected change processes. In a second session, we discuss a digital ethnographic tool, SenseMaker – that applies the classic feminist methodology of Narrative Action Research (NAR). We discuss how we apply SenseMaker to analyze the gendered dynamics of climate challenges and risks, and unpack gender norms, values, perspectives and behaviors of key institutional actors implementing climate initiatives.*

Moderator/organisers: Upandha Udalagama, International Water Management Institute (IWMI)

Panelists:

Deepa Joshi, IMWI

**Knowing and Doing Transdisciplinarity**

John van Breda, Stellenbosch University, South-Africa

**The design of a transdisciplinary, gender transformative, digital ethnographical tool**

Prabhat Kumar and Mayank Jain, SumArth/MICROX Foundation

**(Re)shaping the power from within**

Upandha Udalagama, IMWI

**Building resilience for whom & how?**

## Tue 3.0 **Opening Plenary**

*As the official conference welcome, the opening plenary will offer an opportunity for conference participants to greet each other and learn more about the conference aims, programme, and portal. Distinguished speakers Arthur Mol, Rector Magnificus/Vice-president Executive Board at WUR; Claudia Sadoff, CGIAR Executive Management Team Convener and Managing Director, Research Delivery and Impact; and Nicoline de Haan, Director, CGIAR GENDER Platform, will provide opening remarks.*

Moderator: Vivian Atakos, CGIAR GENDER Platform

Welcome

- Arthur Mol, Rector Wageningen University and Vice-president Wageningen University & Research
- Claudia Sadoff, Managing Director, Research Delivery and Impact of the CGIAR System Organization (CGIAR)
- Nicoline de Haan, CGIAR GENDER Platform

Keynote

Bina Agarwal, Manchester University, UK

**Cultivating equality by cultivating in groups**

#### Tue 4.1 *Measuring Empowerment in Agricultural Development Projects using Pro-WEAI*

*This session complements a recently-launched distance learning course on the project-level Women's Empowerment in Agriculture Index (pro-WEAI) <https://weai.ifpri.info/distance-learning/>. During the session, participants will learn about survey fieldwork, index construction, qualitative analysis, as well as reporting and interpretation of results, using one of the indicators (Work Balance) as an example. The session will also provide resources for all participants to learn more about how to use pro-WEAI. To ensure that everyone is familiar with the basics of pro-WEAI, all participants are expected to take the free online course in advance of the session, and are invited to submit questions in advance of the workshop, as well as during the workshop.*

Moderator/organisers: Ruth Meinzen-Dick, Agnes Quisumbing, Hazel Malapit and Ara Go, International Food Policy Research Institute (IFPRI), and Deborah Rubin, Cultural Practice

#### Tue 4.2 *Strengthening Community Systems through a Gender Justice and Social Inclusion Framework*

*This session's objective is to explore how research and program implementation contributes to systemic change towards gender equality and social inclusion. Grounded in IFPRI, World Vision, and Oxfam's work around the world, it builds and connects applied research and actual implementation of policies and programs.*

Moderator/organisers: Lilian Nkengla-Asi and M. Rosario Castro Bernardini, Oxfam

Jacqueline Ogega, Serena Stepanovic and Saeqah Kabir, World Vision

##### **Gender equality and social inclusion (GESI) and Food Systems framework: Five domains and two case studies toward GESI transformation**

Kazi Rabeya Ame, Mahmuda Sultana, Rebecca Rewald and Marc Cohen, Oxfam

##### **Unpaid care work, gender-responsive policies to facilitate access to income, services, and agricultural finance**

Tasokwa Kakota Chibowa and Judith Kamoto, Lilongwe University of Agriculture and Natural Resources, Malawi, Anthony Malunga, CARE, and Suresh Babu, International Food Policy Research Institute

##### **Translating National Strategies into Community Level Action: Role of Gender Analysis in Titukulane – Malawi**

\* Leah Payud, Oxfam

##### **WE-CARE Initiative's impacts in gender norms transformation in the Philippines**

#### Tue 4.3 *Making the Invisible Visible: Leveraging space satellite technology to benefit women in agriculture*

*Earth observation and remote sensing offer limitless applications for studying the dynamics of our planet from space. How can we leverage this information to empower women as farmers, mothers, and citizens to respond to climate extremes and build more resilient communities? This panel will present innovative research that uses geospatial data to better understand how food security and access to critical information can influence resilience by bringing research from three distinct areas of the world - Amazonia, Sub-Saharan Africa, and Hindu Kush Himalaya - into dialogue with two global initiatives.*

Moderator/organisers: Katherine Casey, SERVIR Global

Kamala Gurung, International Centre for Integrated Mountain Development (ICIMOD)

##### **Bridging gender gap in agriculture development through enhancing climate information advisory services: Evidence from Nepal**

A Rapid Gender Needs Assessment (RGNA) study of the agriculture and food security service in Nepal was carried out in three villages representing three agro-ecological regions. The objective of the study was to identify the platforms to disseminate the agriculture climate information services targeting women farmers and marginalized groups in order to mitigate the climate risks in agriculture production. The study method utilized qualitative information/data collection. The findings revealed that the farming system has been changing mainly in upland/bari areas with market-based crops production with improved technologies adoption. Such changes have also led to changes in the gender roles and relations. Despite the efforts to increase agriculture production, climate hazards remained a major problem. None of the agriculture extension service providers offer climate related information or advice. Therefore, climate information services should be strengthened to deliver in a gender inclusive way to increase agriculture productivity and food security.

Kathryn Grace, University of Minnesota, Twin Cities, USA

##### **Is there a linkage between seasonal agricultural variation and women's health? A multi-country investigation of recent trends**

In sub-Saharan Africa where the vast majority of households are dependent on rainfed agriculture to meet their food and income needs, many households are chronically and seasonally food insecure. Births also demonstrate a strong seasonal pattern, but the role of seasonal agricultural variation (capturing dimensions of food/resource

insecurity) plays in determining reproductive health outcomes is highly uncertain. In this research, we build on and integrate ideas from past studies focused on food security in the developing world with those on fertility and contraceptive use to examine how variation in seasonal agricultural production relates to contraceptive use and pregnancy in three countries in sub-Saharan Africa - Burkina Faso, Kenya, and Uganda. In this research, we use highly detailed, spatially-referenced individual-level data from Performance Monitoring for Action (PMA) that includes detailed information on women's contraceptive use and pregnancies. This data is matched to different remotely sensed based measures of vegetation - the Normalized Difference Vegetation Index (NDVI) and the Water Requirement Satisfaction Index (WRSI) - as proxies for community-level seasonal agricultural quality. To analyze the relationship between growing season conditions and these different reproductive health outcomes, we estimate a series of regression models leveraging individual-level variation in the timing of contraceptive use and pregnancies with attention to variation in the different measures of vegetation. Preliminary results suggest that contraceptive use and pregnancies do vary based on seasonal vegetation measures but that this relationship depends on each woman's characteristics as well as on specific community characteristics related to the family planning environment. The research provides insight into how individual- and community-level reproductive health needs may change according to seasonal fluctuations, suggesting that decision-making related to women's health interventions and associated targeting incorporate local growing season conditions.

Marina Irigoyen, Alliance of Bioversity International and CIAT

#### **Women's involvement and Participatory Mapping in Peru. First comments**

The SERVIR Amazonia Program and the Cocoa Peru Alliance (ACP, Alianza Cacao Peru, in Spanish) are coordinating since the end of 2020 to join efforts and enhance the promotion of gender equity, raising the participation of women cocoa farmers associated to Alianza Cacao, in the monitoring of their plots from space using geospatial systems. Cocoa is one of the flagship products of Peru, due to the quality and potential of the product; moreover, the cocoa plots combine their production with forestry and fruit trees oriented to food security. At the Ucayali Office level, ACP organizes 2,710 farmers, mostly of them are male, only 8.5% are women. However, women are increasing their activities at the technical and social level. Given the restrictions of the pandemic, the Program considered to work with Facilitators in the area, previously trained by the SERVIR Amazonia Program, who could carry out direct training to women in the exercise of monitoring. The Facilitators are technicians or professionals who are in permanent contact with the cocoa farmers in the area, working as ACP staff or the Colpa de Loros Cooperative, a member of the ACP. One objective was to involve women farmers who are owners of their plots or - who being couples or daughters - have a high participation in the productive and management of their plots. The activity considers three phases: As an introduction, the Facilitators training. Then, the implementation and follow-up of the field activities. Second, the SERVIR Amazonia processing of data and the production of a StoryMap. Third, the devolution of the information to women farmers. At this stage (August 2021) the Participatory Mapping work plan is on intermediate development. The systematization of the experience, which is in process, provides insights into how women farmers could be involved in the participatory mapping of their plots, the factors and conditions that promotes it, the challenges they face and how it could act as a means to enhance their esteem, contributing to make visible their potential. In addition, it introduces a reflection on the role of Facilitators in a pandemic scenario.

Catherine Le Côme, SNV Netherlands Development Organization

#### **Pastoralists' inclusion as minorities in GARBAL service**

To provide herders in Mali and Burkina Faso with timely information to assist in transhumance decisions, GARBAL programme was initiated in 2015 under a public private partnership. GARBAL is a call center allowing pastoralists to access data on pasture & water conditions, market prices, herd concentrations, the location of pastoral infrastructures and advisory services for their production. The data is collected through a mix of field and satellite data sources, building on the traditional information systems of pastoralist communities in the area, while adding the power of earth observation imagery. A call center in Mali has been fully operational since 2017 and one in Burkina Faso since 2019. It will soon launch in Niger. This presentation will outline the methodology behind the two call centers as well as results of initial user uptake and the future scale-up plans.

Jawoo Koo, International Food Policy Research Institute (IFPRI)

#### **Gender equality and food systems transformation in climate change hotspots: Exploring data synergies**

Women and men experience climate change impacts differently due to unequal access to resources and social norms defining their differential roles and responsibilities. In developing countries, women constitute nearly half of the labour force in agriculture, and yet there they do not own the land they farm, lack access to credit, have limited participation in collective action, decision making and leadership. Climate change threatens to exacerbate these existing inequalities, leading to higher vulnerability. The CGIAR Gender platform conducted research that sought to identify hotspots of climate change, where gender inequalities are persistent and likely to exacerbate under a changing climate. A methodology was developed for identifying climate change and gender inequality hotspots, using geo-spatial information and large socio-economic datasets. In these hotspots, extreme climate hazards



intersect with high levels of gender inequalities in the context of agricultural and food systems leading to low adaptive capacities. These hotspots span across different countries, urban-rural continuum, and diverse agro-ecologies. The methodology identifies the convergence and degree of climate-induced food system transformations and gender inequalities. The methodology further allows projects to better target their interventions to trigger equitable and sustainable agricultural and food system transformation for vulnerable population groups. This presentation will discuss the relevance and development of the hotspot mapping methodology, and the identification of hotspots across Asia and Africa. The presentation will focus on the methodology for identifying climate hotspots, the relevant indicators of gender inequality and the maps of geographical hotspot areas that face substantial threats in the near future.

Laura Cooper Hall, International Union for Conservation of Nature and Natural Resources (IUCN)

#### **Gender Integration in SERVIR Agriculture Services: Project Examples and Opportunities for Wider Learning**

In 2015, the SERVIR program adopted a Service Planning approach to ensure that its services help developing countries effectively solve challenges related to agriculture, water management, land use and disaster management. To support implementation, SERVIR designed the Service Planning Toolkit as a resource for SERVIR Hubs as they, with their partners, strive to make an impact in designing, delivering and implementing services. In 2020 Advancing Gender in the Environment (AGENT) began a review process of SERVIR's Service Planning Toolkit, identifying opportunities for enhanced gender integration and gender-responsive implementation. This review included a review of SERVIR's existing gender case study bank, and a process of identification of additional external case studies demonstrating successful integration of gender and inclusion into existing services, in alignment with stages of the service planning toolkit. In the process AGENT identified two case studies of gender integration into agricultural services, both focusing on drought management. These case studies highlighted the value of conducting a gender analysis or assessment at any point of implementation, to better understand project context to have the highest potential for impact. For example, one case study illuminated that it was important to understand how different genders access information in their community, to ensure all community members and farmers are enabled to make informed farming decisions. Case studies also showed the importance of building staff gender knowledge and capacity. Both cases provide valuable learning opportunities for projects and implementers interested in learning about the initial steps to integrate gender in their work.

#### **Tue 4.4 *Feminist Agroecology and Seed Security: Methodological innovations***

Organizers and presenters: Beatriz Oliver and Pratap Shrestha, SeedChange

*This session will showcase the importance of feminist approaches in agroecology and seed security practices and methodologies, and facilitate a collective exercise on priorities for research. Agroecology as a practice has important potential to help address gender inequality in decision-making and access to productive resources, due to the use of participatory methodologies, a social justice framework, and emphasis on local knowledge, practices and inputs. Co-presenters Pratap Shrestha and Beatriz Oliver will present on strategies for gender equality and women's empowerment through agroecology based on learning from agrobiodiversity programs implemented by SeedChange (previously USC Canada) and partners. These include farmer research committees (CIALs), participatory plant breeding and selection (PPB/PVS), and a Seed Security Assessment and Action Plan (SSAAP). They will present on how these methods help to visibilize the important roles women play in agroecology and seed management. Together with gender equality training, these methodologies have supported many community organizations to strengthen gender equality in agricultural activities and leadership roles.*

*In particular, they will discuss program methods to strengthen seed security that increasingly centre a feminist approach, with focus on the Seed Security Assessment and Action Plan (SSAAP). They argue that seed security approaches that emphasize participatory, gender-based analysis are crucial for actions to address intersectional forms of inequality in decision-making and access to resources. Based on a participatory discussion in the session in breakout groups, they will also propose directions for community and academic research in this area to further support feminist approaches to agroecology with focus on agrobiodiversity, and the implications for gender research in agriculture and agroecological settings.*

#### **Tue 5.1 *"Before they thought these are theoretical stories of women": Exploring tensions between conformation and critique of gender training for agricultural research teams***

*Gender is embedded in the sociotechnical process, shaped by context, power and agency (Wajcman, 2010; Blake and Hanson, 2005), making it integral to conceptualization, development and access to agricultural innovation (Schut, et al., 2015; Doss and Morris, 2001). Gender training as an act, process and tool must also be shaped by this understanding. Capacity building is a critical entry point for gender integration in agricultural development (Njuki,*

2016), but questions of who is trained and how have received little attention. Gender training has long garnered seething critique from academics and practitioners alike. Mukhopadhyay (2014) describes “palatable” short training events, Mukhopadhyay and Wong (2007) observe gender training programs that focus on skills while avoiding challenging behavior and attitudes. Gender training has become a “panacea for gender equality”, delivering “neutral” definitions, rather than an opportunity for self-reflection and engagement (Ahikire, 2007). Developing consciousness of gender inequalities and how they are socially constructed is critical to gender training in agriculture (Escobar and Puskur, 2014), so that researchers are exposed to the root causes of gender inequality and become active agents of change towards just and equitable societies. Yet we see parallels to Mukhopadhyay’s (2014) “palatable” training events: gender training programs targeting agricultural researchers that lead to “churning out of half-baked gender practitioners” (Mangheni et al, 2019). This session brings together diverse voices of experience and critique of gender training, with a focus on gender training for agricultural research teams through an interactive panel and collective visioning session.

Moderator/organisers: Hale Ann Tufan, Cornell University, USA

Panelists:

- Carolina Camacho Villa, University of Lincoln, UK
- Carolyn Sachs, Penn State University, USA
- Josephine Ahikire, Makerere University, Uganda
- Krista Jacobs, Landesa, USA

## Tue 5.2 *Gender Across USAID’s Feed the Future Innovation Labs: Lessons and approaches that cultivate gender-transformative agricultural development*

The USAID Feed the Future (FtF) Initiative’s Innovation Lab system partners faculty and extensionists at U.S. universities with in-country researchers to find solutions to some of the world’s most pressing issues related to agriculture and food security. The increasingly critical area of gender research is a major cross-cutting priority in the Innovation Labs. Gender disparities throughout the food system result in detrimental effects on production, health and nutrition, and overall wellbeing for men, women, and children. In this panel session we first explore approaches to gender research across the FtF Innovation Labs, finding value in variation and diverse methods, and the applicability of the research into different parts of food systems and/or in global contexts. Next, we highlight individual Innovation Lab approaches emphasizing different perspectives, strategies, and findings. Lastly, we discuss the collective lessons and how these lessons can move us toward systemic change and gender transformation in the food system. We present an opportunity for collaboration and forward-looking action by sharing about the nascent Community of Practice (CoP) and its focus on gender and capacity development. Engaging with the CoP provides space to develop mutual understanding and shared language regarding gender-responsive and transformative approaches benefiting agriculture productivity and food security - particularly within the research for development framework - and contributes to the agenda of leading donors such as USAID.

Moderator/organisers: Cheryl O’Brien, USAID Feed the Future Innovation Lab for Food Processing and Post-harvest Handling (FPIL), Purdue University, USA

Contributors:

- Kathleen Colverson, University of Florida, USA
- Kathleen Ragsdale, Mississippi State University, USA
- Paige Castellanos, Penn State University, USA
- Daniel Sumner, Virginia Polytechnic Institute and State University (Virginia Tech), USA
- Cheryl O’Brien, San Diego State University, USA
- Mary Read-Wahidi, Mississippi State University, USA
- Elisabeth Garner, Cornell University, USA
- Jamie Rhoads, USAID

## Tue 5.3 *Holistic Approaches to Rural Women’s Economic Empowerment*

The objective of the session will be to share findings from the UN Joint Programme ‘Accelerating Progress towards the Economic Empowerment of Rural Women’ (JP RWEE). The findings will encompass quantitative and qualitative assessments including a final qualitative evaluation, a WEAI report, and GALS qualitative assessment. The JP RWEE is jointly implemented by FAO, IFAD, UN Women and WFP in Ethiopia, Guatemala, Kyrgyzstan, Liberia, Nepal, Niger and Rwanda and aims to secure rural women’s livelihoods and rights in the context of sustainable development. The programme applies an integrated, holistic approach that addresses sustainable agriculture, nutrition and food security, economic development, and enabling policy environments that promote inclusive development and the rights of women. The programme takes into consideration social and political dimensions of empowerment, encompasses intersectional approaches to gender equality, and involves multi stakeholder partnerships with UN

agencies, civil society, and local and national governments. The findings show that the combined impact of this approach, has multiplying effects for women's empowerment which include: i. opening up access to economic opportunities for rural women that enable income generation and diversification; ii. bringing about transformative change for women by addressing social and structural barriers (discriminatory social norms and institutions); iii. increasing women's self-efficacy, ability to speak up and leadership – either in the context of community based groups or local rural institutions; iv) more equitable intra household relations and power dynamics, with men taking on more of the domestic burdens and supporting women's ability to engage in productive activities.

Moderator/organisers: Catherine McCarron, UN World Food Programme, Elizabeth Burges-Sims, UN World Food Programme

Carla Kay Kraft, UN Women

**Enabling policy environments for rural women's rights, resilience and livelihoods: Lessons from the Joint Programme on Rural Women's Economic Empowerment (JP RWEE)**

Susan Kaaria, FAO

**Applying holistic inter agency approaches to Rural Women's Economic Empowerment**

Beatrice Gerli, IFAD

**Behavioural change strategies in the JP RWEE: a qualitative assessment of the implementation of the Gender Action Learning System (GALS) in Kyrgyzstan**

Anna Cecilia Rosso, University of Milan, Italy

**The RWEE project in Kyrgyzstan: GALS vs BALI**

**Tue 5.4 *New Areas and Measures for the Study of Women's Empowerment: Group-based collective agency, time-use agency, and sexual harassment***

Scholars increasingly focus their efforts on improving the breadth and quality of women's empowerment metrics. Many aspects of women's empowerment, however, remain unaddressed. This session will present work on women's empowerment in three new or under-studied areas: group-based collective agency, time-use agency, and sexual harassment. In Delea et al. the authors use data from Nigeria to develop and validate a new scale to measure group-based collective agency—the perceived ability of a group to unite, establish goals, and act to achieve those goals. With the increased focus on collectives in agricultural development programs, this scale will be important for understanding group dynamics and the impacts of different group-based interventions on collective agency. The session also includes two papers on time-use agency—the strategic choices that individuals make about how to allocate their time. The first (Eissler et al.) explores gendered experiences of time-use agency based on qualitative studies in Benin, Malawi, and Nigeria, and describes the gender-based barriers that women experience in exercising agency over their time. The second (Sinharoy et al.) presents a newly validated survey-based approach to measuring time-use agency based on data collected in Ghana; this measure could complement time use data collection methods, to provide insight into agency over time. Finally, using data from Benin and Malawi, the sexual harassment paper (Heckert & Seymour) addresses a critical topic for understanding the contextual factors that contribute to the (dis)empowerment of women, especially as they upgrade their participation in agricultural value chains or become entrepreneurs.

Moderator/organisers: Jessica Heckert, International Food Policy Research Institute (IFPRI)

Jessica Heckert and Greg Seymour, International Food Policy Research Institute (IFPRI)

**Measuring and understanding the implications of sexual harassment among women who work in agricultural value chains**

Maryann G. Delea, The Carter Center, USA

**The Group-Related Collective Agency Scales (GCAS-23 and GCAS-12) – Full and Short-Form Scales for Construct Measurement in Nigeria and Beyond**

Sarah Eissler, Independent consultant

**Exploring gendered experiences of time-use agency in Benin, Malawi, and Nigeria as a new concept to measure women's empowerment**

Sheela S. Sinharoy, Emory University, USA

**Development and validation of a survey-based measure of time-use agency**

## Wednesday 13 October 2021

### Wed 1.1 *Gender and Climate Resilience*

Moderator/organisers: Annet Mulema, International Development Research Centre (IDRC)

Jane Mbolle Chah, University of Nigeria Nsukka, Nigeria

#### **A systematic review of gender perspectives in vulnerability to climate change impacts on agriculture and food security in Nigeria**

Gender inequality is one of the main drivers of food insecurity, as it is the main threat to the agricultural production activities of women due to climate change. Women's vulnerability to climate change is a problem in Nigeria, yet the interplay between gender and vulnerability to climate change impacts on agriculture and food security is poorly documented. The review was conducted in accordance with the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) method. The review documents the relative neglect of gender issues in research on vulnerability to climate change impacts on agriculture with implications for food security in Nigeria. More importantly, the existing studies are limited in number with little focus on food security in relation to vulnerability. Moreover, the majority of these studies have conceptualized gender in terms of two sexes: male and female. Few studies looked at the socio-cultural roles played by men and women. Results revealed that women are more vulnerable to the effects of climate change impacts on agriculture and food security than men. Several factors have contributed to these gender inequalities; education, age, access to land. Gaps in gender research include the limited gender studies in the Northern region of the country, the little conceptualization of gender as the sociocultural roles of men and women with regards to the vulnerability to climate change impact on agriculture and food security; the long-term impacts of vulnerability to climate change on social cohesion in rural households and the sustainability of strategies to reduce rural women's vulnerability.

Lora Forsythe and Valerie Nelson, University of Greenwich, UK

#### **A review of tools and methods for addressing gender in Climate Smart and Resilient Agriculture**

Margaret Alston, Monash University, Australia / Newcastle University, UK

#### **Transformative Resilience in the context of Climate Change**

Climate-related weather events, environmental change and shocks and crises will have gender differentiated consequences for physical and mental health of rural communities and farmers in the coming years. As global providers of major foodstuffs (e.g. beef, wheat, dairy and dairy products), Australia and United States' farmers and farm communities will be impacted not only economically, but also physically and emotionally, by climate-related weather. With such large-scale environmental disruption, there is growing awareness of ecological grief, whereby people that retain working relationships to natural environments are more likely to experience grief from ecological losses, such as loss of ecosystems and livestock due to acute or chronic environmental change (Cunsolo and Ellis 2018). Because of men and women's differing positions, roles, and responsibilities within rural communities, gender plays an important role in individual experiences with climate change adaptation (Alston 2013; McKune et al. 2015) and in responding to shocks and crises including the COVID-19 pandemic (Burki 2020). Our cross-national US-Australian research team will use in-depth interviews with male and female farmers in three communities impacted by climate change and shocks and crises in Australia to explore how socio-economic, political, and cultural dynamics shape men and women's responses in farming communities. The focus of this presentation will be upon analysis of data in on rural community in North-Eastern Victoria, Australia. As we work towards developing our understanding of transformative resilience, we will present preliminary findings from this subset of interviews on the connection between gender and response to shocks and crises.

Nitya Chanana & Stephanie Ma, CCAFS / Columbia University, USA

#### **Gender and Climate Resilient Agriculture- A scoping review**

Climate resilient agriculture is aimed at building the resilience of agricultural systems to both long term as well as short term climate risks through adaptation and mitigation strategies (FAO 2021). Understanding the gender aspects of climate resilient agriculture is key to ensure gender equitable outcomes of interventions. While literature is steadily increasing in the area of understanding gender dynamics with respect to climate resilient agriculture, there still remain certain gaps and challenges that require further efforts and attention.

## Wed 1.2 *Systemic Analysis of Value Chains and Implications for Intervention*

Moderator/organisers: Brenda Boonabaana, Makerere University, Uganda

Anusha De, LICOS –KU Leuven, Belgium

### **Gendered perceptions in Maize supply chains: Evidence from Uganda**

Faced with imperfect information, economic actors use judgment and perceptions in decision-making. Inaccurate perceptions or false beliefs may result in inefficient value chains and systematic bias in perceptions may affect inclusiveness. In this paper, we study perceptions in Ugandan maize supply chains. A random sample of maize farmers was asked to rate other value chain actors—agro-input dealers, assembly traders and maize millers—on a set of important attributes such as service quality, price competitiveness, ease of access, and overall reputation. These other value chain actors are tracked and asked to assess themselves on the same attributes. We find that input dealers, traders and millers assess themselves more favourably than farmers do. We also zoom in on heterogeneity in perceptions related to gender and find that women rate higher than men. The sex of the actor being rated does not affect the rating.

Devis Fabian Mwakanyamale, International Institute of Tropical Agriculture (IITA)

### **Barriers and opportunities to women's participation in the commercialized cassava seed system in Tanzania**

Inclusive agribusiness models can create opportunities for smallholders to increase their income and achieve broader development outcomes. Inclusiveness, however, requires that interventions to commercialize agri-food value chains consider both technical constraints and social barriers to gender equitable participation. This study's objectives were to identify barriers that constrain women's entry into the commercialized cassava seed system and examine gender differences in farmers' experiences as Cassava Seed Entrepreneurs (CSEs). The study was conducted in Tanzania in 2021. Quantitative data were collected from 218 CSEs and 80 farmers who did not meet the selection criteria to become a CSE. Qualitative data were collected from 30 CSEs with varying levels of success running their businesses and from 13 extension officers who provided support to CSEs. Results show how women's limited access to productive resources restricts their chances of becoming CSEs. Women CSEs on average own smaller land holdings and a greater proportion are asset poor compared to men CSEs. Women CSEs also face challenges when accessing capital, land, and labor to run their businesses. Qualitative findings illustrate how discriminatory gender norms within households and communities create additional barriers for women's success as CSEs. Nonetheless, results also demonstrate how, with a supportive home environment and increased access to capital, land, training, and group membership, opportunities offered through the commercialized model can increase women's income and strengthen their enterprises. Results suggest that a gender-transformative approach that integrates both technical and social innovations is necessary for an inclusive, integrated seed production model and for women's increased empowerment.

Mukani Moyo, Nozomi Kawarazuka, and Srinivasulu Rajendran, International Potato Center (CIP)

### **Gender and informal markets: disseminating nutrition-rich sweetpotato bread to low-income populations**

Orange-fleshed sweet potato (OFSP) puree-based bread has been successfully integrated into the urban formal food system, being sold at bakeries and supermarkets. While its main purpose is to create more vitamin A-rich food options for the poor, consumers in the formal food system are mostly better-off. Therefore, to reach poor consumers, it is critical to develop new markets within the informal food system. However, this system is extremely complex and highly gendered with dynamic and diverse interactions among value-chain actors. Furthermore, there is limited investment in storage facilities, compromising food quality and safety. Understanding the informal food system is therefore a first step to developing new markets for the poor. In this presentation, we demonstrate the results of our recent study on understanding potential opportunities, needs and constraints in the informal food system for disseminating OFSP puree-based baked and fried products to both urban and rural poor people in Kenya. The interdisciplinary study was designed by combining the aspects of food sciences, anthropology and economics with a strong focus on gender and intersectionality. Qualitative and quantitative methods were employed to explore value chain actors and characteristics of informal systems, especially their relationships, perceptions and everyday practices. The findings suggest that the informal food system has a great potential for new markets, as it acts as a hub for social interactions, information sharing and reciprocal support. We conclude by highlighting the importance of interdisciplinary research that provides comprehensive recommendations towards equitable and inclusive scaling.

Rahma Adam, WorldFish

### **A gendered aquaculture value chain analysis in northwestern Bangladesh**

The aim of this value chain study was to generate a knowledge base to inform Aquaculture: Increasing Income, Diversifying Diets and Empowering Women in Bangladesh and Nigeria (IDEA) project interventions as well as provide broad baseline information regarding chain composition and both social (including gender) and economic performance. The study applied a bespoke conceptual framework that aims to enable empirical understanding of aquaculture value chains that not only "counts" where women and men are, but rather brings together functional

and economic value chain analysis with gender analysis thinking, informed by theory and current practice. It also used a mixed-methods approach to answer research questions related to the composition, functioning, performance and inclusiveness of the aquaculture value chain. Women and men both engage in paid and unpaid fish production roles, but women are not recognized by male household members as fish farmers. No women were found as intermediaries and retailers, or as hired labor for those businesses. However, they do contribute unpaid household labor to their husband's business. Women have less decision-making power at all levels. Finances were identified as a key constraint to upgrading, which limits farmers of all genders besides those of higher socioeconomic status, while access to quality inputs and training were identified as barriers for all farmers. Some of the action points, include the application of Gender Transformative Approaches (GTA) to address constraining gender norms and attitudes in the households; and leveraging greater access to ponds and control by women over financial assets.

### Wed 1.3 *Recognition and Visibility: Exposing gender in farming 2.0*

Moderator/organisers: Gaudiose Mujawamariya, CGIAR GENDER Platform, AfricaRice

Janna Luisa Pieper, Georg-August-University Göttingen, Germany

#### **Start-up women farmers in Germany: An organic avant-garde challenging gender stereotypes?**

Due to demographic and structural change, the number of farm managers in Germany decreases whereas the size of the farms is increasing. Despite this development, a growing number of organic farmers is calling for a systemic change towards a more sustainable living and farming, also known as "repeasantization" (van der Ploeg 2008). Among this organic niche there seems to be a growing amount of start-up women farmers. In order to set up a farming business as a woman, without inheriting a farm site or land, one has to "marry a farmer or win the lottery", as one interviewee stated. Therefore it is not surprising that only 10% of the farms in Germany are run by women (DESTATIS 2017). This contribution refers to the first results of the qualitative research of the nationwide project on the living and working situation of women on farms in Germany funded by the Federal Ministry of Food and Agriculture Based on biographical-narrative interviews (Rosenthal 2004) with start-up women farmers, the following questions are addressed: • Which opportunities are available for women in order to build a farming business besides taking over the family farm? • What are the biographical backgrounds and motivations of female start-up farmers? • What is their farming philosophy? • How do gender dynamics and perception of gender roles impact start-up women farmers? • Could supporting women to start farming businesses be a measure to achieve a more gender-equitable agriculture? This contribution presents first results and conclusions of this ongoing qualitative research.

Steven Michael Cole, International Institute of Tropical Agriculture (IITA)

#### **Who does what and why? Intra-household roles and explanatory models for sourcing soybean seed from the formal sector in Malawi**

While knowing who does what within the household may improve agricultural development program targeting to meet the needs of women and men, it may be equally important to know the rationale behind why individuals carry out certain tasks (i.e., their explanatory models) and whether the reasons indicated explain any more of the variation in household outcomes than that which is explained by who does what. Using survey data collected in Malawi in 2018, this study asks whether there is utility in knowing who sources soybean seed within the household (wife, husband, or jointly together) and why when explaining variation in seed obtained from the formal versus informal sector. The study sample comprised respondents who were in a marital relationship at the time of the survey (N = 399, 44% female and 56% male). Their responses to why individual(s) source soybean seed within their households were categorized according to the explanatory process they typified following a recent study by Bernard et al. (2020). These variables were included in a logistic regression model along with those representing who sources soybean seed and several covariates. Results suggest that the identity of the person who sources seed has little to do with whether the seed was obtained from the formal sector. Instead, why the person sources soybean seed is the better predictor. As formal seed system actors mobilize to persuade more smallholder farmers to adopt improved varieties, understanding why people source seed may be key for targeting and when designing agricultural development interventions.

Tanya Watson, National University of Ireland, Galway

#### **Women's farm property ownership and gender equality in Ireland**

An increasing number of women living on family farms in Ireland own farm property. Ownership of farm property is not effective on its own and requires women to be in a position to make key decisions about what is done with their farm in terms of production, distribution and disposal of assets. Drawing on recent qualitative research based on interviews with twelve women farm property owners in Ireland, women's personal experiences of property ownership are explored. Women's pathways into ownership through inheritance, lease, purchase and legal

partnership are compared to highlight factors that both constrain and enable women's transition to ownership and control of farm property in Ireland. Strategies women farm owners use to overcome constraints are discussed through the activation of various resources they use to strengthen their positions and create opportunities for themselves. This presentation considers the possibilities women's farm property ownership holds for their active participation in agriculture and decisions affecting their family's livelihood. As women farm property owners claim an identity in farming operating within the context of family farming, are there opportunities for greater gender equality and change?

Annelie Gütte, Leibniz-Centre for Agricultural Landscape Research (ZALF), Germany

#### **Constructing or empowering the female coffee farmer? How gender research in agriculture talks of gender issues in coffee cultivation**

While women and their contribution to coffee production gain visibility, it remains fuzzy how gender research talks of gender equality and women empowerment in coffee cultivation. Using methods of discourse analysis based on a systematic literature review, this contribution strives to highlight how the current scientific debate on gender issues in coffee cultivation is structured. It aims to disentangle main narratives, attributed agendas of promoting gender equality, topics associated with this, and the identification of relevant boundaries of respective socioeconomic and socioecological systems including the potential group of beneficiaries and affected actors. Results indicate three major narratives: (1) coffee cultivation experiences a significant feminisation trend; (2) gender inequalities and women's marginalisation remain prevalent in coffee cultivation; (3) the 'feminisation' of coffee cultivation is a purposive construct neglecting realities of female farmers. (1) and (2) largely concentrate on actors of the respective socioeconomic system. Although discourses (1) and (2) mostly centre on women, they also take into account their families (e.g. in terms of nutrition and health) and the socioecological system as a whole (e.g. in terms of biodiversity). (3) takes into account beneficiaries largely represented by actors of the upper value chain with a strict economic interest in encouraging women to participate in coffee cultivation. This implies that gender research in coffee cultivation has not reached consensus and that the debate affects actors and processes beyond women only. Acknowledging this helps to lift gender research in agriculture from its status as side issue to a central aspect of a sustainable and just transition of agricultural systems.

Shiferaw Feleke, International Institute of Tropical Agriculture (IITA)

#### **Understanding the factors and structure of gender inequality in crop productivity: The case of cassava in Tanzania**

Several studies have documented the gender-productivity relationship, suggesting that women exhibit lower average agricultural productivity than men. The relationship is established based on a unitary household model, which erroneously assumes that all household members equally share household resources. Besides, they are estimated using standard linear regression and decomposition techniques (e.g., Blinder-Oaxaca decomposition). As an improvement over unitary models, collective models have recently been applied. However, like the unitary models, collective models are also estimated using standard linear regression and decomposition techniques, providing average estimates of gender effects. Such techniques, although helpful, do not reflect the productivity effects of gender in all parts of the productivity distribution. They only estimate the mean effects. However, mean effects are insufficient to appropriately target public policies because the effects of differences in endowments and returns to the endowments may vary between men and women not only at the mean but also at other points in the productivity distribution. This study aims to understand the factors and structure of gender inequality in cassava productivity. We applied the quantile decomposition method proposed by Machado-Mata (2005). Results revealed gender inequalities in cassava productivity, with men exhibiting higher levels than women due to differences in endowments and returns to the endowments across different quantiles of the productivity distribution. The results shed some light on the potential entry points for targeted gender-sensitive policy interventions to reduce the gender productivity gap in the cassava production system in Tanzania. We used an existing data set from a household survey conducted with 1047 farmers in Tanzania.

### Wed 1.4 *Gender Issues in Nutrition and Food*

Moderator/organisers: Valentina Peveri, American University of Rome, Italy

Alejandra Safa Barraza, United Nations Food and Agriculture Organization (FAO)

#### **Advancing gender equality and empowerment of women in food systems**

Women play an important role in Food Systems as producers, wage-workers, processors, traders, entrepreneurs, and consumers. However, they face substantial and systemic gender-related barriers. The results of decades of development have shown that the cross-cutting social dimension of sustainability cannot be dissociated from the economic and environmental considerations for ensuring durable and inclusive success. Achieving equitable and sustainable food systems demands thus that the needs, priorities and challenges of men and women of different

age, ethnicity and socio-economic status, including indigenous people, are considered throughout processes of production, aggregation, processing, distribution, consumption, and disposal (loss or waste) of food products. This literature review examines existing guidelines and tools for gender equality and empowerment of women in food systems, highlighting best practices and ongoing collective efforts advocating for gender transformative approaches in food systems. Based on the results of the review, the paper then proposes a set of components and main steps of a Food Systems approach for gender equality and women's empowerment and delineates a series of conditions for successful food systems transformation processes. The results emerging from this literature review will have important implications for policy actors and other relevant stakeholders designing more inclusive and gender transformative Food Systems policies, and will be particularly pertinent for the deliberations and national dialogues surrounding the UN Food Systems Summit.

Padmaja Ravula, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and and Sudha Narayanan, International Food Policy Research Institute (IFPRI)

#### **Understanding the dynamics of women empowerment and nutritional empowerment of rural women and their families in Maharashtra, India**

This paper aims to measure the nutritional empowerment of individuals and the nature of inequalities thereof using a recently developed metric called the Women's Empowerment in Nutrition Index (WENI). The 33 indicator WENI spans 7 domain-dimensions of knowledge, agency and resources across food, health and institutions. We use primary survey data for 867 individuals from 4 villages of Maharashtra, India, including WENI woman (mother of child below 5 years of age), a subsample of their male spouses, mother-in-law of the WENI women. The survey also covers a group of older woman (above the age of 65) from other households. Overall, only 37.21% of the individuals interviewed are nutritionally empowered. 72% of the WENI spouses were empowered compared to only 35% of the WENI women who were empowered suggesting gender inequalities in nutritional empowerment. The least empowered were the elderly women (8%), highlighting heterogeneity among women. Within the 188 households for which we have data on both spouses, in 41% of these, the woman is nutritionally disempowered whereas the male spouse is not. Not only is there a substantial gap in the WENI scores between spouses within the same household, it is apparent that these gaps are actually higher for wealthier households. Our analysis of spousal inequalities in nutritional empowerment demonstrates the utility of a measure such as WENI in conducting diagnostic analysis of gender parity within households and across communities. Such analysis helps identify appropriate levels at which different policies need to be targeting to empower women and reduce gender inequalities.

Ifeoma Quinette Anugwa, University of Nigeria Nsukka, Nigeria

#### **Gender dimensions in perceived vulnerability to the effects of climate change on household food security among farming households in Southeast Nigeria**

Farming livelihoods in small-scale agriculture are imbued by gendered divisions of rights and responsibilities expressed in power asymmetries in access to land, labour, and leisure time. This social differentiation may imply varied vulnerability and capacity to adapt to climate change. Aiming at a more nuanced gender analysis, this study sought to investigate gender dimensions in perceived vulnerability to the effects of climate change on household food security among farming households with a view to unpacking evidence and lessons for policy makers on the need to integrate gender perspectives on climate change adaptation actions. The study was conducted in the Southeast region of Nigeria. Collective and bargaining approaches were used in collecting individual- and intra-household level data of 120 pairs of spouses. Descriptive and inferential statistics were used in analyzing the data. Results of the study showed that more husbands (85.3%) than their wives were aware of climate change. The majority (90.0%) of women and men (79.2%) were classified as food insecure within their households. Overall, slightly more women than their husbands indicated that they were vulnerable to the effects of climate change on food availability, accessibility, and utilization of food supplies. There were observed gender differences in the coping strategies employed by men and women in the areas of growing orchards and home gardening. It is recommended that government, international agencies and NGOs are commit to a gender-integrated approach, which makes men and women's concerns an integral dimension in the design, implementation, and evaluation of climate change adaptation programs.

\* Mousumi Bhattacharjee, National Council of Applied Economic Research (NCAER), New Delhi and International Food Policy Research Institute (IFPRI), and Suresh C. Babu, IFPRI

#### **Do land size, crop, and home garden diversity improve female children's nutritional status? Pilot evidence from a village of West Bengal**

There is limited evidence of agriculture to nutrition pathways focussing on production and consumption diversity at the household level, especially for children (Kumar et al., 2015). Our objectives are to understand the: (i) association between household land size holding and child dietary diversity/nutritional status; and (ii) association between crop/ home garden diversity and child dietary diversity/nutritional status. Fifty households were surveyed



in the village of Taldi (Block Magrahat-II) in North 24 Parganas, West Bengal. Five questionnaires were administered per household: Community Level General, Community Level Agriculture, Household Socio-Demographic, Household (Agriculture), and Household (Nutrition). We adopted a stratified random sampling strategy to identify agricultural households with kids less than five years of age. Of the total number of children, 36 percent were female, and 64 percent were male. Almost 27% are moderately underweight and stunted, and 22% severely underweight and stunted. Our main findings are, Median child food diversity is more than ten across all land size holdings; Female underweight children are more in number and have poor dietary diversity - 61% of female children are stunted and underweight; Child food diversity is low across low crop/home garden diversity; Low dietary diversity and poor quality of nutritious food can explain the poor nutritional status of children in this village. The existing literature substantiates our findings. Home gardening is an overlooked strategy. It should be emphasized to improve diet quality, especially for female children..

\* Gianna Bonis-Profumo, Charles Darwin University, Australia

#### **Gender relations on livestock production and animal-source food acquisition and consumption among smallholders in rural Timor-Leste: A mixed-methods exploration**

Among smallholders, gender relations shape how agricultural products are produced, and how foods are acquired and consumed, which impacts on food security and nutrition. In Timor-Leste, most rural households own multiple livestock species, yet animal-source foods (ASF) intake is low and malnutrition high. This study explores how gender relations inform livestock production, and ASF acquisition and consumption in four Timorese villages in Baucau and Viqueque districts. We examined women's empowerment within the relational sphere of gender relations and applied a qualitative-dominant mixed-methods design. Selected data from the Abbreviated Women's Empowerment in Agriculture Index (n=161 women, n=106 men) and 24-hr ASF recalls (n=161 mother-child pairs), were complemented with 33 semi-structured interviews, mostly with women and/or their husbands, analyzed through the Gender Relations Framework. We found that most women and men reported joint livestock ownership and joint decisions on production and income. However, interviews revealed that for many women, joint decision-making meant requiring their husband's consent, without which they would not proceed with selling livestock or purchasing ASF. Women's unequal bargaining position was influenced by social norms on the gendered division of labor, and by men's role and framing as income generators. In a setting where rice security was a priority concern, ASF were considered not essential and unaffordable. Mixed-methods seem useful, and arguably necessary, to understand the contextual significance of decision-making processes. Nutrition-sensitive programmes could include men in their design as important actors in financial decisions that might affect dietary composition.

### **Wed 2.1 *The Challenges of Interdisciplinary Projects Finding our way into the blackbox: unpacking systemic gender inequality across institutional landscapes***

*Even though feminist researchers have long pointed out the scalar nature of gender inequalities, and how they are reproduced and reiterated in organisations, CGIAR gender research has rarely looked beyond households and communities. What happens inside organisations we work and collaborate with, remain the proverbial "black box", even though this is precisely where policy intent to address gender gets diluted and re-/misinterpreted. At best, we have talked about the masculinity in agri-food system organisations, but rarely explored how gender norms, values and perspectives determine how institutional stakeholders understand, practice and value gender equality. Adopting the research methodology of 'studying-up' institutional structures, cultures and actors who perform in these spaces, we examined how gender is understood, interpreted and practiced by diverse group of organisational stakeholders through in-depth semi-structured interviews. We noted that, as junior women researchers, accessing institutional stakeholders and getting agreement to talk about gender was a key challenge, an indicator of masculine bureaucratic structure. We also observed that official stakeholders focus and prioritize restoration and ecological gains in watershed programs, relegating social, including gender goals as peripheral. Gender is equated with women, with little thought about its application in projects. This explains why "gender work" is subtle to grassroots actors. Those who "do gender" also tend to equate gender with women and simplistically equate increased participation in projects, monetary gains - with women's empowerment. Gender is rarely addressed as a complex set of power relations along the axes of caste, class, education, and age that operate at different scales.*

Moderators: Deepa Joshi, International Water Management Institute (IWMI), and Padmaja Ravula, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

Organizers: Padmaja Ravula, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Arunima Hakhu and Deepa Joshi, International Water Management Institute (IWMI)

Deepa Joshi, IWMI, and Padmaja Ravula, ICRISAT

#### **Introduction**

Breakout 1: *Finding our way into the blackbox: unpacking systemic gender inequality across institutional landscapes*

Moderator: Ananya Chakraborty, ICRISAT

*Case study and panel discussion on drylands*

Padjama Ravula, ICRISAT, *Introduction*

Panelists:

- Stephanie Leder, Agricultural University Uppsala, Sweden
- Ramesh Singh, ICRISAT
- Archana Singh, PRADAN, India

Breakout 2: *When bio-physical and feminist researchers come together: critiquing claims of the “wise use” of wetlands*

Moderator: Arunima Hakhu, IWMI

*Case study and panel discussion on wetlands*

Deepa Joshi and Arunima Hakhu, IWMI, *Introduction*

Panelists:

- Sanjiv De Silva, IWMI
- Ritesh Kumar, Wetlands International – South Asia

### Wed 2.2 *Gender Dynamics in Value Chains beyond Production Node and Single Commodity Analysis*

*Much research has been done to-date on gender dynamics in value chain development, however, there tends to be an overemphasis on the production node and on single commodity chains. This session looks at the findings from a set of projects that began in 2019 and were supported by PIM via the CGIAR Collaborative Platform for Gender Research (predecessor to the current GENDER Platform). The projects analyze gender roles, responsibilities and relations in agricultural value chains drawing on both qualitative and quantitative data looking at nodes in the midstream segments of a value chain or across multiple chains.*

Organizer: Rhiannon Pyburn, CGIAR Research Program on Policies, Institutions and Markets (PIM) and KIT Royal Tropical Institute, Netherlands

Moderator: Froukje Kruijssen, KIT Royal Tropical Institute

Emily Gallagher, CIFOR

**From oil palm mamas to market queens and kings: Measuring the gender footprint of informal and formal market value chains in Eastern Region, Ghana**

Jennifer Twyman, Independent scholar

**Helpers, Employees, and Owners: Exploring Women’s Roles and Empowerment in two Agricultural Value Chains in Honduras**

Surendran Rajaratnam, WorldFish

**Do self-help groups improve women’s empowerment and gender equality in the fisheries and aquaculture in India? A systematic literature review**

Vanya Slavchevska, Alliance of Bioversity International and CIAT

**Gender dynamics in the input segment of local and global value chains for root crops in Vietnam**

### Wed 2.3 *Women Shellfishers and Food Security in West Africa*

*Inspired by two women’s shellfish co-management successes in West Africa, this session will present how the USAID/Women Shellfishers and Food Security project implemented by five partner organizations is addressing the need to understand and document cross sectoral linkages between sustainable shellfisheries, mangrove conservation, and food security that have potential for win-win synergies and scale up across West Africa. Presenters will discuss findings to date from site-based research at 3 sites in The Gambia and 3 sites in Ghana that inform the theory of change, “IF women’s shellfish livelihoods in coastal mangrove and estuarine ecosystems in The Gambia and Ghana are improved through gender and nutrition sensitive co-management and linkages made to community based forest management in the land/seascape, THEN mangrove protection and estuarine biodiversity will be improved, AND IF approaches for sustainable food producing livelihoods within the coastal mangrove land/seascape contribute to a nutritionally balanced local food supply, THEN household resilience, sustainable food systems, and nutrition will improve.” A participatory regional assessment of women’s shellfisheries across coastal countries from Senegal to Nigeria will also be discussed, including the situation, promising approaches, and potential sectoral and cross-sectoral benefits.*

Moderator/organisers: Karen Kent and Brian Crawford, University of Rhode Island, USA

Fatou Janha, TRY Oyster Women’s Association, The Gambia

**The TRY Oyster Women’s Association case and field context.**

Women oyster harvesters in The Gambia are poor, not literate, often widows, single head of their household or primary provider for their household. Among the vulnerable of The Gambia, these women are among the most

vulnerable. They work under dangerous conditions with high effort for low returns. Handling and processing conditions are unhygienic. Harvester communities were isolated and disbursed not working together. Still, these women know and understand that they have to protect the natural resources on which their livelihoods depend. With the founding of the TRY Oyster Women's Association in 2007 and the support of the USAID BaNafaa Project from 2009 – 2014, the women engaged with each other, community, and government stakeholders in an action research, capacity building, and shellfishery co-management planning process. It resulted in the Government of The Gambia granting TRY exclusive use rights to the cockle and oyster fishery in the Tanbi Wetlands National Park in a gazetted co-management Plan signed by 5 stakeholder agencies. The plan institutes shellfish management measures such as an annual 8 month closed season. Value chain improvements, diversified livelihoods training, microfinance, literacy, access to health services, and mangrove replanting were associated activities. Results included 6,300 ha of oysters and protected mangroves better managed, value chain improvements and a 250% oyster price increase. Most importantly, women gained knowledge and power in decision-making on sustainable natural resource management for food security and livelihoods. Through peer-to-peer exchange and technical assistance from TRY and with support from the USAID Ghana Sustainable Fisheries Management Project, women shellfishers in the Densu River Delta in Ghana adopted and adapted this co-management approach. It resulted in a gazetted community-based shellfish co-management plan signed in 2020 delegating exclusive use rights to the oyster fishery to the Densu Oyster Pickers Association and instituting an annual 5 month closed season, mangrove replanting, and other management improvements.

Lalisa Duguma and Stepha McMullin, World Agroforestry, Kenya

#### **Changes in the mangrove ecosystems in The Gambia and Ghana and the associated drivers**

Mangrove forests are among the most important coastal vegetations as they provide numerous ecosystem goods and services to millions of coastal communities and others dependent on the value chains of coastal resources. Mangroves are breeding grounds for various types of fish, including oysters and other shellfish types. Therefore, any damage to this vegetation has a significant impact on the livelihood of the people who make a living out of fishing. We present the findings from the assessment of 20 years (2000-2020) of change trajectories of mangrove ecosystems in The Gambia and Ghana with local insights into the drivers of change and the threats to this important vegetation type. In The Gambia, the net change in mangrove area is approximately 78 square km in the period studied with an average annual gain of about 3.9 square km. This positive development is mostly due to the strong investment in restoring the mangroves through government initiatives, community efforts and bilateral projects. On the contrary, Ghana experienced substantial mangrove loss of up to 539 square km in the 20 years with average annual loss of 27 square km. This poses a serious threat to the coastal community livelihoods especially those dependent on shell fishing and other fishing activities around the coast. The main drivers of loss are expansion of human settlements and exploitation of the mangroves for various uses including conversion of mangrove areas into other highly profitable land uses such as real estate and factories.

#### **Developing location specific nutritious food portfolios for women shellfishers in The Gambia and Ghana**

Smallholder food production in sub-Saharan Africa is often dominated by starchy staple crops which can lead to periods of food and nutrition insecurity. The availability of micronutrient-rich crops like fruits and vegetables are often lacking and highly season-dependent, which is one reason, amongst others, for the low consumption. Using participatory research, World Agroforestry (ICRAF) developed the food tree and crop portfolio approach to enhance seasonal availability of nutritious foods in local food systems. These nutritious food portfolios are customized recommendations for cultivating and utilizing a greater diversity of food tree species with complementary vegetable, pulse and staple crops that could address month-on-month harvest and micronutrient gaps in local diets. The Women Shellfishers and Food Security project engaged with communities in The Gambia and Ghana to better understand the current status and opportunities for increasing the use of agricultural and wild biodiversity to meet seasonal food and dietary needs. This includes gaps associated with annual oyster harvesting closed seasons of 5 – 8 months in some ecosystems studied. A total of 356 households (145 in The Gambia, 211 in Ghana) were interviewed to assess on-farm food production diversity and food security. Twenty-one focus group discussions (16 in The Gambia, 5 in Ghana) were conducted with community members to further capture the use of agricultural and wild biodiversity, develop seasonal food harvest calendars and allow communities to prioritize their preferences for species to meet their food and livelihood needs. In this session, we will highlight the data generated with communities, and present the customized nutritious food portfolios which could enhance seasonal food resilience and diversify diets in the local food systems.

Ernest Obeng Chuku, University of Cape Coast/Centre for Coastal Management, Ghana

#### **Analysis of oyster shellfisheries and associated bio-physical parameters of the estuaries**

Oysters are noted to be a significant source of nourishment and livelihoods for women living near the coastal estuarine/lagoonal and mangrove ecosystems interspersed along the Gulf of Guinea Coast of West Africa. Although the scale and scope of the fishery has not been assessed owing to the fact that the fishery goes almost

unrecognized and unreported in the national fisheries statistics of most coastal West African countries, some minimal data spurred by individual scientific research and a few key natural resource management and livelihoods projects has brought to light the critical need for its management within formalized national frameworks. The requisite data to support proper management strategies are not available. The USAID Women Shellfishers and Food Security Project, as part of its objective to develop a toolkit for potential upscale in the West Africa sub-Region, is assessing six coastal ecosystems, three each in Ghana and The Gambia, to collect biological data on the native oysters (*Crassostrea tulipa*), physico-chemical estuarine water parameters including nutrient levels, and the in-season harvest pressures on the ecosystems over a 12-month period. We present preliminary findings from these field data and their implications for potential management approaches.

Seth Adu-Afarwuah, University of Ghana, and Brietta Oaks, University of Rhode Island, USA

#### **Assessment of oyster consumption, anemia, and food insecurity**

Among West African coastal countries, there is a high prevalence of anemia among women of reproductive age. Anemia is a risk factor for postpartum hemorrhage, a leading cause of maternal death in Africa, and increases the risk of low birth weight, preterm birth, and neonatal mortality. Reducing the prevalence of anemia in women of reproductive age is one of the WHO 2025 Global Nutrition Targets. An iron deficient diet is the primary cause of anemia in West Africa. Shellfish, such as oysters, have a particularly high iron content and its consumption may help reduce anemia prevalence if it is a substantial part of the diet. There is concern that if ecosystems are poorly managed, there may be less availability of oysters and other shellfish, thereby denying communities of a potentially vital resource for addressing anemia and food insecurity. Measures to sustainably manage shellfish resources, such as annual temporary closures to allow the oyster population to replenish itself, may also have short term impacts on nutrition. Heavy metals and other pollutants potentially detrimental to human health have been documented in some estuaries. As part of the Women Shellfishers and Food Security project, we are assessing dietary intake, food security and anemia prevalence in three oyster harvesting communities each in Ghana and The Gambia. We are using questionnaire interview data to investigate what background factors might be related to anemia in our study and examine whether higher oyster consumption is associated with a lower risk of anemia. Preliminary results will be shared in this session. In addition, we have collected oysters from each study site in Ghana, which we will analyze for heavy metal contamination with support from the USAID Feed the Future Innovation Lab for Fish. Results from this study will be used to better understand factors related to nutrition and health that are important for resource managers to consider in the design of sustainable management actions.

Ernest Obeng Chuku, University of Cape Coast/Centre for Coastal Management, Ghana

#### **Participatory Regional Assessment of Shellfisheries in West Africa Senegal to Nigeria**

Fish and fisheries resources continue to be a critical component of global food production and nutrition. In Africa marine and inland fisheries have been at the fore of production volumes, receiving all the attention to the neglect of other important fisheries, especially of those that occur within such critical coastal ecosystems/habitats as lagoons, estuaries and mangroves. These ecosystems fall within the intertidal zones of most coastlines and have characteristically shallow areas, thus accessible to women. As a result, women are noted to dominate overwhelmingly the fisheries of bivalves and gastropods including oysters, mussels, clams, periwinkles, etc., in these ecosystems abounding along the West African coast. To better understand the scope and scale of shellfisheries in West Africa, the USAID Women Shellfishers and Food Security Project is conducting a participatory appraisal of the shellfisheries of 11 coastal countries from Senegal to Nigeria in consultation with the resource users, government, academia, NGOs and local authorities. The study consolidates, for the first time across the sub-region, the gender dynamics of the involvement of coastal inhabitants along the nodes of the value chain of shellfisheries, the types of species, harvest locations, volume and value. The research further probes shellfish consumption rates among stakeholders and seasonality of exploitation, then explores existing local and national management regimes as well as the potential impacts on climate. Key findings and trends will be presented.

### Wed 2.4 *Gender Perspectives on Healthy Food Systems in Argentina: consumer behavior, community access and advertisement*

*The objective of the session is to present the results of 4 recent studies carried out in Argentina in relation to Nutrition and Gender. In the study of CEDES "Gender Dimension and Nutritional Patterns on Healthy Food Demands in Argentina. What can we learn from the Analysis of Household Survey?" We analyze how and to what extent household surveys' analysis constitutes a valuable instrument to shed light to the possible gender differences in food demand decisions in Argentina, based on the analysis of consumption patterns and estimates of demand elasticities. The second study, "Gender stereotypes in graphic advertising through promotional brochures in the main supermarket chains in Argentina", carried out by IECS, explores the construction and reproduction of gender stereotypes present in graphic advertising through promotional brochures in the main supermarket chains in Buenos*

*Aires (CABA), Argentina. After, "Food affordability and accessibility in poor neighborhoods: the role of women and the community environment " is a qualitative cross-sectional study of FIC. This research showed the relevance of women as a political actor in their communities and also the interdependence of community environments and household environments. Women have a central role in developing social networks inside the communities. COVID-19 pandemic highlighted the importance of community networks in food access. Finally, the joint study prepared by CEDES, FIC and IECS present a literature review of "Gender inequalities in food access, affordability and consumption".*

Moderator/organisers: Daniel Maceira, Center for the Study of State and Society (CEDES), Argentina

Daniel Maceira, Center for the Study of State and Society (CEDES), Argentina

#### **Gender perspectives on healthy food systems in Argentina: consumer behavior, community access and advertisement**

**Introduction:** During the last 20 years Latin America has reached remarkable achievements in reducing serious undernourishment problems. However, challenges related to malnutrition-such as overweight and obesity-have steadily increased, both in children and adult population groups. In addition, the distribution of health outcomes within a society, according to income levels and gender, reveals the existence of persistent inequalities, which must be measured in order to adapt and evaluate ongoing policies and interventions aimed at greater equality. **Goal and methodology:** The objective of this study is to analyze how and in what extent household surveys' analysis constitutes a valuable instrument to shed light to the possible gender differences in food demand decisions in Argentina, based on the analysis of consumption patterns and estimates of demand elasticities (how responsive demand is facing changes in prices). A descriptive and econometrical analysis of expenditure data was performed using the National Household Expenditure Survey 2012-2013, which was complemented with nutritional data of each food item provided by local and regional sources of information. **Results:** As a result of our estimates, we find that the gender of the head of household does not seem to be relevant when the total sample of households is considered. However, gender differences arise across nutritional food quality levels-both in food budget allocation and demand own price elasticity-, when the sample is restricted to single-member households. In that scenario, women living alone appear to allocate a greater percentage of their food budget to the healthier alternatives, in comparison to men living alone. Moreover, we inspect the role that the participation of women in the labor market have in the nutritional dimension of food demand, using the subsample of nuclear-with-children households, and we find that the more time women spend working for the market, in relation to their male partner belonging to the same household, the demand for processed and ultra-processed foods increases, with lower nutritional quality. This trend is more pronounced in households with higher incomes. **Conclusions:** A possible explanation behind the results in single-member households is the differential valuation that women have towards healthier foods. In turn, while their demand is more sensitive to relative price changes, men exhibit less elastic demand to price changes, perhaps explained by less information or by the assessment of other factors, such as the reduction in time spent on the purchase. On the other hand, in multi-person households with children, the less time available for household work by women leads to the purchase of food that requires less preparation and cooking time, even if men spend less time relative to work for the market and have more time at home, triggering important policy recommendations about food market adaptation to gender perspectives.

Vilma Irazola, Institute for Clinical Effectiveness and Health Policy (IECS), Argentina

#### **Gender stereotypes in graphic advertising through promotional brochures in the main supermarket chains in Argentina**

**Background:** Talking about gender equity requires facing stereotypes counterproductive, often perpetuated through publicity. The objective of the study was to explore the construction and reproduction of gender stereotypes present in graphic advertising through promotional brochures in the main supermarket chains in Buenos Aires (CABA), Argentina. **Methods:** A qualitative methodology was developed, using documentary analysis and intentional sampling. Promotional brochures were gathered from 8 supermarket chains of the CABA, along three consecutive months (960 pages). **Results:** The findings of this study indicate that there are noticeable gender stereotypes in print advertisements (brochures), where women were represented in passive and traditional roles as mother-caregiver and housewife, a trend which was also seen in advertisements aimed at children. Representation of men included differential activities and more active roles. Representations related to the woman mother, caregiver and housewife and the traditional family model regarding food aspects were observed. **Conclusions:** It is concluded that there are sexist gender stereotypes in graphic advertising through promotional brochures, without any positive evolution towards other gender patterns, inclusion and diversity.

Luciana Castronuovo, InterAmerican Heart Foundation Argentina (FIC), Argentina

#### **Food affordability and accessibility in poor neighbourhoods: the role of women and the community environment**

**Introduction:** Poor households face relevant challenges in their access to healthy foods. The affordability and availability of food occurs in a context of scarcity which affects purchasing practices and food choices. The eating

behavior of households in poor neighborhoods is conditioned by their community food environment. Women remain gatekeepers of the family diet and food purchasing and have also a central role in their communities. Methods: Qualitative cross-sectional design. We interviewed 23 women from poor households from the City of Buenos Aires, Argentina. Interviews were conducted before and after the start of the COVID-19 pandemic in Argentina. For data analysis, grounded theory was used. Results: Informal networks that allow access to different networks are an important household resource. In this sense, social capital is recognized as a relevant resource for poor families in terms of food access. Different buying patterns and strategies were identified. "Child buffering" was a usual practice in households. The frequency of buying and the possibility of getting better prices depends mainly on the resources available. The research showed the relevance of women as a political actor in their communities and also the interdependence of community environments and household environments. Women have a central role in developing social networks inside the communities. COVID-19 pandemic highlighted the importance of community networks in food access. Conclusion: The community environment led by women, encompassing soup kitchens, informal networks, and community resources, was considered crucial to understand food access and the food environment in poor neighborhoods.

Joint summary

#### **Gender inequalities in food access, affordability and consumption**

Introduction: Obesity has reached epidemic proportions and is a major contribution of the global burden of chronic disease. Many regions in the world are affected by a triple burden of malnutrition, determined by undernutrition, micronutrient deficiency and overweight and obesity. This complex scenario also encompasses gender inequalities that should be considered in policy design. Methods: We reviewed 42 scientific articles dealing with different dimensions of food security and nutrition: food access (n=7), food consumption (n=25) and food availability (n=5) across all countries. We find that gender inequalities are identified in the three dimensions. Results: Our review showed that: a) there is a consensus on the evidence about a relationship between female headship and food insecurity in households; b) women's diets are impaired in comparison to other members of the household c) women are the ones that manage the food and assume the provisioning, organization and elaboration of food inside households; d) there are marked differences between genders regarding the perceptions related to the characteristics of supermarkets and consumers behaviors. Conclusion: The evidence found shows the need to include a gender perspective in the design of policies aimed to reduce the current trends of overweight and obesity

### **Wed 3.0 Plenary: The Politics of Knowledge and Plural Visions for Equitable Agriculture and Food Systems**

*This plenary will bring together three esteemed speakers to explore critical issues of related to the politics of knowledge and nurturing plural visions for equitable agriculture and food systems. Andrea Cornwall, Professor of Global Development and Anthropology, School of Oriental and African Studies (SOAS), University of London, will initiate the discussion with a presentation on 'Decolonizing Gender and Development'. Amon Ashaba Mwiine, Lecturer in the School of Women and Gender Studies, Makerere University, will then provide insights on 'Plural feminisms, pathways & practices towards equitable food systems: visions for the future'. Finally, Tania Eulalia Martínez-Cruz, Postdoctoral Researcher, University of Greenwich, will address 'Whose food sovereignty? Encounters and discounters in transnational space: Reflections and lessons from Indigenous Peoples in Latin America'.*

Moderator/organisers: Esha Shah, Wageningen University

Andrea Cornwall, SOAS University of London, UK

#### **Decolonising Gender and Development**

Amon Ashaba Mwiine, Makerere University, Uganda

#### **Plural feminisms, pathways and practices towards equitable food systems: visions for the future**

Tania Eulalia Martínez-Cruz, University of Greenwich, UK

#### **Whose food sovereignty? Encounters and discounters in transnational space: Reflections and lessons from Indigenous Peoples in Latin America**

### **Wed 4.1 Feminist Critiques of AgriR4Dev: Applications, insights and best practices**

*The objective of this session is to discuss the emergence of feminist critiques in agriculture for development (Agri4Dev) – what are they, how have they been applied/engaged with in projects and programming, and, crucially, what have been the outcomes/impacts of these critiques? Given the increasing focus on gender in the Agri4Dev agenda, this session examines what sort of agenda is being promoted and to what extent it reflects progress in*

*feminist scholarship. The panel discussion will explore emergent feminist critiques\* of common practices and assumptions in Agri4Dev which run the risk of reproducing, exacerbating, and/or creating new power inequalities.*  
Moderator/organisers: Katie Tavenner, Independent scholar, and Stephanie Leder, Swedish University of Agricultural Sciences,

Discussany: Seema Arora Jonsson, Swedish University of Agricultural Sciences

Kate Farhall and Lauren Rickards, RMIT University, Melbourne, Australia

### **The “Gender Agenda” in Agriculture for Development and Its (Lack of) Alignment with Feminist Scholarship**

Katrina Kosec, International Food Policy Research Institute (IFPRI)

#### **Bringing Power to the People or the Well-Connected? Evidence from Ethiopia on the Gendered Effects of Decentralizing Service Delivery**

Decentralization, or devolution of authority to lower levels of government, is often motivated by its potential to make service delivery more responsive to citizens' preferences. However, women's ability to influence policy outcomes may vary across levels of government. This paper considers how decentralization affects both women's and men's access to government-provided services and their level of political engagement. We exploit the partial roll-out of decentralization in Ethiopia during 2000-01 and use a spatial regression discontinuity design to identify its impacts. Decentralization improves access to public services for both women and men, but the benefits for men are greater, widening the gender gap in access. We find no evidence that this is due to women's lower likelihood of participating in local elections; indeed, decentralization increases women's but not men's participation. However, decentralization disproportionately increases men's interactions with local government officials and influential civil society leaders—who wield more power under decentralization. The results are consistent with non-electoral channels of political influence at the local level, dominated by men, contributing to policy outcomes favoring men. They shed light on potential pitfalls of decentralized service delivery from a gender equality perspective, and provide policy recommendations for ensuring women's equitable access to services.

Ina Girard, International Potato Center (CIP)

#### **Equitable and inclusive approaches to establishing a potato producers' network in Georgia**

Like many other countries in Central Asia and Caucasus, the agricultural sector in Georgia is dominated by men, from policy-makers to farmers' cooperatives. New technologies, subsidies and policies are proposed and developed by men for male farmers. However, our gender diagnostic study has shown that women play significant roles in agriculture, spending as much time as men do in the field, while having an additional 5-8 hours of domestic work unlike the men, who do only 30 minutes on average. To address this issue, we designed the new approach in potato program to ensure that women farmers, including ethnic minorities, benefit from any interventions; to empower them through a newly established potato producers' network; and to try to transform gender norms in some of the agricultural domains at the community level. However, challenging norms and changing organizational structures are not easy. In this presentation, we share our experience of engaging men and women with various activities, as well as tips for interactive gender training. We also introduce practical tools to identify gender norms and communicate effectively to donors our commitment to gender equity. We conclude by highlighting the importance of engaging men in transforming gender norms.

Fanny Howland, Alliance of Bioversity International and CIAT

#### **Barriers and solutions to Gender Integration in Agriculture, Climate Change, Food Security, and Nutrition Policies: Guatemalan and Honduran perspectives**

Gender mainstreaming is seen, at international level, as critical to achieving national development goals and addressing key global challenges such as climate change and food and nutrition insecurity in the agriculture sector. Our study examined the barriers leading to poor gender mainstreaming and potential solutions in policies applying to gender, agriculture, climate change, food security and nutrition, in Guatemala and Honduras. We used a case study approach to analyze the barriers to gender integration in policies. Based on semi-structured interviews and policy document analysis, we conducted a methodology based on policy mix, policy integration and policy translation. Results show that, despite having made multiple international commitments on gender issues and having gender-labeled policy and governmental gender bodies, gender mainstreaming in the policy cycle is lagging. There are multiple barriers of a different nature and at different levels that explain the lack of gender integration in the policy, related and linked to: policy translation from the international level; structural policy barriers at national level; behaviors and corruption; and lack of knowledge and capacity. Solutions to address these barriers have been identified. Our results confirmed the literature findings and also introduce new elements such as the importance of considering the nature of the relationship between governments and international cooperation actors to evaluate gender integration in policy. We noted that no solutions were provided relating to structural racism and machismo, religious extremism, power groups, and censorship of civil society.

Charlotte Maybom, University of Copenhagen, Denmark

#### **Achieving gender equality through transnational interventions? The case of PRM in pastoral Kenya**

This paper examines gender equality in policy and project design and discusses whether and how transnational interventions can achieve it. The study takes the European Union (EU) funded Participatory Rangeland Management (PRM) project in Kenya as example. The main objective of PRM is to improve the management of rangelands in pastoralist communities in East Africa. Drawing on a review of gender mainstreaming theories and on primary data from project documents and interviews in Kenya, the paper examines how the PRM project addresses 'gender equality,' 'gender,' 'women' and 'men' in policy and project design, and which gendered outcomes it produces. Furthermore, it discusses PRM's potential and challenges for changing inequal gender relations, and lessons learnt for transnational interventions and gender equality in general. The results show that PRM takes a mainly integrationist approach to gender mainstreaming, uses the concepts 'gender' and 'women' almost interchangeably, and that its gender relevant activities are an add-on to its main intervention strategy. In PRM's conceptualization, gender equality is equal opportunities for and integration of women into existing development interventions and social structures. In this way, gender equality comes to mean that women should adapt, change, and integrate into existing male-dominated structures, while men and structures do not change. To understand how gender equality is addressed and operationalised in transnational interventions it is important to separate gender mainstreaming as a research topic in project design and as a staffing issue within organisations.

#### Wed 4.2 *Can Agricultural Development Projects Reach, Benefit, and Empower Women? Results from South Asia and Africa using the Project-Level Women's Empowerment in Agriculture Index (pro-WEAI)*

*This panel session includes eight papers evaluating the impact of gender sensitive agricultural development programs using the project-level Women's Empowerment in Agriculture Index (pro-WEAI), co-developed with 13 agricultural development projects in 9 countries in Africa and South Asia. The objective of this session is to compare findings related to women's empowerment across program components and contexts and demonstrate the pro-WEAI as an evaluation tool.*

Moderator/organisers: Agnes Quisumbing, International Food Policy Research Institute (IFPRI), and Brooke Krause, The College of Wooster, USA

Agnes Quisumbing, IFPRI

##### **Designing for empowerment impact in agricultural development projects: Experimental evidence from the Agriculture, Nutrition, and Gender Linkages (ANGeL) Project, Bangladesh**

Agnes Quisumbing, IFPRI

##### **Introduction to pro-WEAI**

Bobbi Gray, Grameen Foundation

##### **Understanding women's empowerment in Burkina Faso through use of the project-level Women's Empowerment in Agriculture Index (pro-WEAI): A mixed methods study**

Brooke Krause, The College of Wooster, USA

##### **Pastoralists and Power: The Impact of a Food Security Program on Women's Agency in Northern Tanzania**

Greg Seymour, IFPRI

##### **How well does pro-WEAI detect project impacts? A multi-country validation and sensitivity analysis**

Jessica Heckert, IFPRI

##### **Can a gender-sensitive integrated poultry value chain and nutrition intervention in Burkina Faso impact women's empowerment**

Marya Hillesland, FAO

##### **Did a microfinance 'plus' programme empower female farmers and pastoralists and improve intrahousehold equality in rural Ethiopia?**

Nehar Kumar, IFPRI

##### **Impacts of nutrition-intensification efforts integrated into a women's self-help group-based livelihood project on women's nutrition: evidence from India**

Ruth Meinzen-Dick, IFPRI

##### **Measuring empowerment in agricultural development projects using pro-WEAI**

#### Wed 4.3 *Understanding the Needs of Women Farmers and Rural Women Entrepreneurs: New research and frameworks to support their efforts*

*Academic interest in women entrepreneurship has grown considerably in the past decade and researchers are approaching it from various contexts and disciplines. In light of this increased interest, the narrative landscape on gender and rural entrepreneurship is nascent. Current women's entrepreneurship literature lacks a gender-*



*integrated focus and evades structural issues regarding labor markets, resource distribution, and the intersectional dimensions of gender inequality. In addition, rural challenges such as geographic isolation, limited resources and infrastructure, less accessible services, and lower socioeconomic status have an acute impact on women across multiple levels. Obstacles such as access to capital, resources, and skill development also exacerbate the field. Despite this, there is a steady rise in rural female-led entrepreneurship and therefore, a growing need for a gender-integrated approach to research. This session offers a gendered critique of rural entrepreneurship, including new insights and considerations.*

Moderator/organisers: Casandra Bryant, University of Guelph, Canada

Afrina Choudhury, WorldFish and Wageningen University, NL, and Casandra Bryant, University of Guelph

**A gendered critique of rural entrepreneurship: A transformative approach**

Women's entrepreneurship literature lacks a gender-integrated focus and evades structural issues regarding labor markets, resource distribution, and the intersectional dimensions of gender inequality. Rural challenges such as geographic isolation, and limited resources and infrastructure have an acute impact on women across multiple levels. Obstacles such as access to capital, resources, and education exacerbate the field. Despite this, there is a rise in rural female-led entrepreneurship and therefore, a growing need for a gender-integrated approach to research. The concept of women's entrepreneurship and female social entrepreneurship will be introduced and contextually defined including a proposed typology. This paper introduces two conceptual frameworks that highlight a transformative gender-integrated contribution with a research focus on Bangladesh and the Scottish Highlands & Islands.

Charlene Lambert, Women Entrepreneurship Platform

**To what extent can women farmers and rural women entrepreneurs contribute to the success of the European Green Deal?**

When we examine the Green Deal policies women's involvement is fundamentally inadequate. Women are on the bottom rung with education and training in digital technologies; 24 of every 1000 female graduates have an ICT connected subject, and of these, 6 out of 1,000 graduates go on to work in related fields. Likewise, access to finance, and support programs are not reaching innovative women, where only 2% of all initial funding reaches women-led start-ups. While entrepreneurs are recognized as a key source of new, innovative projects, women represent approximately 33% of all entrepreneurs in the EU. Women entrepreneurs are increasingly recognized as a huge untapped resource (EU Commission Study 2014), bringing new perspectives and solutions.

Sally Shortall, University of Newcastle, UK

**Women entrepreneurs in farm businesses**

This paper considers women entrepreneurs in the highlands of Scotland and England. It notes the variety of types of entrepreneurs, and the importance of understanding women's motivations for developing businesses of a particular scale. The usual model is one that is not necessarily suited to the objectives of women, and evidence presented here shows that this can make it more difficult to access appropriate levels of finance and business support. The research found that women do not identify with the language of 'entrepreneurs' or 'innovators', so funding labelled as such will be unlikely to reach women. The English research found that women entrepreneurs are much more likely to pursue regenerative farming practices. Recognising the role of women on farms will be imperative to achieving the Green Deal objectives.

**Wed 4.4 *Indigenous, Local And Traditional Knowledge***

*The objective of this session is to present the work carried out in various regions of the country, in very diverse ecosystems. The intraregional and intracommunity differences of the home gardens of each region are shown, the local foods and consumption patterns of different cultural groups are identified. Traditional local knowledge in home gardens is shown as local production systems, enrichment of crops and diets. The results obtained in the research work are presented, carried out by groups of academics and civil society organizations to solve the problem of production, supply, processing and distribution of healthy, safe and nutritious food to solve specific problems of each community in the region that was worked. The role of women in the construction of gardens, preparation of recipes, recovery of local products and the empowerment of women in food production processes is highlighted.*

Moderator/organisers: María de Jesús Ordóñez Díaz, Universidad Nacional Autónoma de México (UNAM), Mexico

Sandra Montes Carrillo, Dirección Estatal de Pueblos Originarios de Baja California, Mexico, and Carolina Gutiérrez Sánchez, Universidad Autónoma de Baja California, Mexico

**Promotion of the Kumiai culture of a native community of San Jose de la Zorra, Baja California, Mexico**

The native groups of the Baja California region in northwest of México, have managed local ecosystems for thousands of years, they create cooperative traditional food systems related to the ways of feeding and use of natural resources from the desert, sierra, valley and coast. However, today, there are only a few people with living memories of traditional foods, mostly women who are related to providing food in the present days. The entry of

industrialized food into the community context has displaced processes and forms of food constructed as traditional that are shown to be healthier (gathered, hunted or produced locally). In this sense, it is important to value this traditional knowledge of food and support the connection with natural resources implicit in the process, which are decisive for the sustainability of their environments. At present, young people and women from the communities recognized a lack of documentation of the knowledge and a need for tangible action for their food heritage and food system. This research focuses on the native Kumiai community of San José de la Zorra, one of the seven communities in Baja California. In the research process, qualitative methods were applied to different people from the community who collaborate later in the participatory action process. The results in this research was a proposal of a "Living Community Cookbook: traditional recipes with biocultural value". Group of women from the Kumiai Community, San José de la Zorra, focused on the recovery of knowledge about food and natural resources whose product will be a live cookbook.

Carolina Gutiérrez Sánchez, Universidad Autónoma de Baja California, Mexico

**The kitchen as a platform for creative and collaborative development with the socio-ecosystem.**

It is important to rethink what type of gastronomy and food system we are living, then, to speak of gastronomy is to speak of restoration, wisdom and community, a community that generates ties with those who produce, those who transform, those who consume and those who dream. During the pandemic, we have reconfigured our food cultures, and with it, many practices and daily lives around food have been reinvented. We focus the attention in Ensenada Baja California, which is a state known for his wine production and the big diversity of ingredients of great quality, that why this is part of one of the Creative Gastronomy Cities from UNESCO. We focus to explore the food system in a privileged geographical area for its climate and landscape diversity; the exploration takes part in a kitchen called Shawii, located on a ranch at the countryside of Ensenada. This kitchen provide the opportunity to reunite all kind of people to the table, because is a space to connect, to taste warm food and enjoy the scenery of the landscapes from Baja California. We use techniques that respect the flavor and essence of the ingredient; we use products from neighboring farms, trying to promote a collaborative economy with local producers. We apply knowledge from our past and present relations to prepare and create our narratives around the origin of the ingredients. Tries to share that food as part of a sustainable system and to keep knowledge, culture, nature and innovation in balance.

Alicia Gutierrez Valenzuela, Institucion Emanuel Arturo, IAP, Mexico

**Seven years of work in the family gardens project in San Ignacio Rio Muerto, Sonora, México**

The experience of 7 years of work carried out in the IAP Emanuel Arturo, in the municipality of San Ignacio Río Muerto de Sonora, Mexico promoting community assistance and development is presented, the latter in the strategic axis of Food, a program of Vegetable Gardens was developed backyards in which training has been given for families to establish, become aware and sensitize about the situation of the use of agrochemicals; Training is provided to produce organic fertilizers and repellants with very good results in 250 low-income families who have presented changes in their eating habits, generate income with the sale of surpluses, improve their health, get sick less and above all know that their food they are healthy because their vegetables are chemical free. Of the 250 families benefiting from vegetable gardens, 3 base groups generated 5 micro-businesses for the sale of organic products. They seek to establish a social enterprise that sells organic products, such as vegetables, fertilizers and repellants; Work is being done so that 200 families achieve their food security through family gardens and the establishment of a poultry farm to supplement their diet with animal protein such as chicken meat and eggs, aspects that have supported during the Covid 19 pandemic that has prevented families from leaving their communities. Those involved acquired knowledge about the care and handling of poultry; regulation and phytosanitary regulations for poultry; they have improved their family finances; the children consume more vegetables, less junk products and have shared knowledge with other people from different villages.

Diego Hernández-Muciño, UNAM, Mexico

**Traditional home gardens as a tool for guaranteeing food security and for forest landscape restoration: the case of Me'Phaa indigenous community in Mexico**

The Forest Landscape Restoration (FLR) place the human communities in the center of crucial processes to reconciling food production with the social resilience and biodiversity conservation. Among the strategies proposed by FLR, the establishment and rehab of agroforestry systems is especially interesting. Home gardens (HG) are agroforestry systems recognized since pre-Columbian period play an important ecological, economic and social function in rural areas. Studies about HG have been developed in the southeast of the country where the Maya culture domain, whereas the HG of other regions and ethnic group are less well known. "La Montaña" is a rural and indigenous region in the south of Mexico (Guerrero state), considered one of the poorest in the country and with high levels of degradation of natural resources. In 2014 the Indigenous Non-Governmental Organization (INGO) Xuajin Me'Phaa started the project: "Mbaá Yuskha: Cultural Me'Phaa home gardens", which consisted in the restoration of approximately 200 HG of indigenous families belonging to the ethnic group me'phaa. In partnership,

The Regional Multidisciplinary Research Center of the UNAM have worked in projects about socioecological aspects of the HG in the region. The most relevant processes and results from INGO and academic interventions, in terms of HG biodiversity and productivity, and the role of HG to improve the landscape connectivity, food security and socioecological resilience in the communities. The main objective is increase knowledge about HG from La Montaña region and highlight the HG potential as FLR strategy by linking cultural and social values with the sustainability of societies and ecosystems.

Adriana Caballero Roque, Universidad de Ciencias y Artes de Chiapas (UNICACH), Mexico

**Varied diet in Copainalá Chiapas with vegetables from the family garden**

Nutritional Food Security has been defined as a state in which all people have, in a timely and permanent manner, physical, economic and social access to the food they need, in quantity and quality, for its proper consumption and biological use, guaranteeing them a general welfare state that contributes to the achievement of their development (PESA, 2011). In rural communities, in many cases families do not have availability and physical access to food, causing a poorly varied diet and alterations in family health. The food of the families of the José María Morelos y Pavón locality of the municipality of Copainalá Chiapas is linked to agriculture itself, they consume food grown in the orchards. The present research aims to promote the cultivation and consumption of vegetables for a varied diet through the use of home gardens supplemented with eight types of vegetable seeds (chard, broccoli, coriander, cabbage, tomato, lettuce, radish and carrot) and three aromatic herbs (spearmint, thyme and oregano). Housewives were surveyed. Some seeds were given to plant and grow some vegetables. There was a talk about experiences and a food fair. It was found that the diet of the families was little varied because there is not a diversity of foods. After the harvest, a comparison of the preparations was made between before and after starting to have a variety of vegetables and as one of the results it was obtained that, the families increased preparations in broths, stews and salads.

Anuschka Van't Hooft and Claudia Heindorf, Autonomous University of San Luis Potosí, Mexico

**From farm to fork: the role of women and men in Indigenous communities of the Huasteca Potosina in Mexico**

In indigenous societies in Mexico, a strict partition of duties and responsibilities between men and women often causes disadvantages for the female family members in terms of economic sovereignty, land tenure, and rights, as well as decision-making at the family and community level. However, men also recognize the important role women have to assure the food security of their family members. We want to present some examples of how division of labour is implemented in the Huastec Mayan communities in North-eastern Mexico and the impact of these traditions on the local food system. The chosen examples are based on several years of fieldwork in the region. In particular, we will highlight the division of labour and sharing of responsibilities regarding tasks such as the management of the most important land-use systems, food acquisition, and the selection, preparation, and commercialization of crops. Likewise, we will discuss daily customs and traditions related to food consumption and preparation. In this examination, we also want to reflect on the role of female and male participation in our fieldwork and in our selection of participatory methods. Based on our field observations, we conclude that strict division of work often has practical implications and generates disadvantages for Indigenous women. These distinct responsibilities and duties have a long tradition and assure household income and food security. Yet, they need to evolve and transform to adapt to complex challenges these Indigenous societies will face regarding food security and rural transformation.

\* José Carmen García Flores and María de Jesús Ordoñez Díaz, UNAM, Mexico

**The family garden as a mitigator in the impact of COVID-19 in Jojutla, Morelos, México**

This research evaluate the impact of the coronavirus pandemic on the mental health of 60 families in Jojutla, Morelos. Deaths from COVID-19 is a serious result of the current health emergency, confinement brought with it an increase in domestic violence, stress, anxiety and other psychological disorders. The family garden (FG) provides food, medicinal plants and other useful resources for the owners, they are important areas due to the uses they fulfill in the social fabric. Thirty families that have a family garden and 30 that do not have were studied in order to compare their state of mind and how they coped with staying at home. Questionnaires were applied that yielded statistical information describing the psycho-emotional situation presented in isolation. Through participant observation, systematic tours and in-depth interviews, the conditions experienced were complemented and interpreted. Both groups suffered an alteration in their mental health, due to the scenario that existed and the high number of cases and deaths. The group without a family garden presented greater discomfort, lacking a place that would allow them to vent. On the other hand, people with FG showed a better attitude, expressed that this space is ideal for rest, relaxation, reflection and spirituality due to the shapes, colors and aromas of the vegetation. Staying at home, with FG, helped in physical activation, facilitated the coexistence of the family and the decrease of psychosomatic ailments, FG offers an alternative that enables vulnerable people to overcome mental health problems and decrease domestic violence.

### Wed 5.1 *Exploring Social Dynamics to Better Understand a "Women's Crop": Gender+ and groundnut in Africa*

*This session will explore findings from four on-going research projects explicitly focused on intersecting gender+ dynamics in groundnut (peanut) cultivation in rural Africa (Ghana, Senegal and Uganda). Central themes of the research include the impact of time use and time poverty; intrahousehold power and labor dynamics; youth engagement; and land tenure and climate change on individuals, households and communities engaged in groundnut-based livelihoods. Funded through the Feed the Future Innovation Lab for Peanut, these projects involve international teams of scientists from disciplines including rural sociology, geography, and agricultural economics; they likewise employ diverse quantitative, qualitative, and mixed-methodological approaches, ranging from participatory photovoice to household surveys, unstructured interviews, and wrist-worn activity monitors. Uniting these research efforts is a shared focus on understanding the opportunities, barriers and structural changes necessary for building inclusive, equitable and resilient groundnut value chains.*

Moderator/organisers: Jessica Marter-Kenyon, University of Georgia, USA

Organizer and moderator: Jessica Marter-Kenyon, University of Georgia, USA

Edward Martey, Savannah Agricultural Research Institute, Ghana

#### **Women's empowerment and poverty in Northern Region of Ghana**

Genti Kostandini, University of Georgia

#### **Gender considerations, land tenure, agricultural employment and climate change impacts among young farmers in the Groundnut Basin in Senegal**

Sarah Blakeley, University of California at Santa Barbara, USA

#### **Gendered Time Use Life Cycle among Senegalese peanut farmers**

Carrie Stephens, University of Tennessee- Knoxville, USA

#### **Barriers and opportunities for youth engagement and empowerment in groundnut value chains in Uganda**

### Wed 5.2 *Climate Change, Gender and Agriculture: Implications for Policy*

*As the global food system adjusts to the impacts of climate change on food production, distribution, and food security and nutrition, it is important to recognize the different ways in which rural men and women are affected and their respective contributions to address the climate challenge. The session presents a conceptual framework of gender and climate change linkages, and evidence of gender differences in adaptation responses and the potential for climate-resilient agriculture to address the gender gap in agriculture. Importantly, as households adapt to a changing climate, men's and women's labor allocation in agriculture—which is particularly affected by heat stress—is changing. Finally, climate change and how men and women adapt to climate changes can worsen or improve nutrition outcomes. Evidence from Bangladesh shows that women's empowerment influences adaptation decisions, with important implications for production and, potentially, nutrition outcomes.*

Moderator/organisers: Elizabeth Bryan, International Food Policy Research Institute (IFPRI), Aslihan Kes, USAID

Elizabeth Bryan, International Food Policy Research Institute (IFPRI)

#### **Conceptual linkages between gender, climate change and food systems: What does the evidence show?**

Growing research on gender and resilience highlights the importance of recognizing and addressing multiple risks and disturbances that men and women face as well as the need to strengthen their capacities to respond to these in ways that increase well-being. Much of the literature on gender and resilience in the context of agricultural research for development focuses on the gender-differentiated experiences with shocks and stressors, gendered resilience capacities, and the responses of men and women from smallholder farm households to these shocks. It suggests that efforts to promote gender equality and women's empowerment are very much aligned with efforts to increase the resilience capacities of women, who tend to be more vulnerable to or adversely affected by many shocks and stressors. Yet this literature does not yet incorporate thinking and concepts related to food systems. This paper synthesizes evidence and highlights case studies that demonstrate how resilience is gendered using a gender and resilience framework. It also proposes ways this framework may be enhanced by a food system lens.

Sophia Huyer, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and International Livestock Research Institute (ILRI)

#### **Scaling Out Gender Transformation for Climate Change**

There is limited evidence of the potential for Climate-Resilient Agriculture (CRA) to address the gender gap in agriculture in a changing climate. Pathways to ensure gender responsiveness of CRA entails understanding the capacity of farmers to address climate risks (defined by their vulnerabilities and adaptive capacities), conditions that promote or limit adoption of CRA (barriers to adoptions or enabling conditions) while also assessing how the adoption of CRA, or strategies and approaches to encourage adoption of CRA, can lead to gender equality outcomes in agriculture in the wake of climate change. These outcomes then become instrumental in building the resilience of men and women farmers toward climate risks through inclusive adaptation processes. The study

presents the results of a scoping review, covering focus areas, gaps and research issues, to identify conditions and outcomes that make Climate Resilient Agriculture gender-responsive. It collates data from more than 100 documents, including journal articles and grey literature, published in the last decade to highlight key trends, challenges, opportunities, innovations, and good practices in the field of gender and climate resilient agriculture. Preliminary results show that Climate-Smart Agriculture or CSA is the dominant approach to Climate Resilient Agriculture. Additionally, vulnerability is the most prevalent theme in the literature, while evidence related to gender equality outcomes of CSA adoption remains limited. The review also highlights key trends and gaps in terms of geographic focus, sector focus, intersectionality lens, and methods of data collection. The review results are expected to better inform research efforts as well as project interventions related to climate resilient agriculture.

Yeyoung Lee, Michigan State University, USA

**The heat never bothered me anyway: Gender-specific response of agricultural labor to climatic shocks in Tanzania**

Agricultural production in Africa is generally highly labor intensive with gender-specific specialization across activities. Using panel data from Tanzania, we examine the effects of heat stress (temperature above 29°C) during the maize-growing season on gender-disaggregated agricultural labor use. Results show that heat stress reduces total male family labor but does not statistically affect female family labor. Households with only female adults seem to increase their labor supply under heat stress. Given these heterogeneous effects, gender-sensitive development interventions and adaptation strategies are suggested to enhance women's adaptive capacity.

Alessandro De Pinto, Greenwich University, UK

**Women's empowerment and farmland allocations in Bangladesh: Evidence of a possible pathway to crop diversification**

Climate change will likely affect several of the dimensions that determine people's food security status in Bangladesh, from crop production to the availability and accessibility of food products. Crop diversification is a form of adaptation to climate change that reduces exposure to climate-related risks and has also been shown to increase diet diversity, reduce micronutrient deficiencies, and positively affect agro-ecological systems. Despite these benefits, the level of crop diversification in Bangladesh remains extremely low, requiring an examination of the factors that support uptake of this practice. This paper explores whether women's empowerment, measured using the Women's Empowerment in Agriculture Index (WEAI), leads to increased diversification in the use of farmland. Our results reveal that some aspects of women's empowerment in agriculture, but not all, lead to more diversification and to a transition from cereal production to other crops like vegetables and fruits. These findings suggest a possible pathway for gender-sensitive interventions that promote crop diversity as a risk management tool and as a way to improve the availability of nutritious crops.

**Wed 5.3 Book-based session: Gender, Food, and COVID-19: Stories of Harm and Hope**

*For this session, we will share a preview of our upcoming edited volume titled, "Gender, Food, and COVID: Stories of Harm and Hope." This book includes contributions from authors and research areas from across the globe and documents the impact of COVID-19 on gender and the food system with on-the-ground accounts and personal reflections. During the coronavirus pandemic with many people under lockdown, continual agricultural production and access to food remain essential. Women provide much of the formal and informal work in agriculture and food production, distribution, and preparation often under precarious conditions. The chapters range in content across the four themes of the book and geographically diverse parts of the world. During the session, we invite scholars and practitioners from across the globe to share from their chapters and provide their timely observations on these issues as well as more personal reflections on its impact on their lives and work. Our book presents four major themes that emerge from these accounts and are interwoven throughout: the pervasiveness of food insecurity, the ubiquity of women's care work, food justice, and research methods and policies that can result in a resilience that reimagines the future for greater gender and intersectional equality. We will touch on these thematic areas and have an open discussion of COVID impacts on gender, food, and agriculture for all of the participants.*

Moderator/organisers: Paige Castellanos, Carolyn E. Sachs and Ann R. Tickamyer, Pennsylvania State University, USA

Introduction by organizers and roundtable with of invited chapter authors:

- Stephanie Leder, Swedish University of Agricultural Sciences
- Sovanneary Huot, Pennsylvania State University, USA
- Hannah Budge and Sally Shortall, Newcastle University, UK
- Emily Southard, Pennsylvania State University, USA
- Michaela Hoffmeyer, Pennsylvania State University, USA
- Lilian Nkengla-Asi, M. Rosario Castro Bernardini, and Marc Cohen, Oxfam America
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### Wed 5.4 *Transforming Food Systems through Critical Feminist Research*

*Gender mainstreaming approaches in agriculture and food security research and practice are critically important, but in some cases are characterised by depoliticization. The latter means that on-going struggles between actors, agency, power inequalities and root cause causes and solutions are insufficiently tackled. Developments in feminist theory, such as feminist political ecology and social reproduction theory, have offered a rich approach that foregrounds such issues in research in natural resource, food systems and the care economy. Feminist theory also points to the need for improved global linkages between food and agriculture researchers/practitioners with women's social movements. However, there are inherent barriers of application of feminist approaches in agriculture and food systems research and practice, and transdisciplinary approaches more generally. The session seeks to facilitate a collaborative discussion on 'how we can make food systems research and action more feminist, critical and transformative?' and to identify potential opportunities for radical and systemic change in food systems. The objectives of the session are to explore i) how feminist and gender-transformative approaches can be applied in research and action, by highlighting new research and emerging insights in areas such as social reproduction, geographies of care, feminist political ecology, and ii) different types of partnerships based on transdisciplinary dialogue involving agriculture, nutrition, environment, social development, gender and food systems researchers, practitioners plus civil society groups. The group discussion will culminate in identifying potential ways of improving research and action for gender justice and transformative change.*

Moderator/organisers: Lora Forsythe, June Po and Valerie Nelson, University of Greenwich, UK  
Fiorella Picchioni, University of Greenwich, UK

#### **Contested development tool and rural transformation: a social reproduction critique on financialised services in agriculture.**

The pandemic has exacerbated the crisis of social reproduction by bringing into plain sight contradictions between increasingly financialised capitalist systems and multiple complex social reproduction needs in the global South. Small-scale credit is often exalted in mainstream agriculture interventions and development thinking as a key means of supporting women and their families in dealing with daily, ongoing, and often slow-onset climate disasters in Cambodia and Tamil Nadu (India). This paper critically explores how such developmental discourses and tools have paradoxically deepened the social reproduction crisis. In particular, women have been specifically targeted as 'reliable' borrowers as they often manage agricultural productivity and take responsibility for the nutritional wellbeing of their households. Yet, the pandemic has reshaped strategies for social reproduction, and in doing so, has put the very form of their organisation in question. This presentation reviews mixed-method data collected between 2020-2021 in Cambodia and Tamil Nadu to highlight the long-term gendered dynamics of debt-taking and how this contributes to multiple forms of material and experiential depletion. We argue that a more systematic analysis is necessary to: 1) highlight the long term and everyday erosion that capitalism exerts on social reproduction; and 2) move beyond the pandemic discourse and mainstream developmental narratives that stress financial inclusion. Therefore, when thinking about financial inclusion for improved resilience among rural communities (and beyond) we need to critically interrogate the mechanisms through which these tools provide long-term sustainable responses to transform food systems.

Gwen Varley, University of Greenwich, UK

#### **How insights from the reproductive justice movement challenge instrumentalism and reveal connections between women's empowerment and children's nutrition in Busoga, Uganda**

Predominant theories of the pathways between women's empowerment and children's nutrition outcomes rely on instrumentalist ideas of women's roles and labour. These include theories that empowering women will result in improved nutrition outcomes for children because of 1) women's role as primary caregiver, 2) women's physiological contributions to reproduction, or 3) women's choices about how to allocate household resources. I argue that the logical foundation of each of these theories is weak, and that a conceptual framework built on principles of the reproductive justice movement is both more theoretically coherent and more likely to result in transformative change in development practice. I demonstrate the latter point by presenting empirical evidence from Busoga, Uganda that illustrates how the use of a reproductive justice lens revealed key issues relevant to both women's empowerment and their children's nutrition. Furthermore, a reproductive justice lens shows how the pathways between women's empowerment and children's nutrition can be bidirectional. That is, women's empowerment can improve children's nutrition, and improving their children's nutrition can also be empowering for (some) women. These results reaffirm the epistemological strength of feminist theory and suggest the dispensability of the common trope of women's empowerment as an instrument for achieving other objectives, rather than a development objective with equal intrinsic value.

Arlette Saint Ville, June Po, Amilcar Sanatan, The University of the West Indies, Trinidad and Tobago

#### **Daughters within Rastafari movement: Critical lessons on bridging social movements and feminist influences in food sovereignty**

Small island developing states of the Caribbean, as the world's first colonized spaces, have experienced land contestations throughout history. This has contributed to persistent poverty and food and nutrition insecurity, that are exacerbated by rapid environmental change. Efforts to engage communities and re-imagine futures around food systems in the CARICOM, remain underdeveloped with the exception of Indigenous Peoples and groups that advance alternatives to dominant food security paradigms. One such group is the Rastafari (circa 1930) that comprised an underclass of enslaved African descendants who established a movement that was self-sufficient and produced food as community. This historical case study of Rastafari Daughters traces an alternative approach to women's empowerment differing from a western theory of gender equality. From what was observed as a male dominated Rastafari social structure and doctrine to a gradual manifestation of Daughters' commitment to Rastafari, the case study shows how feminists progress are often negotiated and challenged within social movements themselves. In the broader context of initial colonial state repression and post-colonial systemic discrimination, an undercurrent questioning of gender equality spread region-wide, with influences on recent rapprochement around reparations, decriminalization of marijuana, agricultural cooperatives, and food self-sufficiency programmes. As a cultural alternative, the movement led by Rastafari presents a place-based understanding of the underappreciated interconnectivity between women's empowerment, community self-determination, environmental sustainability, and food sovereignty.

Lora Forsythe, University of Greenwich, and Petra Abdulsalam-Saghir - Federal University of Agriculture Abeokuta (FUNAAB) Nigeria

#### **The role of social movements in addressing gender-based violence in food markets in southern Nigeria**

Women's social activism in southern Nigeria has historically, to a significant extent, been organised around food: food production, processing and trading. This paper examines the role of food chains, with particular reference to cassava, as an organising factor in gender justice movements in the country. Food markets in Lagos and other urban areas of the country have been the site of both gender-based violence, oppression and activist responses. There are endemic issues of extortion and corruption among police whereby primarily female market traders are vulnerable, and issues of abusive police enforcement measures under COVID-19 that have put the primarily female traders and retailers at food markets in Lagos at risk of increasing physical and sexual violence. Examining women's participation in the EndSars movements, we find that their activism is also responding to the gendered oppression of women in food spaces. The measures of the state in "controlling" of the virus and response of women farmers and traders are rooted in the strong history of oppression and protest. Cases of tapioca retailers, and cassava farmers in Nigeria have had notable impacts in challenging oppression and inequality rooted in colonialism, corporatism and male oppression. This paper will provide a gendered and food justice lens to current social movements in southern Nigeria and how they have responded to gender-based violence. The implications of the findings are the need and responsibility of international food systems projects and research to recognise the socio-political contexts in which they are working and participate in broader movements of emancipation.

## Thursday 14 October 2021

### Thurs 1.1 *Gender Norms and Normative Change*

Moderator/organisers: Steven Michael Cole, International Institute of Tropical Agriculture (IITA)

Anouk Ride, WorldFish

#### **Balancing the canoe - community based resource management and gender in Pacific coastal fisheries**

Community-based resource management (CBRM) is an approach endorsed by Pacific leaders to achieve livelihood and conservation objectives, also recognising traditional and customary rights indigenous Pacific peoples have to their coastal and marine resources. However, women, youth and people with disabilities are marginalised from local leadership institutions across the linguistically, racially and culturally diverse region. Fisheries management is particularly vital to life as fish and other aquatic foods are key sources of protein and micronutrients for coastal communities in the Pacific as well as being a key element of livelihoods, particularly of women. As with other forms of governance initiatives in the Pacific, this exclusion can either be re-enforced or challenged by initiatives to promote local resource management. We address the need to balance asset-based approaches with objectives for advancing the role of women in fisheries decision making, by using Participatory Action Research (PAR). In 2020 and 2021, 20 Pacific Island communities (10 Solomon Islands, 6 Vanuatu, 4 Kiribati) reviewed participation in local fisheries management as part of assessing of their CBRM plans and committees. PAR approaches adapted for this purpose included facilitated discussions during which communities reflect, in several rounds, about exclusion in fishing and harvesting of aquatic foods. Qualitative data from these participatory workshops is triangulated with quantitative data on representation, social norms and attitudes. This process built consensus for more inclusion in

decision-making structures, and points to how structural change at the local level may be supported by policy and practice.

Kipo Jimah and Gundula Fischer, International Institute of Tropical Agriculture (IITA)

**“The woman has no right to sell a livestock”: The role of gender norms in Northern Ghana’s small ruminant value chains and implications for transformative interventions**

Ghana’s overall sheep and goat meat production depends on its Northern region, where medium- and low-endowed farmers practice small ruminant husbandry as an important livelihood diversification strategy. However, participation in the value chains and benefits from it remain gender inequitable. Based on a mixed methods approach, we explore the gender norms that underpin inequitable relations within households along the value chains and between different nodes. Respondents comprised of livestock keepers, feed and food vendors, animal health providers, traders, butchers and feed trough manufacturers. In the ongoing process of data evaluation results indicate that men and women respondents to a great extent agree that married women are generally not capable of making important decisions by themselves and should not leave home without their husbands’ permission. Furthermore, it was seen as unacceptable for women to take up roles in livestock trade. Other aspects were more controversial such as the question whether women may reveal their livestock ownership or contribute substantially to household income. Further gender analysis will focus on how by-laws, norms and policies restrict or enable non-production actors. Insights into how gender norms (such as those above) shape access to various nodes as well as the process of translating participation into gains do have implications for value chain interventions. We offer specific recommendations for small ruminant value chains in Ghana with emphasis on gender-transformative community conversations and multistakeholder dialogues on equitable institutions.

Dipika Das, University of Southern Queensland, Australia

**The impact of gender and local norms on women smallholder farmers’ bargaining in the Eastern Gangetic Plain region**

Various studies have confirmed that women smallholders have low farm bargaining power and that bargaining intention is a predictor of bargaining behaviour. However, this phenomenon has not been studied within the farm bargaining context. The main objective of this research was to examine how gender dynamics influence the bargaining intentions of women smallholder farmers in the EGP. An interpretive paradigm was employed using a qualitative phenomenological approach and case study methodology. Data were collected by conducting 35 in-depth interviews with women smallholders and 17 interviews with the farmers’ bargaining opponents in the EGP region. A thematic analysis was employed to analyse the data. The findings revealed that gender dynamics and local norms embedded in power such as male privilege, gender roles and hegemonic masculinity influenced the intentions of smallholder women farmers to engage in farm bargaining. It was found that gender-related dynamics and local norms created a barrier for women to freely engage in farm bargaining. Several strategies are outlined to address the farm bargaining needs of women farmers.

Lan Chu, University of Antwerp, Belgium, and Els Lecoutere, CGIAR GENDER Platform

**Empowering women in their households: A mixed methods analysis of a field experiment in rural Tanzania**

The study, therefore, presents the results of a scoping review, of approximately 291 journal as well as grey literature articles related to gender and Climate Resilient Agriculture. Broad trends in terms of time, geographic focus, sector focus, use of intersectionality, and methods of data collection are highlighted. Additionally, a full text review of 154 articles covers different thematic areas within the literature including vulnerability context, climate related impacts, adaptation and gender outcomes. There has been a rise in the publications on the subject in the last few years with 75% of the articles being published during 2016-2021. Also, more than 40% of the articles are based on studies from East Africa and South Asia. In terms of themes, while much is mentioned about vulnerability towards climate change, there is limited evidence of CSA or CRA contributing to gender equality outcomes. Some of the innovative methods and tools are also highlighted. The review results are expected to better inform research efforts as well as project interventions related to climate resilient agriculture.

\* S. M. Faridul Haque, WorldFish

**Gender dynamics: Barriers, opportunities and risks in aquaculture and agriculture sector in northwest Bangladesh**

This study was undertaken with a broader objective of Identifying gender norms and practices in Northwest Bangladesh and the resulting roles that women and men take up in aquaculture and agriculture. This was accomplished by examining gender relations and dynamics at home, community and commercial level (production, group and market), and by assessing how gender relations connect and overlap with intersectionality. To understand the current gender dynamics in northwest Bangladesh, and how these shape the barriers and opportunities for women and men to engage in and benefit from aquaculture and agriculture, this study employed a mixed and integrated qualitative methods approach. The overall findings of the study includes, gender norms and stereotypes are prevalent, hindering women’s full involvement in aquaculture and its benefits. Stereotypes and



entrenched structural systems of women's subordination to men prevent men from helping women in their reproductive roles, unless women are sick or away. The cultural norms and belief systems (Islam and Hindu) on women's abilities hinder their full participation in aquaculture. Reputation related to societal ideals on masculinity and femininity further determine what men and women can and cannot do. The study proposes several recommendations for building women empowerment in aquaculture. These include supporting women entrepreneurs through accelerator programs from organizations and getting women involved in the aquaculture value chain. Another way is by building women's production capacity through information, knowledge and training. Enabling market conditions for women are needed. Gender transformative approaches are needed on prevailing notions of masculinity and negative, gender-based stereotypes.

## Thurs 1.2 *Addressing Gender Gaps and Exclusions in Research and Practice*

Moderator/organisers: Margaret Agesuba, Newcastle University, UK

Ranjitha Puskur, CGIAR GENDER Platform, International Rice Research Institute (IRRI)

### **Ways forward for Gender in Agriculture research: Key takeaways from Evidence Gap Map**

A growing interest in gender in agriculture and food systems has characterized research in the last decade. An evidence gap map (EGM) was developed to systematically collate available evidence on gender in agriculture and food systems. This map provides a framework for prioritizing research across 11 key themes that have evolved organically from CGIAR gender research over the years, to enable focused evidence synthesis and generation based on identified gaps. The EGM included studies that employed qualitative, quantitative and mixed method designs, acknowledging the inter-disciplinary and wide-ranging methodologies applicable to gender research in agriculture, a departure from other EGMs which only focus on quantitative studies. We provide a visual overview of studies spanning the themes and different outcomes. After screening 7259 studies across a range of academic databases, 752 studies were included in the map based on the inclusion criteria and quality check protocols. Findings indicate an overall predominance of qualitative research designs followed by quantitative and mixed method studies. The synthesis also suggests that studies that examined 'social' outcomes significantly outnumber those that captured 'economic' 'environmental' and 'agricultural knowledge and behaviour outcomes'. In terms of regional distribution of evidence, Africa, followed by Asia were the dominant geographies, with fewer studies focusing on Latin America and the MENA region. This presentation will draw out the broader implications of the gaps identified for gender in agriculture research, and identify ways of prioritizing themes and outcomes for impactful multi-dimensional gender research in the context of agriculture and food systems in future.

Sarah Lawless, James Cook University/ WorldFish

### **Diluting gender equality: The case of small-scale fisheries**

Global commitments to gender equality have surged, yet their translation and potential to influence regional and national food systems policy and practice is unclear. Subsequently, the propensity to advance gender equality through food systems is difficult to assess. We examined small-scale fisheries of the Pacific Islands, a largely community-based productive sector, to explore how gender equality was (1) represented, (2) prioritized and, (3) actioned in policy and practice to, (4) assess the potential (type and depth) of gender-based change. We conducted interviews with Pacific small-scale fisheries and/or gender experts (n=71), combined with a systematic analysis of influential policy instruments (n=76). We found that within fisheries policy and practice, the concept of gender equality was diluted to a narrow focus on women, overlooking men, gender norms and power relations. Rationales for pursuing gender equality were predominantly instrumental (i.e., to drive ecological outcomes) rather than intrinsic (i.e., as inherently valued for fairness). The gender strategies implemented by fisheries agencies mainly sought women's inclusion (i.e., participation in fisheries projects, meetings and committees), consequently, changes were clustered around the individual (i.e., women's improved productive capacities) rather than spanning household-to-societal levels. We highlight potential reasons for this dilution, including incoherence in values of gender equality within policies and among fisheries agencies. Critical shifts in dominant gender equality narratives, and an embrace of multi-level strategies, provide opportunities for fisheries, and other productive sectors, to rise to current best practice, and make meaningful (opposed to rhetorical) progress toward gender equality.

Cynthia McDougall, WorldFish

### **Conceptualizing and Assessing Inclusion and Exclusion in Community-based Natural Resource Management: A New Framework and Tool**

Community-based management of natural resources (CBNRM) approaches have been critiqued for glossing over intra-community power differences along the lines of gender, wealth, caste, ethnicity or other dimensions of difference. This oversight – and associated assumptions that CBNRM are equitable by virtue of being participatory – can reproduce or even exacerbate existing inequalities. And yet, existing frameworks and methods for assessing CBNRM tend to focus on participation in broad brush terms and/or resort to 'attendance' as a proxy for inclusion.

As such, conceptual and methodological innovation is needed to better shed light on who experiences 'participatory exclusions', and to what degree, is critically needed. This contribution will engage with this gap with the objectives of both generating greater shared understanding of the problem (why reducing participation to attendance is problematic) and of an innovative framework that unpacks 'inclusion' in a more granular way. In particular, the framework unpacks inclusion (in CBNRM governance) into five inter-related elements: (1) attendance to meetings, (2) having an understanding of local CBRM processes regulations, and access to that information (3) speaking during meetings, (4) feeling respect from other members of the community, and (5) the perception of inclusion during the meetings. The framework and the associated quantitative and qualitative tool we will share can be used to examine inclusion and exclusion through an intersectional gender lens, i.e., engaging with age, ethnicity or other. It will draw on the 2019 pilot, which took place in 14 communities in Solomon Islands.

### Thurs 1.3 *Food Culture and Policy Environments*

Moderator/organisers: Elise Talsma, Wageningen University

Soumya Gupta, Cornell University, USA

#### **Structural transformation and Intrahousehold food allocation: evidence from India**

While attention has focused on determinants of dietary diversity at the individual and household- level, little is known about biases in intrahousehold- food allocation and the factors behind it. Even less is known about how such biases are influenced by the pace of structural transformation. In this paper we analyze differences in dietary diversity scores of women relative to men in the same households. This intrahousehold difference in dietary diversity scores is referred to as the 'dietary gap'. We use nationally- representative data from India's National Family Health Survey to analyze the magnitude and determinants of the dietary gap. We control for demographic factors like age, education and household size; as well as measures of women's empowerment. And finally, we account for variations in subnational structural transformation by way of per capita GDP and associated variables. We find evidence for a significant shortfall in the diversity of diets for women as compared to men. Furthermore, the gap in dietary diversity varies by the level of structural transformation within the country. Apart from the stage of structural transformation, women's empowerment is an important determinant as well. Our results point towards the importance of addressing systemic biases in women's dietary intake.

Almayya Sylla and Jummai Yila, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

#### **Pattern or effect of gender roles in in agri-food systems in Mali**

Equality is crucial in agriculture and food production for fair distribution of food and welfare outcome among smallholder farmers and rural consumers in West and Central Africa. In a country like Mali with high population growth (3.6% per year, see RGPH, 2009), in which majority of the population is rural and poor, the provision of food for the population, especially women and children under 5 years of age, is an urgent development imperative. Food production, supply and consumption intersects with socioeconomic status of food producers or consumers, food sharing cultural norms, gender roles in production and food distribution practices and roles. The case of Mali is taken here to illustrate huge inequalities in food production and supply and the effects of gender roles on food production and consumption patterns in the most of rural settings in Mali. The evidence presented here comes from a study conducted in Mali on the cereal (millet and sorghum) and groundnut value chain actors' trait preferences and the entrepreneurial practices of youth involved in agri-food systems in Mali. It was found that while food production requires the interrelationship of various actors and institutions in the agri-food nodes, there are specific gender roles in food production that is dependent on the availability of resources, the cultural division of labor and the gender roles in food production. Food security can only be achieved by cultivating equality in food production and supply for the poor consumers by integrating and considering all the segments of agri-foods as a whole.

Vivian Valencia, Wageningen University and Research, Netherlands

#### **Public policies for agricultural diversification: Implications for gender equity**

Identifying mechanisms by which policies and interventions in agriculture may enhance women's empowerment—a critical aspect of gender equity—is of paramount importance for sustainable development. We investigated how targeted public food procurement, a promising policy instrument to support farm diversification, influences women's empowerment. We also discuss how targeted public food procurement may bridge across Sustainable Development Goals (SDGs) to support transformation of food systems towards sustainability. Specifically, we assessed Brazil's flagship public food procurement program, the National School Feeding Program, in southern Brazil. We compared farmers (n=75) who do and do not participate in the National School Feeding Program and conducted household surveys on farm characteristics and practices women's empowerment, and women's participation in social movements. We found that women were more empowered in households participating in the National School Feeding Program, and that this empowerment was associated with diversified farming systems.

When women were more empowered and, therefore, jointly participated in farm management with male farmers, we found that agrobiodiversity and use of agroecological practices were at their highest. Finally, we show that women's participation in social movements related to agroecology was associated with both higher empowerment and household participation in the National School Feeding Program. Targeted public food procurement is a promising policy instrument to support multiple SDGs by linking cross-sectoral efforts to increase food production (SDG 2), provide economic opportunities for small-scale farmers (SDG 1), and create an economic space that women in agriculture can more easily access (SDG 5).

\* Farhana Hussain Ibrahim, International Potato Center (CIP)

#### **A nutrition-sensitive agriculture intervention in Bangladesh: What were the most significant changes for women and men?**

It is widely recognized that nutrition-sensitive agriculture interventions can improve diet and nutritional outcomes when they are multi-functional, combining agronomic, nutritional and hygiene behavior change through capacity strengthening, access to agricultural resources and offering techniques for empowering women and men. However, the pathways to positive nutritional outcomes are complex, involving among other things subjective perceptions of the change process itself, which has often been neglected. To address this issue, we employed a subjective story-telling method known as "Most Significant Change" to supplement other conventional qualitative and quantitative assessments. In-depth interviews were conducted with 26 women and 12 men in districts of Khulna and Satkhira. We present narratives about how the multi-functional interventions changed women and men's lives and/or livelihoods and why. Most significant changes experienced by women were diverse: awareness of nutritional diet, hygiene practices, care of mother & child; ability to contribute to household expenses; involvement in decision-making; and increased freedom of movement. Men's changes were mostly economic: capacity to invest in additional livestock and new transport to increase earnings; investing in their children through keeping them in school; acquiring increased knowledge of production and post-harvest technology; becoming aware of the importance of OFSP for household nutrition and the economic benefits of producing sweet potato planting material. They also recognized their own behaviour change, supporting spouses for improved household nutrition and hygiene. We conclude with identifying the impact pathways from the intervention to improved dietary outcomes and highlight the role of gendered subjective perceptions in facilitating positive dietary outcomes.

#### **Thurs 1.4 *Agricultural Modernization and Gender Relations***

*The objective of the session is to discuss new insights into the effect of agricultural modernization on gender relations and to explore directions and possible collaborations for future research. Three new studies will be presented. The studies shed light on the role of institutional drivers of gender inequality in the process of agricultural modernization through technological change and commercialization, in areas dominated by smallholder farming. The studies focus on three different countries in Asia and Africa, namely India, Indonesia, and Senegal.*

Moderator/organisers: Janneke Pieters and Esther Gehrke, Wageningen University, Netherlands

Kanika Mahajan, Asoka University, India

#### **Gendering Technological Change: Evidence from Agricultural Mechanization**

Technological change in production processes with gendered division of labor across tasks, such as agriculture, can have a differential impact on women's and men's labor. Using exogenous variation in the extent of loamy soil, which is more amenable to deep tillage than clayey soil and therefore more likely to see adoption of tractor driven equipment for primary tillage, we show that mechanization has led to significantly greater decline in women's than men's labor on Indian farms. Reduced demand for labor in weeding, a task that requires precision and is thus more often undertaken by women, explains our findings. The estimates suggest that increased mechanized tillage led to a more than 22% fall in women's agricultural labor in India, with no accompanying increase in their non-farm sector employment, during 1999-2011. Our results highlight the gendered impact of technological change in contexts where there is sex-specific specialization of labor.

Anna Fabry, KU Leuven, Belgium

#### **Decent work in global food value chains: Evidence from Senegal**

The rapid growth and transformation of global food value chains has stimulated the development of rural labour markets and has important consequences for rural poverty reduction. While this transformation can be associated with substantial rural employment creation, there is still debate on the inclusiveness and quality of these jobs. We provide quantitative evidence on the inclusiveness of wage employment in the horticultural sector in Senegal and on the quality of this employment and disparities among vulnerable groups of workers. Using survey data from 525 workers, 392 hired workers in agro-industrial companies and 133 workers on small-scale farms, we assess the inclusiveness of employment towards female, young and migrant workers, and compare the quality of employment

between these different groups of workers. The quality of employment is assessed through wages and a decent work index that captures multiple wage and non-wage dimensions of job quality. We use bivariate and multivariate analyses to examine quality of employment and a decomposition analysis to explain wage gaps. Results suggest that job quality is better in the agro-industry than on small-scale farms. We find that the agro-industry is inclusive towards migrant, female and young workers, but that disparities in job quality exist within and across companies. Results illustrate substantial gender wage gaps across companies, but not within companies, and a lower likelihood of having decent employment among migrant and young workers. Our results suggest that wage gaps can be explained by differences in job characteristics, and are not directly based on workers' gender, age or migrant background.

Esther Gehrke, Wageningen University, Netherlands

**Technical change and fertility: Evidence from the oil palm boom in Indonesia**

We analyze the link between the oil palm expansion in Indonesia and fertility. During the time period 1996 to 2016, we find consistently negative effects of the oil palm expansion on fertility. We explain this finding with rising farm profits, that led to consumption growth, an expansion of the non-agricultural sector, increasing returns to education and to higher school enrolment. Together these findings suggest that agricultural productivity growth can play an important role in accelerating the fertility transition, as long as the economic benefits are large enough to translate into local economic development.

Thurs 2.1 *Moving beyond Binary Thinking: reconceptualizing gender in agriculture and food systems*

Moderator/organisers: Ranjitha Puskur, CGIAR GENDER Platform, International Rice Research Institute (IRRI)

Janwillem Liebrand, Utrecht University, Netherlands

**Expert Women in Development: Tracing Technology, Masculinity and Race in International Collaboration in Nepal**

In this presentation, I take one of the classical questions of feminist technology studies as the starting point: Why are there so few expert women in technology? In promoting (gender) inclusive development, the domain of engineering and technology is marked as masculine, and other domains of development, such as nutrition, health care and sanitation, as not-masculine or feminine. Through this division, structural (gender) inequalities in development practice and research tend to be validated rather than challenged. In my presentation, I present an analysis of this gendered (and racial) dynamic and I discuss implications for today's development approaches. I focus on the history of Nepal's rural development and I use a critical reading of policy and research documents, from the 1950s onwards, to analyse what activities with regard to technology transfer and development policy, were marked as suitable for professional women. My analysis shows that professional women in technology have always worked in rural and agricultural development alongside and indeed majority-male professionals, but that they hardly 'progress' because they are dealing with a persuasive 'process' in development in which women's assumed shared experiences and interests are romanticised, and in which policy solutions are supported that assume a relationship between female embodiment and representation of women's interests. As a result, more than five decades of debate on women/gender in development has produced a lot of work for so-called women/gender specialists, but it has not challenged structural gender inequities in processes of promoting development.

Marie-Charlotte Buisson, International Water Management Institute (IWMI)

**Women's empowerment and the will to change**

A static and apolitical framing of women's empowerment has dominated the development sector. We assess the pertinence of considering a new variable, the will to change, to reintroduce dynamic and political processes into the way empowerment is framed and measured. Using a household survey based on the Women's Empowerment in Agriculture Index (WEAI) and qualitative data collected in Nepal, we analyze how critical consciousness influences women's will to change and how this process is affected by visible agency, social structures, and individual determinants. A virtuous circle emerges from the analysis: women with higher visible agency and higher critical consciousness are more willing to gain agency in some, but not all, of the WEAI empowerment domains. These findings support the design of development programs combining interventions increasing visible agency with interventions raising gender critical consciousness to reduce gender inequalities. Through this analysis, we advance current conceptualizations of empowerment processes by establishing that the will to change as an indicator offers valuable insights into the dynamic, relational and politic nature of women's empowerment. Our results finally argue for improving the internal validity of women's empowerment measurement tools by identifying culturally and contextually relevant indicators.

Sophie von Redecker, Kassel University, Germany

**Queer and agriculture. or: queer agriculture.**

The talk will combine the fields of queer theory and agricultural science. Thus, the traditional binary between so called natural science and the so-called humanities get questioned. The talk will be based on two documentaries of queer farming in the US as well as on insights from the movement of LGBTIQ\* people within the movement of La Via Campesina. Thus, the research will not only show how diverse rural livelihoods already are but also problematize how queer people has their struggles (or not) to be "out" in the countryside. Thereby the common narrative of queer and diverse cities on the one side and conservative and mono-cultural" countrysides on the other side get deconstructed. Starting from there the research also asks how farming contexts need to change to bring more people to the land. What do queer people need to feel free to move (back) to the land? Moreover the talk will focus on the field of queer ecologies and will analyse how nature shows itself queerness and stabilizes non-hegemonic perspectives and ways of living. Following this, nature can also be seen as a safe place for LGBTIQ\* people. Thus, the research is a radical way of unlearning normative ways of thinking about farming families, rural contexts and nature/cultures.

Valentina Peveri, The American University of Rome (AUR), Italy

**Multispecies perspectives for cultivating diversity and equality: reflections on 'species inclusivity' in gender research in agriculture**

In viewing nature as a resource for humanity, mainstream narratives around food/agricultural/rural research fail to recognize the agency and dynamics of non-human life forms as being intrinsically entangled in humans' everyday lives. Yet, women play major roles and possess a wealth of knowledge in fostering and maintaining multispecies communities that are rooted in a less anthropocentric vision of farming practices and the natural environment. To illustrate the untapped potential of multifunctional mosaics, I will start from the case study of a perennial root tuber crop in Southwestern Ethiopia, and further expand into the related ramifications of home gardening, polycultural farming, and multistoried landscapes. This talk will ultimately explore if and how a more species-inclusive approach can cross-pollinate gender in agriculture research and help cultivate both sustainable agri-food systems and gender equality. A combination of feminist and multispecies frameworks will be discussed to map out what methods exist that may reflect species inclusivity. It is argued that debunking binary thinking should be applied to gender as well as the human-animal and human-plant divides. The ecosystemically-related zoonotic origin of the Covid-19 pandemic represents a powerful hint at reconsidering what a multispecies perspective means for environmental development agendas. Species inclusivity would require a rethinking of received wisdoms, and response-ability in exploring and experimenting with the counter-narratives of local actors who frame their daily interactions with natural resources not only in terms of gains or losses (resource-based), but also of human flourishing as fundamentally dependent on other species (relation-based).

## Thurs 2.2 *Intergenerational Relations and Family-based Securities*

Moderator/organisers: Esther Njunga-Mungai, CGIAR GENDER Platform, International Livestock Research Institute (ILRI)  
Nozomi Kawarazuka, International Potato Center (CIP)

**Agriculture in intergenerational relations: Ethnic Thai youth in northern Vietnam**

In Southeast Asia, the family system, rather than the state system, fulfills a vital role in maintaining well-being of rural households. Drawing on the concept of intergenerational relations, this study illustrates gendered experiences of a youth transition period with a specific focus on the interactions of youth with parents and parents-in-law through agriculture. Findings show that intergenerational reciprocal support plays significant roles as safety nets for young married couples, even though men are often absent from the rural village, looking for casual labor work outside the village. Young men access cash, goods and services from their kin in exchange for unpaid labor in farming. Women take major responsibility for farming, animal husbandry and domestic work to support their parents-in-law through which they eventually utilize agricultural resources to their own benefits. The economic focus of research on agriculture as a source of income masks this important aspect of agriculture within ethnic minority communities. Unpaid youth labor in agriculture should be viewed as more than a simple problem of youth unemployment or a lack of individual skills. Instead, gendered experiences of ethnically marginalized youth should be reflected in relevant policies and agenda settings to support agricultural development.

Isabel Lambrecht, International Food Policy Research Institute (IFPRI)

**Gender and youth in Myanmar agriculture: some facts**

Agriculture is often stereotyped as a men's sector, and the sector is further problematized as one in which youth is not interested and farmers are increasingly older. Perceptions do not always coincide with the reality though, and effective policy making and design of interventions related to agriculture should be guided by 'facts' rather 'myths'. In this paper, we strive to bring objective, quantitative documentation of women's and youth's involvement in

agriculture in rural Myanmar. To do so, we perform a descriptive analysis of rural adults based on a nationally representative survey. First, we focus on employment patterns in rural areas, and on employment in agriculture in particular. We show that women and youth contribute substantially to agriculture, but that there's a small gender gap in participation and a large gender wage gap. Second, we focus on women's and youth's access to farmland, a key prerequisite for own-farming in a country where rental markets are scarce. Households are more likely to own land as the household head ages. In landholding households, the household head is considered the owner, either solely or jointly with a spouse, though mostly as representative of the household rather than as sole decisionmaker. Third, we explore cropping patterns and gender: are certain crops more often grown by women than men? Are certain crops more appealing to young farmers? If such patterns exist, they offer quick entry points for policies and interventions that aim to support youth or women farmers.

Laudemira Silva Rabelo, Research Institute in Meteorology and Water Resources (FUNCEME)

**The invisibility of young people in family farming: A gender perspective in the semi-arid region of Ceará, Brazil.**

The migration of the children of family farmers in the semi-arid region of North-eastern Brazil reveals new challenges, especially for girls and women, who seek visibility for their multiple roles in society. This article brings an analysis of the factors that contribute to this process of mobility, in view of the variable's youth and gender. The Systemic Participatory Rapid Diagnosis method was used, with interview techniques and questionnaire application, in two sub-basins located in the hinterland of the state of Ceará, Brazil, in the temporal period of 2019 and 2020. The research revealed that migration is justified by the inequality in social relations. Faced with the invisibility of their productive and reproductive work in family farming, girls and women seek means of living in the city that allow them a well-being not made possible in the rural territory. If these desired migrations, by today's young women, become a reality, a new format of family farming will be designed in the territory, including the accentuation of gender inequalities.

\* Francois Iradukunda, Alliance of Bioversity International and CIAT, and University of Antwerp, Belgium

**Men's rural-to-urban migration in Burundi, and how it affects their wives' voice and agency in farming and their banana plantations**

In Burundi, rural-to-urban migration is a rapidly increasing phenomenon. Most villagers migrate to the capital Bujumbura which has seen its population increasing from 497,166 in 2008 to 743,514 in 2020. Especially in northern Burundi male out-migration is common; up to one-third of male household heads was recorded to move away, usually leaving their wife and children behind in the village. Little is known about how this male out-migration affects farming; crop management; investment in farming and revenue; crop choice etc. nor about how the household and particularly women, are affected when their husbands move away. This study aims to shed light on these issues by studying both male migrants and their rural households and farms. We will particularly focus on farm decision-making, labour allocations, women's voice and agency, and possible changes in the farm systems of 'migrant' households. With regards to farming, we focus on the banana crop and plantation. Banana is not only an important cash and staple crop in Northern Burundi, the plantation, which is semi-perennial, also represents standing capital and social status and is traditionally controlled by men. We take a case-study approach, using mostly qualitative methods such as individual semi-structured interviews with male migrants and their rural-based wives and field (plantation) observations. The fieldwork will be conducted over the next two months. This study is part of the Master thesis project of the lead author.

### Thurs 2.3 *Adoption and Impacts of Technologies / Innovations*

Moderator/organisers: Everisto Mapedza, International Water Management Institute (IWMI)

Chiara Perelli, Tuscia University, Italy

**Gender equality and sustainable development. How women's contribution to farm management systems influence the adoption of Climate-Smart Agriculture approach**

Women play an important role in Sub-Saharan farming systems. However, they face severe gender-specific constraints and have minimal part in the farm decision-making systems (Ogunlela & Mukhtar, 2009). This determines additional barriers in the adoption of agricultural technologies based on the Climate-Smart approach (Nelson and Huyer, 2016). This paper contributes to the gender debate in developing systems by assessing evidences from Ethiopia, Malawi, South Africa and Tanzania. A two-step methodology is applied to estimate: (i) influence women have on CSA adoption intensity through a Poisson regression model; (ii) socio-economic and environmental factors affecting women involvement in the farm management system by using a multinomial regression model. Results obtained suggest that households headed by women and characterized by the availability of physical and economic resources adopt more CSA practices than ones managed by men. Furthermore, while in Malawi women participation to agricultural groups and their contribution to the farm decision-making process affect positively the CSA adoption intensity, in the other countries their role remains

marginal or negatively related with farm sustainability. Among factors affecting women involvement in the farm management systems, female ownership of agricultural land, participation of women in agricultural groups and their involvement in some field activities play a crucial role. The present study illustrates that cultural barriers continue to persist in some contexts. This implies the need for a review of government policies aimed to close this “gender gap” and determine significant gains for society by increasing agricultural productivity, reducing poverty and promoting economic growth.

Sarah Mayanja, International Potato Center (CIP)

#### **Gender Responsive Communication tools and approaches for scaling the Triple S Technology in Ethiopia and Ghana**

This study aimed to assess communication methods best suited to the needs of women and men in transmission and delivery of the Triple S technology. The Triple S (Sand, Storage, Sprouting) is a root-based sweet potato vine conservation and multiplication technology suitable for arid and semi-arid areas. First trialed in Uganda, it was scaled out in Ghana and Ethiopia under the RTB Triple S Scaling project. The outreach strategy was based on three treatments (i) core communities (ii) informed communities (iii) spillover communities. Various communication tools and approaches were used for the three treatments; and were qualitatively assessed to ascertain their effectiveness in technology dissemination, uptake and scaling. Findings indicate that face-to-face communication channels was the most preferred by men and women in both countries. Women did not prefer radio given limited access to radio sets and accessories, and timing of the programs. Video was deemed a new and educative channel especially by men who likened it to being in a classroom but was mostly appreciated by women in Ghana. A digital divide was evident between men and women in Ethiopia where women unlike men perceived radio and video inaccessible, the information delivered difficult to comprehend, apply and share. Future interventions need to obtain a deeper understanding of the intrahousehold dynamics related to communication equipment as well as existing gender norms before designing communication strategies. This could enable better reach and utilization of technological information by women and men farmers.

Joan Kimaiyo, World Agroforestry (ICRAF)

#### **Women and Technology Adoption: does capacity building really count?**

Adoption of fodder technologies could improve smallholder farmers productivity and alleviate poverty in rural areas. Fodder shrubs provide alternative protein supplement that is less costly and can sustainably be produced year-round. Besides significantly increasing milk production, fodder shrubs improve soil fertility and provide fuelwood. Despite all these benefits, adoption by smallholder farmers is still very low. Access to knowledge and trainings has been identified as one of major factors hindering adoption. Using a randomized control field experiment, this study looked at differences in adoption of fodder shrubs in two districts in eastern Uganda, Kapchorwa and Manafwa. The experiment saw male and female farmers trained in fodder shrubs planting, management, and utilization as well as its benefits on milk production. Levels of adoption were measured pre- and post-intervention using a weighted fodder adoption index. Results show access to information is critical but not sufficient to improve adoption by women. Female participants significantly adopted less than their male counterparts: they had less fodder on farm and significantly less knowledge on fodder compared to males. Further analysis found that decision-making and control over resources played a key role in the overall levels of adoption. In both districts, men had more control not only over land use decisions but also on the management of dairy cows including decisions related to feeding. The study also found that post-project intervention women participated more in decisions on dairy management and sale of milk. We conclude that understanding gender roles and decision-making dynamics are fundamental in technology adoption

\* Irina Andrianina Tefy and Gaudiose Mujawamariya, AfricaRice

#### **A gendered assessment of production and technical efficiency for rice in Vakinankaratra region- Madagascar**

This study investigates the adoption of the good agricultural practices in rice farming and their efficiency, applying quantitative data collection methods to determine if the adoption of these good agricultural practices leads to more efficiency while demonstrating the importance of considering gender aspects. The study was carried out in Vakinankaratra region in the Highlands of Madagascar with a sample of 228 male and 232 female rice farmers. The descriptive data analysis and the stochastic frontier production function model explored gendered differences for the adoption of those key agricultural techniques and the technical efficiency of the producers. Results show that concerning the adoption levels of good agricultural practices, two-thirds of the farmers apply at least four of the good agricultural techniques components for the irrigated rice farming ecology, while it is the case for only one-third of those practicing rainfed rice farming. Men are significantly more familiar with the key good agricultural practices than women, and the households of the male farmers are more likely to practice these key good agricultural practices than those of the women. The stochastic frontier production function model shows that female rice farmers are more efficient than male farmers. Facilitating access to resources and rice farming trainings for women should enable them to be even more efficient.

## Thurs 2.4

### *Poster session: Irrigation and Women's Empowerment*

Moderator/organisers: Arwen Bailey, Alliance of Bioversity International and CIAT

\* Elizabeth Bryan, International Food Policy Research Institute (IFPRI)

#### **Small-Scale Irrigation and Women's Empowerment: Lessons from Northern Ghana**

As with any new agricultural technology or practice, there are important gender dynamics to be considered with the expansion of small-scale irrigation technologies. Women's lack of access to resources and agency relative to men, and other social constraints, often limit their ability to adopt and benefit from agricultural technologies. At the same time, expanding access to agricultural technology to women may provide a pathway for empowerment. This presentation draws on recent papers on this topic to explore the potential for small-scale irrigation technologies to increase women's empowerment by evaluating the impacts of an intervention that distributed motor pumps to small groups of farmers in Northern Ghana. The analysis uses a mixed-methods approach and a conceptual framework that illustrates the linkages between small-scale irrigation and the domains and women's empowerment as well as the broader opportunity structure shaping these relationships. Qualitative and quantitative data from the case study area are used to identify what aspects of women's empowerment are salient in this context and how the irrigation intervention influenced outcomes for women. The findings suggest some potential for small-scale irrigation technologies to provide a pathway for women's empowerment, however, there are also potential negative impacts, including among households that did not benefit from the intervention. Results also suggest that many of the impacts of the motor pump intervention are indirect—while some women reported direct income benefits of engaging in small-scale irrigation, others described shifting time away from direct engagement in irrigation activities when motor pumps were introduced.

\* Mary Okumu, University of Kwa Zulu Natal, South-Africa

#### **The Role of Women in Irrigation: A Case Study of Ahero Irrigation Scheme in Kenya**

This paper explores the role of women in irrigated agriculture in the Ahero Irrigation Scheme in Kisumu County in the Western region of Kenya. Irrigated agriculture is seen as one of the major means through which food security may be improved in Kenya. The theoretical framework used in the study is 'eco-feminism'. A qualitative research approach was used, involving sixty-six participants. Sixty-one participants answered questionnaires and five participants took part in interviews. Data analysis (via Microsoft Excel) was conducted using theme-based groupings. The findings of this study acknowledge the important role that women play in irrigated agriculture with regards to rice farming, the challenges that women faced in irrigated agriculture with regards to land ownership, inheritance, financial assistance and agricultural training in Ahero Irrigation Scheme. The study concludes with the need to develop agricultural policies that have bottom-up approaches that meet the needs of farmers, regardless of gender.

\* Natalia Reyes, IHE Delft Institute for Water Education, Netherlands

#### **Female farmers and Magüevas: central links in Maputo's urban food systems**

This research uses the case of Infulene Valley as an example of urban irrigated farming. As part of the city's greenbelt created during Mozambique's civil war, Infulene Valley has historically played a key role as a fresh food provider for Maputo and even now irrigated farming is crucial for the livelihood of several hundreds of families in the city. It aims to explore how the place of irrigated farming has changed over time and what are the threats and opportunities for irrigated farming – the machamba – within the current urbanization process. Concern about the effects of these socio-environmental changes on the lives and livelihoods of Infulene's farmers, particularly on female farmers, form the direct motivation for this research. The research objective is, thus, to articulate the value of the machamba from the farmers' perspective to explain, first, why do they remain working on it despite the narrative of decline of urban and small-scale farming, and second, to conceptualize the machamba in a way that visibilizes women's work in Maputo's urban food system.

### *Poster session: Prospects and Lessons from Gender Mainstreaming*

\* Manohara Khadka, International Water Management Institute (IWMI)

#### **Gender and Socially Inclusive WASH under Federalism in Nepal: Transformative Approaches and Pathways for Moving Beyond 'Engineering Fixes'**

The main objective of this paper is to unpack the dynamics relationship between gender equality and social inclusion (GESI), WASH, and federalism in Nepal using qualitative research approach. Following the institutionalization of the new Constitution in 2015, Nepal adopted a three-layered federal system of governance. This policy shift to federalism impacts the management and governance of public services including Water, Sanitation and Hygiene (WASH), and coupled with a parallel policy adoption of GESI, has implications for inclusive, equitable and sustainable WASH. However, the linkages between Federalism, WASH and GESI remain poorly understood. Our recent implementation of WASH project in two rural districts in West and East Nepal identify



unique opportunities as well as structural challenges to inclusive WASH posed by these recent policy shifts. While federal governance provided opportunities for inclusive political leadership, intersectional inequalities by caste, ethnicity, poverty and gender are not easily dismantled, and create barriers to inclusive political institutions and policy outcomes. Women, particularly from socio-economically and politically marginalized groups struggle to effectively exercise their political roles in local WASH governance. Local elected women leaders struggle with access to information and be meaningfully engaged in local WASH decision-making, planning, and policymaking in very powerful political spaces such as new local governments established under the federal structure. We argue that WASH provides the context to ensure that policy aspirations of representative and inclusive governance through federalism and GESI are achieved in practice. To not lose momentum for transformative, inclusive change, we see an urgent need for institutional change processes at scale.

\* Geetanjali Gill, University of the Fraser Valley, Canada, and Canadian Foodgrains Bank

**Applying a Gender+ Lens to the Foodgrains Bank's 'Scaling-Up Conservation Agriculture in East Africa' (SUCA) Program**

The Foodgrains Bank's SUCA program (2015-2020) introduced conservation agriculture techniques to male and female smallholder farmers in Ethiopia, Tanzania, and Kenya, while emphasizing the key role of savings groups, marketing, and policy advocacy. The project led to opportunities for the empowerment of women farmers, and underscored the importance of applying an intersectional gender (gender+) lens to understand benefits and constraints for women differentiated by age and marital status. The project's endline evaluation involved 951 male heads, 349 female heads, and 733 married women in a household survey, and 1,049 men and 1,749 women farmers in sex-specific focus groups. Women, and particularly elderly female-heads, faced more constraints in their access to CA tools and inputs; and all women had less access to governmental extension services. Time burdens posed by CA adoption affected some women, but only in the first year. The program improved household food security and nutrition due to higher yields and the inclusion of diverse food crops; however, the perception of improved food security was lower for female heads. Increased yields and improved access to loans contributed to women's economic empowerment; yet female heads had access to smaller plots of land and married women had the least ability to take part in household decision-making. Applying a 'gender+' lens, focusing on female (married and female heads) and male CA adopters as 'role models' and 'gender champions', and tackling gender norms at a community level can enhance the gender-transformative potential of CA programs.

\* Farhan Majid, IMPAQ International

**Graduating to Resilience Program and women's empowerment: Evidence from Uganda**

The purpose of this contribution is to examine livelihoods, time use, agricultural value chains, and nutrition from a gender perspective by contrasting the experiences of refugee and host community participants of the Graduating to Resilience activity (G2R) in Uganda (2017-2024). G2R is a USAID Bureau for Humanitarian Assistance funded activity utilizing the Graduation Approach – an integrated, time-bound, and sequenced set of interventions designed to progress ultra-poor households out of extreme poverty and into sustainable livelihoods and greater resilience. G2R engages 13,200 HHs in Kamwenge District; half of the participants are refugees from the Democratic Republic of Congo living in the Rwamwanja Refugee Settlement and half are from the surrounding host community. While these households are economically active, they are unable to consistently meet their basic needs without some form of assistance. We will present findings from four repeated cross-sectional mixed method studies. Quantitative data, including data from the Pro-WEAI tool, is collected from 800 households and 1,700 program participants from Cohort 1. The fourth study, a value chain analysis, adapts IFPRI's 5Capitals tool to our local context and collects semi-structured data from linked enterprises and detailed household level data on smallholder female farmers for three value chains. Extensive qualitative data is also gathered through key informant interviews and focus group discussions. Importantly, this session will not only share key findings from four assessments, but also the importance of using data for decision-making, and how these assessments are being currently used from an implementing partner perspective to inform Cohort 2 programming.

\* Sugandha Munshi, International Rice Research Institute (IRRI)

**Convergence: Key for Gender Inclusion**

Challenging gender inequality through institutional and systemic structural change is the key for sustainable change. In order to address the gender inequalities in the agriculture system, it become imperative to innovate and come up with ideas for implementation which calls for larger participation and ownership form different stakeholders operating in the system at large. The inherent issues which affect the women farmers are subjective in context of geographical spread, social system, and the ecosystem. It is only with the mutual collaboration where the gender inequalities can be challenged strategically equally showing the changes. Collaboration and convergence with public, private, government partners and cgair focusing on inclusion is important. Since the conception phase till the implementation and up to impact analysis the ownership of change promoting inclusion has to be equally owned by different institutes. Convergence Platform formed under the Cereal System Initiative

for South Asia is one such operation example in Eastern India, which has eventually established a sustainable ground where different partners and institutes have started putting women farmers at the center of their deliverables. <https://ricetoday.irri.org/the-new-normal-in-agriculture-convergence-collaboration-and-inclusion> Largely, when we speak about reaching a phase where inclusion is a driving force behind policy formation, it become crucial that men and women farmers are targeted equally putting in context their subjective needs. Multi-stakeholder co-development process and delivering timely and actionable activities undertaken for challenging and resolving y can contribute for sustainable change as far as gender inequality is concerned. Institutionalizing change for gender equality is required.

### *Poster session: Women's Empowerment: Correlations and Survey-based Measurements*

\* Els Lecoutere, CGIAR GENDER Platform, and Marrit van den Berg, Wageningen University, Netherlands

#### **Changes in Women's Empowerment in the Household, Women's Diet Diversity, and their Relationship against the Background of COVID-19 in Southern Bangladesh**

The COVID-19 pandemic in Bangladesh, associated public health measures, and people's reactions are projected to have caused job losses among women, a decline in women's empowerment and reduced women's diet diversity. Using a November 2020 telephone survey to re-interview adult female respondents of a November 2019 in-person survey, we find that, contrary to expectations, more women found than lost jobs and women's diet diversity increased over the year partly marked by the COVID-19 pandemic. As expected, women's involvement in food purchase decisions declined. We find that change in women's involvement in food purchase decisions is not statistically related to change in women's outside employment. Gaining employment outside the home, however, is associated with a decrease in women's autonomy over use of household income. Change in women's diet diversity is positively related with change in women's involvement in food purchase decisions but negatively with change in women's autonomy over income use. Our study demonstrates that it is important not to assume specific changes in women's opportunities in crisis situations but that data collection is necessary and to realise that the COVID-19 pandemic was a shock that may have affected the trajectory of changes taking place in women's agency over time in Bangladesh. The next wave of studies on COVID-19 and development impacts will need to explore why these changes happened, how progress can be sustained, and setbacks reverted.

\* Kalyani Raghunathan, International Food Policy Research Institute (IFPRI)

#### **Women's Empowerment and Gender Equality in Agricultural Value Chains: Evidence from four countries in Asia and Africa**

Women play important roles at different nodes of both agricultural and off-farm value chains, but in many countries their contributions are either underestimated or limited by prevailing societal norms or gender-specific barriers. We use primary data collected in Asia (Bangladesh, Philippines) and Africa (Benin, Malawi) to examine the relationships between women's empowerment, gender equality, and participation in a variety of local agricultural value chains that comprise the food system. We find that the value chain and the specific node of engagement matter, as do other individual and household characteristics, but in different ways depending on country context. Entrepreneurship—often engaged in by wealthier households with greater ability to take risks—is not necessarily empowering for women; nor is household wealth, as proxied by their asset ownership. Increased involvement in the market is not necessarily correlated with greater gender equality. Education is positively correlated with higher empowerment of both men and women, but the strength of this association varies. Training and extension services are generally positively associated with empowerment but could also exacerbate the inequality in empowerment between men and women in the same household. All in all, culture and context determine whether participation in value chains—and which node of the value chain—is empowering. In designing food systems interventions, care should be taken to consider the social and cultural contexts in which these food systems operate, so that interventions do not exacerbate existing gender inequalities.

\* Lukas Welk, International Food Policy Research Institute (IFPRI)/University of Hohenheim, Germany

#### **The gendered yield gap and women's empowerment: Evidence from smallholder farmers in Uganda's central region**

Despite a substantial increase in agricultural productivity in developing countries over the past decades, a gap persists between the agricultural productivity of women and men farmers. However, there are still knowledge gaps on the determinants of this gap and how it can be closed. Furthermore, there is particularly little information on how women's empowerment influences agricultural productivity. The objective of the proposed study is to understand the determinants of gendered differences in agricultural productivity. The evidence will be drawn from an empirical analysis of a recent intrahousehold survey conducted in Uganda in the frame of the IFPRI led project 'Reaching Smallholder Women with Information Services and Resilience Strategies to Respond to Climate Change'. To measure empowerment the Abbreviated Women's Empowerment in Agriculture Index (A-WEAI) is used. Additionally, descriptive statistics will be used to show the yield and productivity differences between men and

women cultivated plots as well as other potential relevant explanatory variables. To measure the impact of women's empowerment and potential influencing variables a Kitagawa-Oaxaca-Blinder decomposition will be conducted where the gendered yield gap is decomposed into differences in the mean values of the endowments. Results are expected to differ from previous approaches, as gender differences are considered in greater detail using the A-WEAI. This will provide in-depth understanding of the influence of women's agency on yield gaps. The results may not only help to identify reasons for the productive and yield gaps between men and women but also help in finding solutions to reducing the gap.

\* Katrina Kosec, International Food Policy Research Institute (IFPRI)

**Relative Poverty and Women's Empowerment Narratives: An Experimental Study of Gender Attitudes in Nepal**

How do perceptions of one's relative economic status affect beliefs regarding gender roles? We conducted a 2019 survey experiment with approximately 2,000 adults in Nepal. Employing an established survey treatment called a priming experiment to subtly alter half of respondents' perceptions of their relative economic well-being, we find that increased feelings of relative deprivation make women significantly less likely to support gender egalitarian perspectives. Increased perceptions of relative deprivation lead women to decrease their support for women making decisions over household expenditures, having equal control over household income, sharing household chores, and women working outside the home. These effects are generally larger when, prior to treatment, women felt that they had a relatively high status—precisely the group of women for whom the prime should have had the greatest impact. A message randomly read to half of women and designed to support increased women's empowerment does very little to alter beliefs regarding gender roles or to attenuate the effect of the relative deprivation prime. Despite the negative impacts on women, however, we do not find a similar pattern for men. The results underscore the deleterious effects that feelings of relative deprivation can have on women's own gender attitudes.

\* Simone Faas, International Food Policy Research Institute (IFPRI)

**Using the pro-WEAI for Market Inclusion (pro-WEAI+MI) to assess the empowerment of participants in the Agricultural Technical Vocational Education and Training (ATVET) for Women program in Benin.**

We use the pro-WEAI for Market Inclusion (pro-WEAI+MI), in a mixed-methods evaluation to assess the impact of the Agricultural Technical Vocational Education and Training for Women (ATVET4Women) program in Benin on women's empowerment. Data were collected from 598 men and 879 women via a sex-disaggregated household survey with beneficiary and non-beneficiary households following the completion of program implementation. Both beneficiary and non-beneficiary households were selected from four target commodities: rice, poultry, soy, and compost. The survey also collected data on pro-WEAI+MI "candidate indicators," contextual information on working environments, and productivity in the value chain. We also collected qualitative data from interviews and focus group discussions with program participants, value chain actors, and program staff to examine local understandings of empowerment and assess both value chain experiences and program outcomes from multiple viewpoints. We use propensity score weighted regression analysis to compare beneficiaries and non-beneficiaries. Preliminary average treatment effects demonstrate a statistically significant increase of women beneficiaries being empowered overall, as well as statistically significant positive treatment effects on self-efficacy, respect among household members, and control over use of income. However, there were statistically significant negative treatment effects on women's work balance, group membership, and membership in influential groups. Qualitative results reveal that the increased time burden from value chain activities may drive declines in group participation. They also find high satisfaction with the program and highlight difficulties related to transportation to trainings and difficulties finding support for childcare and completing household duties to participate in the trainings.

\* Khin Zin Win, International Food Policy Research Institute (IFPRI)

**Project-level Women's Empowerment in Agriculture: results from cognitive testing in Myanmar**

When designing and evaluating policies and projects for women's empowerment, appropriate indicators are needed. This paper reports on the lessons learned from two rounds of pretesting and cognitive testing of the project-level Women's Empowerment in Agriculture Index (pro-WEAI) in a total of five States/Regions in Myanmar. We assess if respondents understand the modules as intended and which questions require modification based on the cultural context. We find that the questions also present in the abbreviated WEAI are generally well understood, particularly on instrumental and group agency. The challenge to respond to hypothetical and abstract questions did become apparent in the domains representing intrinsic agency, and was problematic for questions on autonomy and self-efficacy. Also, the internationally validated questions on attitudes towards domestic violence were too abstract, and responses depend on the scenario envisioned. We also suggest including an adapted version of the module on speaking up in public, to reinforce the domain on collective agency. Our findings provide an encouraging message to those aspiring to use pro-WEAI, but emphasize the need for continued attention for context-specific adjustments and critical testing of even those instruments that are widely used and deemed validated.

### Thurs 3.0 Plenary: Rural Women's Voices: Messages to researchers

*In the lead up to the International Day of Rural Women (15 October), four incredible rural women and activists from different parts of the globe will share their experiences and perspectives on key issues related to gender in agriculture and food systems. Esteemed panelists include: Wairimu Kanyiri, Champion farmer from GROOTS, Kenya; Willemien Koning-Hoeve, Dairy Farmer engaged in the main Dutch and European Agricultural Organisation with special attention to women in agriculture; Eileen Mairena, Vice President of Indigenous Women's organization Wangki Tangni who is also a Researcher & Advocacy Officer at the Centre for the Autonomy and Development of Indigenous Peoples (CADPI), Nicaragua, and; and Bhavanaben Pravinsinh Parmar and Mansi Shah, farmer and Senior Technical Advisor of Self Employed Women's Association (SEWA), India, respectively. Panelists will point conference participants towards key areas of research needed to advance gender equality in agriculture and food systems.*

Moderator/organisers: Agnes Atim Apea, Hope Development Initiative and Chairperson of Local Government Finance Commission, Parliament of Uganda, Uganda

Panelists:

- Wairimu Kanyiri, GROOTS, Kenya
- Willemien Konings-Hoeve, Dairy farmer, chair of the LTO Women farmers in the Netherlands (LTO Women and Business) and member European Copa-Cogeca's Women's Committee, Netherlands
- Bhavanaben Parmar and Mansi Shah, Self-Employed Women's Association (SEWA), India
- Eileen Mairena, Centre for the Autonomy and Development of Indigenous Peoples (CADPI), Nicaragua

### Thurs 4.1 *Gender Transformative Approaches: Methods and findings*

Moderator/organisers: Soraya Hassanali, Global Affairs Canada

Caitlin Shannon, CARE USA

#### **Can gender-transformative approaches in agriculture be a WIN-WIN for food security, income and gender equality?**

Objective: Conventional approaches to gender mainstreaming and gender integration have focused on closing gender gaps in access to resources, information, and technologies without addressing the underlying causes of gender inequality. Methodology: Conducted in Burundi, this research compared the impact of a gender transformative approach – EKATA (Empowerment through Knowledge and Transformative Action) –to a conventional gender mainstreaming (Gender Light) approach and a control on agricultural productivity, household wealth, food security, gender equality and women's empowerment. Results: A gender transformative approach resulted in higher adoption rates of improved technologies, higher production, and greater improvements in dietary diversity for women, as compared to a Gender Light approach or control. More households in the EKATA group had moved up the wealth ladder at study end, compared to the those in Gender Light or control group. The largest gains in women's empowerment (using the Women's Empowerment in Agriculture Index score) were observed among woman in the EKATA group – 84% increase at end-line among that group as compared to a 31% increase among women in the Gender Light group. The proportion of women who were empowered and of those achieving gender parity with their spouses was the highest in households in the EKATA group. In terms of cost-benefit ratio, the EKATA approach had a ratio of 5:1 compared with 3:1 and 2:1 ration for Gender Light and control groups, respectively. Implications: These results show that implementing a gender-transformative approach can lead to improvements in food security, wealth and gender equality compared to other traditional approaches.

Cynthia McDougall, WorldFish

#### **Gender Transformative Approaches for Food Systems Transformation: New Methodological Insights**

The session objective is to create common ground and understanding on methods for gender transformative approaches (GTA), in particular in relation to food systems. Specifically, the session will share the key findings and message of the Working Paper on Gender Transformative Approaches that is being developed in 2021 by the GENDER Platform Method Module's Working Group on GTA. By the time of the Conference the paper will be completed and ready for sharing. The focus of the session will be on a synthesis of current tools, strategies and methods, good practice guidance and tips related to the transformation of gender norms. In particular, it will focus on: • formative methods and tools for understanding gender norms, • strategies and tools for catalysing changes in gender norms (this could also include action research tools such as experimental games, participatory community planning), at scale, and • methodologies, methods and tools for measuring changes in gender norms along with understanding the underlying reasons. Across these areas, the session will flag issues of intersectionality as well as recognize the interest in change 'at scale

Isabelle Droy, Les Afriques dans le Monde (LAM, UMR CNRS 5115), Bordeaux, and Elisabeth Hofmann, University Bordeaux Montaigne / Les Afriques dans le monde, France

**Development projects as arenas for gender transformative action: The participatory-action-research project ARPEGE in Madagascar**

In spite of a growing official recognition of women rights, gender inequalities persist, particularly in rural areas. The specificity of local cultures makes it difficult to take them into account in development projects and whenever methods or tools prove their efficiency in peculiar contexts, they are hard to scale up. At the intersection of the individual (micro) and community (meso) level, and the macro-level, with national and global policies promoting women's empowerment, development projects may be considered as places of confrontation between social players. During the life span of projects, intermediaries make iterative and permanent adjustments between theoretical norms and policies, specific forms of practice and daily management of projects. Little is known about how "gendered" methods and representations – as formal "professional norms" – are re-negotiated and re-combined with other "social norms" among the development organisations themselves, at the level of the implementation team and with the "target" population. In order to enhance the transformation of gender norms, through better gender mainstreaming in project implementation processes, we are conducting a Participatory-Action-Research (named ARPEGE) in Madagascar, with a team of researchers and practitioners from three NGOs (Agrisud, Gret, ID) in three rural development projects. The goal is to build archetypal methods for contextualizing an integrated gender approach in development projects. A ToC has been designed to articulate the process of scaling of action research findings and to adapt the research to other contexts, based on an intervention logic and increasing awareness and evidence of potential impacts, constraints and paradoxes of scaling initiatives.

Shruti Sharma, University of Georgia, USA

**Training and shifting gender norms: Evidence from a training intervention in rural Nepal**

Skill development training programs are widely practiced policy instrument to improve female labor force participation and her agency. However, such training intervention can also liberalize gender norms and attitudes around women working outside the household. While previous studies link progressive change in gender attitudes and increased female labor force participation, they do not explicitly look at the shift in these norms around women's work and her mobility in a household through training intervention. We use a panel dataset from a training in Nepal to empirically capture the effects of improved labor market opportunities on both a woman and her families' (husband and mother-in-law) gender attitudes that affects their future-oriented behavior. Using two-stage randomization, 150 of 300 women were randomly invited to be trained as community animal health workers (CAHW). We estimate both local average treatment effects (LATE) and intent to treat (ITT) effects of being a CAHW (or being invited to CAHW training) relative to not being a CAHW (or not being invited to CAHW training) on their gender attitudes. We also estimate an enhanced specification in which controls for additional baseline women and household characteristics are chosen using the Lasso double-selection method. Preliminary results indicate that women who became CAHWs hold more gender regressive attitude around female work and her agency. This work provides a unique understanding of how a women-focused training intervention reshapes women's role in society and in the household and how individual perceptions are formed that affects future-oriented behavior for young women in the household.

Kathleen Colverson, University of Florida, USA

**Engaging men in supporting maternal and child consumption of milk and other animal source foods in Rwanda**

Maternal and child nutrition practices, including consumption of milk and animal source foods, are considered the responsibility of women in many low- and middle-income countries. However, men can influence nutrition in their households through their decision-making, control of resources, and social support. Despite the role of gender and the importance of men in influencing nutrition in their households, most nutrition programs target women and men are not comfortable participating. This project explored methods of engaging men more actively in household nutrition through a combination of training and communication materials tailored to meet their needs. Training materials were developed after extensive field research with men and women using focus groups and key informant interviews. These materials were used to train local partners on providing nutrition education to men, and assess the effectiveness of changes in household nutrition before and after the training. Due to Covid restrictions, the final results are pending, but should be available by the conference. The implications of this research could improve overall household nutrition, particularly as it relates to consumption of animal source foods by women and children.

Emily Hillenbrand, Cornell University, USA, and Esther Lupafya, Soils Food and Healthy Communities (SFHC)

**Using Farmer Participatory Research to Address Gender Norms in Malawi**

Participatory farmer research that is truly farmer- and community-led is a key element of a gender-transformative approach to research, as it transforms top-down research relationships. Soils, Food, and Healthy Communities (SFHC) in Malawi is a farmer-led non-profit organization engaged in long-term farmer participatory research to address the interrelated challenges of soil infertility, food and nutrition insecurity, climate change, and gender inequality in Northern Malawi. Issues of social and gender equity have been at the heart of SFHC approach to

agroecology, and SFHC has documented important programmatic adjustments they have made to challenge gender norms, such as involving men equally in nutrition and caregiving training activities. Still, SFHC has less evidence about the specific mechanisms by which SFHC's gender activities—and men's engagement in them—may improve food security and gender outcomes. A participatory research design is being set up with SFHC, to pilot-test a gender-transformative approach. This presentation discusses SFHC's previous lessons learned on addressing gender through farmer-led research, and it highlights key findings on gender norms from a 2020 baseline study carried out by SFHC researchers in four SFHC communities in Northern Malawi. These four communities were purposively selected to represent high-migration and low-migration communities, with either some or no prior exposure to SFHC's gender activities. The baseline information will be used to identify entry points and key gender issues to address, within a participatory, gender-transformative intervention.

#### Thurs 4.2 *Moving beyond the "Feminization" of Agriculture*

*This session presents empirical evidence, methodological insights and an emerging conceptual framework on moving beyond the 'feminization' of agriculture. In August 2018, the CGIAR Research Program on Policies, Institutions, and Markets put out a call (through the predecessor to the current CGIAR GENDER Platform) for research proposals on: the 'Feminization' of Agriculture: Building evidence to debunk myths on current challenges and opportunities. The aim was to analyze how gender roles and responsibilities in agriculture are changing, drawing on both qualitative and quantitative data. The research engages with discourse on the feminization of agriculture and seeks to validate and/or challenge persistent assumptions about women and gender dynamics in agriculture and related sectors. Three papers provide empirical evidence, one presents methodological insights across the projects and one presents an emerging conceptual framework.*

Moderator/organisers: Cheryl Doss, University of Oxford, UK, Ruth Meinzen-Dick, International Food Policy Research Institute (IFPRI)

Cheryl Doss, University Of Oxford, UK

##### **Beyond the Feminization of Agriculture: A Conceptual Framework.**

Mary Crossland, World Agroforestry

##### **Family ties: insights on the effects of male out-migration on gender relations, farming investments and women's wellbeing (Kenya)**

Wei Zhang, IFPRI

##### **Migration and Gender Dynamics in Irrigation Governance in Nepal**

Hom Gartaula, International Maize and Wheat Improvement Center (CIMMYT)

##### **Multiple geographies of the feminization of agriculture in South Asia: Insights from Nepal**

Cathy Farnworth, Independent scholar, Germany

##### **Methodologies for Researching the Feminization of Agriculture**

#### Thurs 4.3 *Gender Relations and Biodiversity Management*

Moderator/organisers: Iliana Monterroso, Center for International Forestry Research (CIFOR)

Diana Lope-Alzina, Wageningen University & Research, Netherlands / Platform for Agrobiodiversity Research

##### **The Socio-Economic Participation of Spouses in Family Farming**

This qualitative study explores how spouses perceive their legal and operational participation in family farming. Based on guidelines developed through a literature analysis, narrative interviews were conducted with 12 participants (11 female, 1 male) in the Württemberg-region of Germany. The findings confirm research that spouses are often in a precarious position. The results show that the work taken on by spouses may coincide with their participation in decision-making on family farms, assumed liabilities, involvement in the legal structure, and with property relations. However, these aspects do not have to match or may match only partially. Regardless of life stage and gender, most respondents are thus exposed to a high risk of poverty in the event of divorce. Talking about the consequences of death and divorce was deemed unpleasant by interviewees. Due to the legal situation in Germany, however, it is necessary for spouses marrying into family farms to negotiate this issue with their partner. Notions of time-enduring romantic love additionally hinder spouses in these negotiations, as does the internalized priority of the family farm above individual interests.

Rashida Chantima Zibilla, German Institute for Tropical and Subtropical Agriculture, DITSL, Shea Network Ghana, University of Kassel, Germany

##### **Rural women's income diversification through underutilized species: Processing and marketing of the African locust bean in northern Ghana**

Underutilized species are a way of increasing livelihood options and improving dietary micro content for more vulnerable social groups, particularly women. However, innovative processing, packaging, and marketing of these

crops are needed to strengthen these value chains. In this research we analyze how gender shapes the options available for women to access, process and market an underutilized species, dawadawa, or African Locust Bean (*Parkia biglobosa*) in Ghana. Using a transdisciplinary research approach, researchers established a collaboration with three women's groups in Northern Ghana. From 2018 to present qualitative data through participant observation, group activities (40+) and individual interviews (19) has been collected. The study found that in the Dagomba culture, the dawadawa is of particular importance for women and is linked to their gendered identity. It is also a source of folate during pregnancy and is appreciated as a cooking spice. Despite this importance, access to dawadawa is declining due to lack of propagation of new trees associated with agricultural mechanization, firewood collection and land ownership. Currently, most women must resort to buying the seeds for their individual processing at increased prices while facing greater challenges of supply for their dawadawa businesses. Although women hold knowledge for processing and are motivated to do it, they must overcome multiple barriers to achieve it. Considering how the loss of dawadawa trees disproportionately impacts women, more support is needed to conserve and replant the trees. Women also need more options for processing dawadawa in order to gain important supplementary income for their livelihoods.

Gisella S. Cruz-Garcia, Oxfam Novib

#### **A gender lens to the role of local food plants as rural safety net during the food scarcity season in Africa, Asia and Latin America**

For many rural people the availability of food is driven by seasonal cycles, and is least in the pre-harvest months. During food scarcity periods household food stocks from the last harvest begun to dwindle and the nutrition security of the family can be at stake. However, the wide diversity of local food plants can contribute to reducing and even ending food scarcity by adding diversity and nutritional value to the diet. Indigenous peoples and smallholder farmers hold most of the traditional knowledge associated with agrobiodiversity. The objective of this presentation is to compare women's and men's knowledge on local food plants using an intersectional approach, and to highlight their role during the food scarcity period, under different socio-economic and demographic conditions. Data was collected during a household survey conducted with 2,241 indigenous people and smallholder farmers in Uganda, Zambia, Zimbabwe, Nepal, Laos, Peru and Guatemala. The survey was part of the baseline of the Local Food Plants for Nutrition work, Sowing Diversity = Harvesting Security program (<https://sdhsprogram.org/>). The presentation will reflect on how to build the diets of tomorrow using a gender approach to traditional knowledge as a starting point. The presentation will discuss the implications of the results for the Sustainable Development Goals (SDGs), taking into account that food scarcity tends to be overlooked by policy makers. Finally, we will share a practical example that illustrates how development programs on nutrition and agrobiodiversity could be successfully built on the basis of gender equality.

\* Silvia Sarapura-Escobar, University of Guelph, Canada

#### **Land use planning to Secure Food in the Andean Region of Peru, the case of Andean Women**

The objective of this research study was to understand and analyze women's representation in land use planning in Andean agri-food systems. Andean agriculture depends on land use planning. Women's contribution to these systems and their upkeep of biodiversity while using land adequately are not well documented. Through the intersecting critical feminist perspective, two case studies were considered; (1) women producers using new approaches to land management; and (2) peasant women who traditionally maintain the land. A sequential explanatory design was used to obtain data iterated with participatory and discussion-based activities. Key findings demonstrated the influence of women's worldviews on land use planning. According to women's discourse, respect for the land and the concept that the land is part of a whole comprising universe was central to their actions. This is fundamental for the preservation of biodiversity, food security and resiliency. Some of the practices carried out by women are: (i) soil erosion control, rainwater storage and microclimates usage; (ii) soil rotation; (iii) tillage systems; (iv) escalated planting seasons; (v) live fences and canals; (vi) festive calendars for planning; and (vii) communal practices. The study provides evidence on how land use planning is critical in Andean agriculture and the key role women play in these systems. It recognizes the importance of land use and genetic biodiversity on women's lives and the influence Andean Cosmivision or indigenous worldviews holds on it. Policies, governments, and institutions have considered the context as homogeneous without attending women's knowledge, traditional land-use planning, and forms of community organizations.

### Thurs. 4.4 *Financial Inclusion and Control over Income*

Moderator/organisers: Meredith Soule, USAID

Nicole Lefore, Texas A & M University, USA

#### **Innovating asset finance inclusion: A gender-sensitive credit assessment in irrigated agricultural value chains**

The research to be presented aims to improve asset-based, agriculture financing to be inclusive and provide women with equitable opportunities for agri-preneurship. The objectives are to identify gender biases in market-based finance tools, and to co-develop gender-responsive tools with private sector solar irrigation companies. This study uses qualitative, action-research methods for a case analysis from the solar irrigation private sector in frontier markets in Sub-Saharan Africa. Women face higher socio-cultural barriers and demand and supply credit constraints that prevent them from investing in productive irrigation assets and reaching entrepreneurial aspirations, when compared to men. Solar irrigation pump companies are attempting to fill a general credit gap through asset-based financing, often viewed as innovative. However, companies' credit risk assessment tools to predict the likelihood of repayment for asset-based loans are not designed to be gender sensitive; companies do not even target women farmers as potential clients. Finance initiatives, while well-intentioned, developed credit scorecards to analyze quantifiable commercial aspects of finance. Scorecard criteria exclude factors known to influence women's ability to achieve investment returns and repay credit, such as off-farm income, livelihood diversification, group membership and social networks, and financial management. Asset-based finance is considered a high potential solution to credit constraints that builds on the strengths of the private sector for development, but without improvement, could inadvertently deepen women's lack of access to productive assets. This research has implications for the inclusiveness of irrigation equipment supply chains and women's equitable participation in irrigated value chains.

Berber Kramer, International Food Policy Research Institute (IFPRI)

**Lending her name, but not having a say? Gender norms and credit for agriculture in Odisha**

Smallholder farmers often lack access to credit from formal financial institutions. Expanding access to credit for marginalized (often women) farmers through credit scoring based on remote sensing could help reduce the costs associated with screening and monitoring agricultural loans, expanding access to credit especially for women farmers who typically lack land records; but it could also disempower women, given restrictive gender norms. Using surveys with 1,228 men and women from two rural districts in the state of Odisha, we find that there are strong gender norms around women's role in agriculture. A minority of women have a final say in the decision to take out an agricultural loan, even though this loan is put in their name. A randomized trial evaluating the effects of video-based gender sensitization, provided as part of a microfinance institute's product trainings, finds that such gender messaging did not help shift these norms. At the same time, survey evidence suggests that expanding access to agricultural credit through digital technology can potentially increase women's demand for such loans: although women prefer borrowing smaller amounts than men to invest in the main agricultural season, preferred loan size increases more among women than among men when informing prospective clients that loans will be scored using the technology. We conclude that shifting norms directly through training may be difficult, but that digital technology could help increase the number of women with agricultural loans, increase women's visibility in agriculture, and thereby shift gender norms.

Grace Nanyonjo, National Agricultural Research Organization, Uganda

**Bean Seed Credit Model: A double Edged Sword for Maximizing Benefits for Women.**

Availability and access to affordable quality seeds of improved bean varieties threaten women's ability to increase farm productivity, income and improve nutrition and food security. With the recent commercialization of beans, women's access, use, and decision-making processes on seed have reduced due to social structures that promote men's access to agricultural inputs as compared to women. Thus, to ensure equal access to seed by men and women, a seed credit model was introduced by NARO in collaboration with CEDO among bean farmers in central Uganda in 2015. However, since its introduction, little is known whether and how the model has benefited women farmers. Quantitative and qualitative data were collected from 210 farmers in 2021. Results- 67% of women & 33% of men farmers perceived the model as a "blessing" that addressed seed availability and quality challenges. Women & men could access certified seed on credit and share through informal networks to reach last-mile farmers. The model was complemented by training on agronomic and gender, contributing to increased productivity, business skills resulting in economic empowerment. Participation in the model enhanced women's (81%) agency over the beans' sale compared to men's (71%). Nonetheless, the participation of married women was restrained by gender-based constraints- demotivation from the burden of repaying husband's seed loans - increased domestic violence perpetrated by the stereotypes that women cannot be as successful as men. Therefore, if the gender-based barriers to women's participation and decision-making power are addressed, the seed credit model will maximize benefits for married and unmarried women.

\* Vedavati Patwardhan, University of Washington, USA

**Weather Shocks, Household Income, and Women's Decision-making: Evidence from Malawi**

Covariate shocks such as droughts and floods negatively impact household welfare in LMICs, especially in sub-Saharan Africa, where there is high dependence on rainfed agriculture. Several studies examine the impact of covariate shocks on household outcomes, including food security, consumption, agricultural production and



income, and migration. Although weather shocks affect women differently from men, their gender-differentiated effect is relatively less studied. I examine the effect of rainfall shocks on women's financial decision-making in Malawi, using three rounds of the nationally representative Malawi Integrated Household Panel Survey (IHPS). Employing household-year fixed-effects identification, I test whether female control over household farm, nonfarm, and transfer income changes in response to rainfall shocks. I find that in households with both men and women, a rainfall shock (defined as one standard deviation above or below the historical 30-yr average) is associated with a 6% percentage point increase in women's sole control over farm income ( $p < 0.05$ ) and no changes in total household farm income. I find that the effect on women's sole control over farm income is stronger in matrilineal districts in the Central and Southern part of the country (9 pp. increase). I find that rainfall shocks are also associated with higher sole female farm management ( $p < 0.05$ ), which may act as a mechanism for higher female decision-making over farm income. The results suggest that climate shocks alter intra-household decision-making, particularly related to the farm, and highlight the integral role of women in maintaining household resilience in agrarian economies.

#### Thurs 5.1 *What is a Local Normative Climate? Different operationalization of the concept*

*A 'local normative climate' refers to the prevailing set of gender norms in a given community, and how these norms are interacting with other dynamics in that context to differentially shape women's and men's capacities to innovate in agri-food systems. The concept emerged during the analysis phase of the global GENNOVATE study conducted in 137 villages from 26 countries. In this panel, four doctoral candidates present how they have appropriated and adapted the concept in their own research and reflect on lessons for gender and agri-food systems research.*

Moderator/organisers: Patti Petesch, Wageningen University, Netherlands, Cees Leeuwis, Wageningen University Afrina Choudhury, WorldFish and Wageningen University

##### **What is a local normative climate? Different approaches to operationalizing the concept**

Anne Rietveld, The Alliance of Bioversity International and CIAT /Wageningen University

##### **Gender Responsible Scaling**

Diana E. Lopez, Wageningen University

##### **What is a local normative climate? Different approaches to operationalizing the concept**

Patti Petesch, Wageningen University

##### **What is a local normative climate? Different approaches to operationalizing the concept**

\* Anne Rietveld, The Alliance of Bioversity International and CIAT/WUR

##### **GENNOVATE 2.0: Reimagining Research for Gender-Transformative Change in Agri-food Systems**

The time is ripe to build on the knowledge acquired in GENNOVATE by moving forward with research for gender-transformative development in the domain of smallholder farming, agricultural innovation and natural resource management and to create closer R4D interactions with a wide variety of stakeholders at all levels. A small team has been working on a potential GENNOVATE 2.0 since early 2021. Work has included a SWOT analysis of GENNOVATE 1, the development of initial concept notes for GENNOVATE 2.0, and a virtual workshop (conducted in April 2021) to present and discuss these ideas with members of the CGIAR Gender Platform. We propose three working packages: • WP 1 – Designing GENNOVATE 2.0 field research and transformative methodologies, • WP 2 – Promoting gender transformative research for change on different levels with a wide range of partners through institutional capacity strengthening and building of new partnerships, • WP 3 – Widening access to the existing GENNOVATE data. We particularly want to collect your ideas on how to move forward and create strong research proposals.

#### Thurs 5.2 *Bringing Gender Issues into Agricultural Technology Design: Shaping breeding investments*

*This session will discuss gender issues in the design of agricultural technology with emphasis on breeding. It will cover the theoretical background behind the need to address gender in technology design as a fundamental component of equality and inclusion. The case studies illustrate multiple angles of how gender interplays with varietal and trait preferences and the need to build a solid evidence base to inform technology design processes and scaling. The panel will start by presenting results of a working paper on "Gender Sensitive design of CGIAR technologies" with an overview of tools and methods available to address technology design through a gender and inclusion lens. Secondly it will build on a specific technical area "breeding" by describing existing evidence and gaps. Thirdly, building on the evidence gaps, specific cases will describe how they have addressed the challenges.*

Moderator/organisers: Vivian Polar, International Potato Center (CIP) and CGIAR Research Program on Roots, Tubers and Bananas

Ida Arff Tarjem, Norwegian University of Life Sciences

**Tools and methods at the interface of gender and agricultural technology design and evaluation**

This paper will explore methods and tools at the interface of gender and agricultural technology, covering technology design, implementation, scaling and evaluation. It provides a systematic overview of gender-responsive tools and methods that operate across the agricultural innovation cycle. Four key areas are explored, identifying tools and methods for: a) assessing gender differences in preferences and demand; b) identifying drivers of and constraints to technology adoption and the roles of gender indicators; c) evaluating gendered impacts of technologies; and d) evaluation of impact of gender-intentional deployment of technologies. Using the pool of methods and tools curated, the paper and proposed presentation identifies both methodological and thematic gaps, as well as innovative and “good practice” elements and lessons learned in and of existing tools and methods, along with recommendations for scaling, improvements and re-design. Accordingly, the paper contributes toward an improved understanding of the co-constructed relationship between gender and agricultural innovation and technology, and suggests how researchers, practitioners, and decision-makers may shape this relationship in more socially inclusive ways and towards more socially constructive ends.

Vanya Slachevska, Alliance of Bioversity International and CIAT

**Cassava in Vietnam**

Hale Ann Tufan, Cornell University, USA

**Beyond “women’s traits”: Analyzing gender and social differences for inclusive crop varietal design**

The process of crop improvement is rapidly shifting globally. Borrowing frames of thinking from the private sector, public sector crop breeding programs are shifting towards “market intelligent” or “demand-driven” crop varietal design. This intention of responding to producer, processor and consumer demand, and market dynamics has brought greater attention to the need of gender+ focused value chain analyses, trait preference studies and on farm trials. In the midst of this change, there is a growing need for innovation in methods, as well as bigger picture thinking around how to integrate different streams of qualitative and quantitative social science research, and interpret findings to guide crop breeding. This presentation outlines an integrated and interdisciplinary approach piloted under the Nextgen Cassava project in Nigeria and Uganda. Results shown will outline experiences with new methods to capture the relationship between gender and social difference, trait preference, and on farm varietal choice. We draw from past qualitative gendered food mapping and trait focused studies, quantitative marketing tools for conjoint analysis, and lastly citizen science on farm trials. Our results illustrate the high variability and complexity arising from considering social differences, as well as household level information such as food security status and poverty level create a challenge for breeding programs to prioritize their varietal design processes.

Bela Teeken, International Institute of Tropical Agriculture (IITA)

**Cassava Nigeria**

Eileen B. Nchanji, Alliance Bioversity-CIAT

**Gender-responsive Participatory Variety Selection in Kenya: Implications for common beans (*Phaseolus vulgaris* L.) breeding in Kenya**

Sarah Mayanja, International Potato Center (CIP)

**Prioritising quality traits for gender-responsive breeding for boiled potato in Uganda**

Using quantitative, qualitative and sensorial data collected from western (Kabale) and central (Rakai) Uganda, this paper identifies and describes gender-responsive traits preferred in varieties for the boiled potato market. These traits are aggregated into a product profile to support breeding programme design and decision-making that will increase probability of variety acceptance. An interdisciplinary and participatory methodology was used to collect data on socio-economic on trait preferences, processing and organoleptics and finally, to develop a lexicon through a sensorial panel. Characteristics that were important to both men and women, such as red skin and yellow flesh, are linked to market preferences. Women-only preferred characteristics such as big size and mealiness are linked to processing efficiency and eating quality. Besides agronomic traits, breeders must consider factors such as gender roles, social norms, and market preferences traits that guide farmers and other food chain actors in their selection of new varieties.

Dina Najjar, International Center for Agricultural Research in the Dry Areas (ICARDA)

**Does class trump gender? The case of trait preferences in lentil crop in Ethiopia**

Thurs 5.3 *Using a Livestock Vaccine Value Chain Framework to Identify Pathways to Transform Outcomes for Women Livestock Owners*

*Our session will present the synthesis of country results on mapping the livestock vaccine value chains in Ghana, Nepal, Kenya, Rwanda, Senegal, and Uganda. The synthesis will be from four ongoing research for development projects, funded by the Livestock Vaccine Innovation Fund, using a livestock vaccine value chain framework infused*

*with systematic gender, and in the case of one project intersectional, analysis to identify causal pathways to increasing women's access to livestock vaccines. Inadequate vaccine supply and infrastructure coupled with socio-cultural-economic inequalities in the value chain continue to perpetuate gender blind policies and practices to improve the provision of, and access to, vaccines and animal health services. As a result, women's animals are unvaccinated and vulnerable households lose livestock to vaccine preventable diseases. The research aims to identify entry points that can transform outcomes for women livestock owners. Because of the complexity and dynamics within the livestock system, the four projects applied the livestock vaccine value chain framework to analyze causal pathways and the existing assumptions and practices around livestock vaccination. Each project will share a country specific case study to showcase the different entry points for transformative change of the livestock vaccine value chain. The heterogeneity of the causal pathways require different approaches for development and challenge the notion of scaling. Interactive discussion session after presentations will stimulate a conversation on best approaches to advancing gender+ research and gender+ integration in food systems and increasing the understanding of gender issues within a previously unexplored domain of livestock systems.*

Organizer: Nargiza Ludgate, University of Florida, USA

Moderator: Sandra Russo, University of Florida

Nargiza Ludgate, University of Florida

**Using the livestock vaccine value chain framework to transform outcomes for women livestock owners: intersectionality & causal pathways**

Salome R.A. Bukachi, University of Nairobi, Kenya

**Triggering shifts in gender norms through enhancing distribution and delivery systems for Newcastle disease among smallholder farmers**

Immaculate Omondi, International Livestock Research Institute (ILRI)

**Transformative change for women's empowerment through livestock vaccine in Ghana**

Jemimah Oduma, University of Nairobi

**Systemic transformational change and empowerment for women smallholder farmers through engagement of key critical partners**

## Thurs 5.4 *Diverse Perspectives on Gender, Well-Being and Institutions in Agriculture and Food Systems*

Moderator/organisers: Elisabeth Garner, Cornell University, USA

Farhan Majid, IMPAQ International, USA

**Do "Beef Bans" Affect Women's Health?**

India has the highest number of anemic women globally. Progress to reduce anemia has been slow despite substantial economic growth and decades of programmatic efforts. This paper examines the impact of access to beef in India on women's anemia. It investigates a cultural institution - the religious norm that bans cattle slaughter and beef sale/possession in much of India. We compile historical data on cattle slaughter ban legislation by state and harmonize it with household and individual level data on beef consumption (National Sample Surveys) and biomarkers (Demographic and Health Surveys). We study the state level rollout of beef bans over time and compare the effects on upper caste Hindus, Sikhs, and Jains (who traditionally don't consume beef) with the effects on lower caste Hindus, Muslims, and Christians (who traditionally do consume beef) to estimate a triple difference-in-differences model and an event study model. Our results show that beef bans significantly reduce beef consumption and reduce women's hemoglobin in communities that traditionally eat beef. Our paper highlights the role of institutional/cultural factors in shaping anemia prevalence among women that may have potential intergenerational effects on future generations as well. As 11 Indian states don't have these bans, and a few states have even rolled back these bans, there is room for public policy debate on these bans, to which this paper contributes. More broadly our paper highlights how culture, legislations and food systems can interact in complex ways to contribute to suboptimal diets and malnutrition among women.

Madu Galappaththi, University of Waterloo, Canada

**Linking social wellbeing and intersectionality to understand gender relations in dried fish value chains**

This presentation aims to advance a comprehensive framework to integrate gender within the study of dried fish value chains toward better understanding the complexity of gendered value chain experiences. We do so by linking three complementary areas of scholarship: social wellbeing, intersectionality, and value chains. Social wellbeing literature emphasizes the range of benefits generated through dried fish value chains (e.g., social ties, cultural values, material goods). An intersectional perspective however brings attention to the relational structures (e.g., caste, ethnicity) that intersect with gender to uniquely position women and men within value chains in relation to the benefits they can generate. In developing this framework, a key point of departure from existing literature is the notion of relationality (i.e. the creation of experiences in relation to one another within a given context). The

value chain analysis further reveals how such unique positions determine the wellbeing outcomes women can generate through their participation in value chains. We demonstrate the contribution of this novel framework by applying it within dried fish case examples from Bangladesh, Tanzania, and Sri Lanka. In doing so, we systematically unpack how gender intersects with other structures of oppression and perpetuate gender inequity. Our framework thus results in a 'thick description' of gender relations operating in dried fish value chains. The insights that emerge can inform relevant policies, decision-making processes, and programs to ensure the creation of equitable wellbeing outcomes by those participating in dried fish value chains.

Lone Badstue, Independent researcher

**Women Farmers and Agricultural Innovation: Marital Status and Normative Expectations in Rural Ethiopia**

Sustainable agricultural development depends on female and male smallholders being effective farmers. This includes the ability to access or control resources and make the best decisions possible agro-ecologically, economically, and socially. Traditionally, gendered studies on innovation practice focus on female- versus male-headed households. In this paper, we focus on married women in acknowledged male-headed households and women heading their own households to examine how marital status influences women's capacity to innovate in their rural livelihoods. Using data from eight community case studies in Ethiopia, we used variable-oriented and contextualized case-oriented analysis to understand factors which promote or constrain women's innovative capacities. We use Kabeer's Resources–Agency–Achievements framework to structure our findings. Single women are more likely to own land and experience control over their production decisions and expenditures than married women, but engage in considerable struggle to obtain resources that should be theirs according to the law. Even when land is secured, customary norms often hamper women's effective use of land and their ability to innovate. Still, some single women do succeed. Married women can innovate successfully provided they are in a collaborative relationship with their husbands. Finally, we find that gender-based violence limits women's achievements. The article concludes with recommendations.

Hagar El Didi, International Food Policy Research Institute (IFPRI)

**Gender in Institutions and Governance: A Review of Tools**

Gender, institutions, and governance are complex but crucial concepts; the tools and methods to address their interactions need to address this complexity. A wide range of tools have been used by different disciplines, for research and interventions. This paper provides guidance to researchers, practitioners and policymakers on the tools that are available, and points to gaps where methodological development is needed. Through an extensive search process, we identified 68 tools, encompassing frameworks, data collection instruments, implementation and participatory implementation guides, and M&E tools. Data collection tools and implementation guides emerged as the most common tool types. Most tools (73 percent) have a primary focus on gender, but others were included if they could be applied to gender research or practice. Reflecting the diversity of tools, there was a relatively even balance between qualitative, quantitative, and mixed methods. Two thirds of tools deal with community-level institutions or governance. A high prevalence of participatory tools may reflect concerns with enhancing women's agency and gender equality in power relationships. Natural resource management (NRM) and political engagement are the most common sectors covered, together comprising half of tools. NRM-focused tools span all tool types, with a large cluster in implementation guides, whereas most tools focused on political engagement are data collection instruments. Participation in groups is the most common outcome. Tools considering outcomes related to rights or tenure are usually frameworks or implementation guides. Overall, the review highlights the wealth of tools available, as well as tool gaps (e.g., climate change as a sector).

\* Louise Erskine and Emily Hillenbrand, Cornell University

**More Than Soil, Seeds, and Water: True Cost Accounting and an Intersectional Sustainability Index for Gender Equity and Racial Justice**

Our current food system does not sustain lives, livelihoods or our planet, in large part because we do not value much of the work, land or inputs required to create good food. A new tool, True Cost Accounting (TCA) can be used to incentivize new values in our food system. The accounting tool works to quantify the hidden costs and benefits created on a farm and then with aid from public policy supports good behaviours and disciplines harmful ones. Women and Black, Indigenous and People of Colour (BIPOC) communities are at the heart of the food systems in Canada and the United States, whether it's by providing uncompensated homecare or temporary foreign workers harvesting for long hours in difficult conditions. These farmers and farmworkers must be represented and compensated for the total of their work provided to food production and to have the power to do so without fear of discrimination or harm, and with dignity. A pilot survey (38 questions) was dispersed across North America (n=24) to capture inequities between farmers, employers, farmworkers, landlords and tenants across gender and racial lines. Phase two of project development will offer tangible equity-based solutions based on survey responses. To this day, no TCA farm tool has ever attempted to include the hidden human or social costs that are created by farms and felt by women or BIPOC.

## Friday 15 October 2021

### Fri 1.1 *Securing Livelihoods*

Moderator/organisers: Saskia Ivens, Independent consultant, Netherlands

Dagmar Wicklow, University of Kassel, Germany

#### **The socio-economic participation of spouses in family farming**

This qualitative study explores how spouses perceive their legal and operational participation in family farming. Based on guidelines developed through a literature analysis, narrative interviews were conducted with 12 participants (11 female, 1 male) in the Württemberg-region of Germany. The findings confirm research that spouses are often in a precarious position. The results show that the work taken on by spouses may coincide with their participation in decision-making on family farms, assumed liabilities, involvement in the legal structure, and with property relations. However, these aspects do not have to match or may match only partially. Regardless of life stage and gender, most respondents are thus exposed to a high risk of poverty in the event of divorce. Talking about the consequences of death and divorce was deemed unpleasant by interviewees. Due to the legal situation in Germany, however, it is necessary for spouses marrying into family farms to negotiate this issue with their partner. Notions of time-enduring romantic love additionally hinder spouses in these negotiations, as does the internalized priority of the family farm above individual interests.

Malvika Chaudhary and Mariam A.T.J. Kadzamira, CABI

#### **The catalytic role of plant clinics in livelihood improvement of women engaged in local biocontrol agent production enterprises in India**

This study analyzes the impact of Plant Clinics established in Chokkalingam Puddur village, India, in linking their advice of using biofungicides to product availability through a women's cottage industry, an arm of a larger farmer producer organisation in the area. Using a mixed method approach we determine how participation in the women-only cottage industry has positively impacted the cottage industry members livelihoods with changes observed at the personal, relational and environmental levels. Furthermore, we find that the livelihood outcomes of the cottage industry members are far better than for other women who are only members of the larger farmer producer organisation comprising of both men and women. The study also shows that availability of a plant clinic in the area, which channeled clients to the women's cottage industry, was key in increasing the volume of business for the women's cottage industry, thus catalyzing changes in the livelihoods of the cottage industry members. Key recommendations are for the need for targeted rural development interventions that target women's business development resulting into improved social and economic standing. Targeted initiatives provide for 'safe spaces' that allow women to thrive personally (i.e. personal spaces foster improved self-confidence, allow for increased individual knowledge, allows voicing of opinions and personal autonomy). These personal improvements enable the women to have better relational outcomes at both the household and community level (i.e. via influencing community development, having greater control over household assets, being involved in household decision making, having an independent income and controlling their own time).

Deborah Olamide Olaosebikan, Steven Michael Cole and Bela Teeken, International Institute of Tropical Agriculture (IITA)

#### **The growing importance of cassava cultivation and processing to livelihood security in Nigeria: A life history analysis**

Objective: This study examines the perception of smallholder cassava farmer-processors in rural Nigeria on the importance cassava plays in generating opportunities for increasing their livelihood security. Methodology: A life history interview guide was administered to 32 women and their spouses, in Osun and Imo States, Nigeria. The data were analyzed using an inductive content analysis approach. Result: Cassava cultivation and processing has and continues to be a primary livelihood activity for women, men, and youth from a range of backgrounds in rural Nigeria. Cassava-based livelihoods generate higher employment and revenue opportunities to mainly indigene women processors while also enabling migrants to adapt and integrate into rural communities, provide an alternate option for adults to be self-reliant before and after retirement, and help youth studying to raise income to achieve their educational aspirations. The wellbeing status of cassava farmers-processors has improved over the past ten years. Improved wellbeing is associated with combining cassava cultivation and processing with several other livelihood activities. While the cultivation and processing of cassava has created opportunities for women, men and youth to generate food and cash, male youth in Osun State mentioned low productivity as a major constraint to increasing their wellbeing through cassava cultivation. Young and adult women mentioned that cassava processing is both labour-intensive and time-consuming. Implications: Life history findings broaden the abounding opportunities within cassava-based livelihood to cater for specific needs and prioritizing focus to young

males and women for easier access to improved cassava varieties and labor and time-saving processing technologies.

Christina Ruano-Chamorro, James Cook University, Australia

#### **Advancing gender equality in coral reef socio-ecological systems**

Coral reef degradation is an impending crisis for the millions of people who depend on coral reefs for their livelihoods, food security and wellbeing. Here, we seek to understand current practice and opportunities, and more broadly, to provide an evidence base for future efforts to advance gender equality alongside resilient livelihoods in coral reef dependent communities and fisheries more broadly. We review peer-reviewed and grey literature on livelihood interventions and gender equality in Fiji, Solomon Islands, Madagascar, Philippines and Tanzania. Drawing on CARE's Gender Equality Framework, we synthesize how gender equality is and can be pursued across four key pathways that impact livelihoods in coral reef systems: 1) alternative or improved livelihood initiatives; 2) initiatives that build adaptive capacity; 3) conservation initiatives to conserve biodiversity and 4) resource management to ensure sustainability. We find that overall, gender and sex-disaggregated research is growing. However, key knowledge and practice gaps remain. Across the five focus countries, we found some examples of gender transformative approaches, but most were gender accommodative. Better understanding of gender dynamics through place-specific studies, and trialling and assessing transformative approaches in coral reef and fisheries settings will be key to address gaps between theory and practice. To this end, we summarize successful practices and processes from related systems, and highlight key gender transformative tools, resources and opportunities to advance gender equality in coral reef socio-ecological systems.

### **Fri 1.2 *What Will it Take to Transform Power Relations in Urban and Peri-Urban Food Systems?***

*Going forward, the One CGIAR recognises agriculture as not just rural, but as potentially viable and necessary in urban and peri-urban (UPU) spaces. An initial three-year initiative aims to innovate UPU food systems that allow sustainable production, improved healthy diets, environmental and human health, equity in urban food markets and governance. Strengthening, institutionalizing and transforming largely informal UPU agrifood systems across the Global South will gain from more robust policy dialogue on factors that are critical to determining inclusive urban food networks. CGIAR's Water, Land and Ecosystems Research Program and RUAF Global Partnership argue that a focus on gender and inclusivity are key to enabling truly transformative reconfigurations of power relations in cities and UPU food systems. Unfortunately, the complexity of these issues is largely neglected in urban food policy, practice and research.*

Organizer: Arunima Hakhu, International Water Management Institute (IWMI)

Moderators: Jess Halliday, RUAF Global Partnership on Sustainable Urban Agriculture and Food Systems, and Deepa Joshi, IWMI

Tuyen Huynh, CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), James Garrett, The Alliance of Bioversity International and CIAT

#### **Urban spaces and cities: Inclusive or unequal and exclusionary?**

Ruth Mendum, Pennsylvania State University, USA

#### **What approaches, perspectives, policies might allow more transformative food systems in predominantly unequal urban and peri-urban contexts?**

Laine Young, Wilfred Laurier University, Samuel Ikua, Mazingira Institute, Joy Carey, RUAF Global Partnership on Sustainable Urban Agriculture and Food Systems,

#### **Making the case for a gender lens in the Milan Urban Food Policy Pact (experiences from Nairobi)**

Hajnalka Petrics and Kostas Stamoulis, FAO

#### **Gender aspects of urban food security and nutrition in food environments**

Laine Young, Wilfred Laurier University, Canada

#### **From Gender to Feminist Approaches in urban and peri-urban food systems**

### **Fri 1.3 *Gender-intentional Breeding Approaches***

Moderator: Alessandra Galiè, International Livestock Research Institute (ILRI)

Eva Salve Tino Bacud, Universitat Bonn, Germany

#### **Understanding farmers' trait preferences with an intersectional lens: Evidence in Bangladesh and India**

In breeding, trait preferences are often mixed. Men and women may prefer different traits but may also prefer similar traits and differ only in ranking. These contradicting results render difficulties in setting breeding priorities. When are preferences the same and when are they different? This requires analysis through an intersectional lens. The study's overarching research question is, Do gender and other intersectionalities matter on farmers' trait preferences? To answer this, the study clusters and characterizes producer groups based on intersectional

identities and marginalization experiences using sequential multivariate analysis: Principal Component Analysis (PCA) and Cluster Analysis (CA). It utilizes cross-sectional data in Bangladesh and India. The study focuses on the intersection of gender, age, caste, class or wealth, education, and marital status to shape marginalization in terms of time use, risk exposure, and access to assets, markets, and information. Thereafter, it understands how they overlap and influence trait preferences within and across clusters. Multiplicative regression analysis is done to also capture intersectionality and check results' robustness from clustering. Among expected results are similar trait preferences between men, women, and both exist within the same cluster. Significant differences may be observed when comparing men, women, and both between clusters. Similarities in their preferred traits could imply that men can be as marginalized as women because marginalizations can be activated when gender overlaps with discriminating factors like low-caste, low-class, and low education. This study elucidates intersectionality applications in breeding and exemplifies how intersectionality can be captured in quantitative analysis.

Jummai O. Yila and Almamy Sylla, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

#### **Varietal Choice and Trait Preferences of Sorghum and Pearl Millet Value Chain Actors in Mali: A Case for Gender Responsive and Demand Driven Breeding Decision**

Identifying and understanding the diversity of users of crop improvement products, and defining the traits choice of customers is necessary to address the limitation in developing crop varieties that are gender-responsive and demand-driven. In response to this limitation, the study assessed the varietal and traits choices of sorghum and pearl millet value chain actors and examine the socio-economic determinants of their varietal choices. This approach elicits the understanding, characterization of the various actors, the socioeconomic factors that interact to influence male and female actors' decisions in varietal selection, which is often unaddressed in most participatory approaches. Primary data were collected using a questionnaire administered to 612 respondents in the production, marketing, processing, and consumption nodes of the sorghum and pearl millet value chains. The data were analyzed using descriptive statistics, a multinomial logit regression model, and system dynamics modeling. The result revealed marked difference in the trait preferences of male and female actors in the producer node, whereas the preferences of actors in the marketer, processor, and consumer nodes were similar. At the producer node, female preferences tended toward food and grain quality traits while the males' preferences leaned more towards productivity and biotic stress resistance traits. Varietal trait preferences seem to be influenced by the resources and responsibilities male and female sorghum and pearl millet chain actors have with which they engage in production. The findings study provide the evidence needed to support gender equity in prioritizing the diverse and most important trait preferences of sorghum and pearl millet value chain actors in product development pipelines.

Jill E. Cairns, International Maize and Wheat Improvement Centre (CIMMYT)

#### **Revisiting strategies to incorporate gender intentionality into maize breeding in southern Africa**

There is strong focus on identifying women's trait preferences to enable gender-intentional product development. In the case of maize, breeding programs are ready to incorporate specific traits to increase gender intentionality but lack guidance on gender-specific traits. Previous research has focussed on elucidating gender-specific traits in on-farm trials used for product evaluation. However, this approach does not reflect the real-life choices made by farmers when choosing seed. An alternative, inductive approach would be to understand if there are differences in maize varieties currently grown by male and female plot managers within male and female households, learning from how the system currently works. A survey of maize varieties and agronomic practices used was conducted in Zimbabwe. By using logistic regression, we found gender-disaggregated preferences in variety use at the plot manager level but not at the household level. Varieties unlikely to be grown by female plot managers were previously chosen by the female plot managers as the best varieties in surveys around on-farm trials. These results highlight the mismatch between experimental results and real-life decisions. Intercropping was found to be significant predictors of the gender of both the plot manager and household head. Although further qualitative studies are ongoing, our results suggest that a trait-specific approach is not the only avenue towards increasing gender intentionality in maize breeding in southern Africa. A quick win towards increasing gender intentionality in maize breeding in southern Africa would be to screen advanced stages of breeding pipeline under agronomic management practices used by female farmers.

\* Rachel Voss, CIMMYT

#### **Gender inclusivity through maize breeding: A review of the issues and options for future engagement**

With the prioritization of social inclusion in agricultural development, donors and research centers have shown growing interest in gender-intentional varietal development and delivery. Breeding maize varieties that respond to gender-based differences in trait preferences now represents a central objective of maize R&D in the CGIAR and elsewhere. Drawing on wider literature on gender and crop breeding, we take stock of what is known about gender-based differences in trait preferences and the approaches to understanding them, with the aim of shedding light on options for future engagement on gender and maize breeding. While recent research on farmers'

preferences for varieties of crops such as cassava, potato, and legumes has yielded insights into distinct preferences, we find that evidence of gendered preferences for maize varieties remains inconclusive. Ultimately, we identify several obstacles to achieving impact through maize breeding, including a lack of clarity around gender-differentiated preferences, methodological and conceptual challenges in understanding women and men's seed preferences and purchasing behaviors, and logistical concerns associated with breeding for gender-relevant traits. A wider evidence base is needed to inform gender-intentional breeding, incorporating broader analysis of demand that considers farmer agency and aspirations, intrahousehold decision-making, and seed access dynamics. We close by identifying key knowledge gaps and charting an agenda for future gender-intentional breeding.

#### Fri 1.4 *Gender Equality, Women's Empowerment, and Food Systems: A framework and review of evidence to inform the United Nations Food Systems Summit (UNFSS)*

*Achieving gender equality and women's empowerment in food systems can result in greater food security and better nutrition, and in more just, resilient, and sustainable food systems for all. This session aims to present and discuss a framework for gender and food systems analysis and a review of evidence of the pathways to gender equitable food systems transformation, recently published in a UNFSS brief (<https://dx.doi.org/10.48565/scfss2021-1q69>). The paper adapts the food systems framework to conduct a scoping review of the evidence and identify areas where evidence is strong, and where gaps remain. A discussant will comment on the key recommendations for further research emerging from the paper, and then a panel of practitioners will have a moderated discussion around the implications of these findings and recommendations from their perspective. The session will conclude with an open Q&A with the audience.*

Organizer: Jemimah Njuki and Hazel Malapit, International Food Policy Research Institute (IFPRI)

Moderator: Esther Njuguna-Mungai, International Livestock Research Institute (ILRI)

Jemimah Njuki, IFPRI

##### **Presentation of the framework and the review of evidence**

Discussant: Afsana Kaosar, BRAC University, Bangladesh

Panel discussion

- Susan Kaaria, FAO (Gender Lead UNFSS Action Track 2)
- Karl Deering, CARE
- Reema Nanavaty, SEWA (Gender Lead UNFSS Action Track 4)
- Corinna Hawkes, University of London (Nutritious Foods Working Group Lead for UNFSS Action Track 4)

#### Fri 2.1 *The Power of Moving Visuals and Art in Research and Outreach for Empowerment*

Moderator/organisers: Margreet van der Burg, Wageningen University, Netherlands

Nozomi Kawarazuka, International Potato Center (CIP)

##### **Participatory video without assistance of professionals: a powerful tool for engaging with the marginalized**

Annejet Brandsma, Independent filmmaker/photographer, Netherlands

##### **Documentary 'Women of the Land'**

To nuance the image regarding farm women. The current collective image needs another, more modern addition. I want to do this through film and photography. The images of life in the (Dutch) countryside that have shaped our collective memory seem to come from a period when people still wore traditional costumes and transported buckets of milk by bicycle. Documentaries about the Dutch countryside are often about farmers fighting against government or other large institutions. Women are never the main theme, are never questioned about their lives and roles within the farm. I think that art, or image, is a very strong tool to start the conversation, because it's an accessible medium. Everybody can watch a film or look at photographs. I would like to present the documentary and discuss the image regarding women of the land.

Eza Doortmont, University of Manchester, UK

##### **Paiba Salma | Women's Gold**

This research was carried out with the shea butter processing women in Tampe-Kukuo, on the outskirts of Tamale in Northern Ghana. Shea butter is a product traditionally made by women. The demand for this product has grown drastically over the past decades, and this has changed the production and production space of the commodity. Women's Gold is a film and accompanying dissertation, exploring ideas of safe space, personhood and gaining more than the material independence connected to shea. Through the exploration of this research, I have tried to understand and represent what the women in the shea industry gain in terms of social connections and prosperity. This research also explores the fact that the benefits gained by the women are jeopardized by changing gender dynamics, connected to a rapidly changing value chain. I applied a feminist approach as my methodology in



filmmaking to seek a different perspective, while using a sensory way of filming to evoke ideas of embodied experiences and emphasize the sensuous knowledge of the daily lives of women. This project has also resulted in the creation of spaces to discuss and understand gender within the shea commodity chain.

### Fri 2.2 *Cultivating Diversity for Integrating a Gender+ Perspective: The Gender-SMART CIRAD Community of Practice*

*The European project Gender-Smart, coordinated by Cirad, a French agricultural research and international cooperation organization, aims to promote gender equality in agricultural research centers as working places, but also to better integrate gender in research projects, in order to enhance their relevance and impact. In 2020, an internal community of practices (CoP) was set up to provide training resources, share experiences and document the diversity of pathways through which gender+ is integrated in Cirad projects. It is based on in-depth reflexive case studies, with the objective of mainstreaming gender+ approaches, from below, starting from our practices. The CoP is co-chaired by a woman and a man and, as of today, is composed of 36 women and 20 men, including scientists (agronomy and social sciences) as well as support staff for project design and management.*

Moderator/organisers: Emmanuelle Bouquet, CIRAD, France

Presenters of introduction and case-studies:

Emmanuelle Bouquet, Jean-Michel Sourisseau, and Nathalie Cialdella, CIRAD

### Fri 2.3 *Book-based session: Advancing Gender Equality through Agricultural and Environmental Research*

*This session presents key messages a recent CGIAR-wide gender publication involving all research programs and Centers, entitled: Advancing gender equality through agricultural and environmental research – past, present and future (Pyburn, R. and A. Eerdewijk, eds. 2021). This book sets an agenda on how agricultural and environmental research and development can advance gender equality in its own right. The framing intentionally flips the direction of common questions on gender-based constraints in agriculture and natural resource domains. For example, rather than looking at how gender analysis can increase productivity or improve uptake of technologies, authors look at how agricultural research and technology development contribute to progress towards gender equality and greater women's empowerment. Authors challenge boundaries in thinking about gender in agriculture to stimulate creative and new perspectives or insights to both contribute to the CGIAR system-wide gender research agenda as well as the broader gender/agriculture research and practice domain internationally. Nine thematic chapters cover the following domains: breeding research, seed system development, value chains, nutrition-sensitive agriculture, natural resource governance, climate adaptation and mitigation, the feminization of agriculture, assessing women's empowerment, and gender transformative approaches. This session will focus on what emerged through using a gender equality lens in re-examining CGIAR gender research within these themes, and what this means for the next generation of gender research. After a rapid-fire presentation from chapter co-authors, the discussion will focus on where to go next with gender research in order to advance gender equality.*

Moderator/organisers: Rhiannon Pyburn, KIT, Royal Tropical Institute, Netherlands

Rhiannon Pyburn, KIT Royal Tropical Institute

#### **Chapter 1: CGIAR research through an equality and empowerment lens**

Vivian Polar, International Potato Center (CIP)

#### **Chapter 2: Examining choice to advance gender equality in breeding research**

Eileen Bogweh Nchanji, Alliance of Bioversity International and CIAT

#### **Chapter 3: Moving beyond reaching women in seed systems development**

Gaudiose Mujawamariya, AfricaRice

#### **Chapter 4: Promise and contradiction: value chain participation and women's empowerment**

Padmaja Ravula, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

#### **Chapter 5: Nutrition-sensitive agriculture for gender equality**

Deepa Joshi, International Water Management Institute (IWMI)

#### **Chapter 6: A gender–natural resources tango: Water, land, and forest research**

Sophia Huyer, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), ILRI and AICCRA

#### **Chapter 7: From vulnerability to agency in climate adaptation and mitigation**

Katrina Kosec, International Food Policy Research Institute (IFPRI) and Johns Hopkins University

#### **Chapter 8: From the “feminization of agriculture” to gender equality**

Ana Maria Paez-Valencia, World Agroforestry (ICRAF)

#### **Chapter 9: Assessing women's empowerment in agricultural research**

Cynthia McDougall, WorldFish

#### **Chapter 10: Toward structural change: gender transformative approaches**

### Fri 2.4 *Shifting Thinking: Toward gender-responsive agricultural sector policy measures for recovery and resilience during and after pandemics*

*COVID-19 has dealt a serious blow to national economies and the agriculture and food systems have not been spared. The pandemic has exposed the fragility of food systems and vulnerability of low-income populations and women in developing countries. The containment measures by governments restricting movement have disrupted food supply chains, access to staple food markets, farm inputs, and agriculture-based livelihoods. Women have also been affected by increases in gender-based violence, increased care work and, challenges in accessing health services. A collaborative study by the CGIAR GENDER Platform and FAO on gender responsiveness of COVID-19 related policy responses in agriculture in Senegal, Zambia, and Ethiopia suggest that women, especially female-headed households are more vulnerable to the shocks related to the COVID-19 pandemic. Gender-neutral policy responses have increased the vulnerability of women's agricultural-based livelihoods. However, in some cases, fiscal policy measures such as tax reduction and debt relief protected businesses of women entrepreneurs in the agricultural sector. The panel session will bring together researchers to share and compare the findings of the study in the three countries. The discussion will focus on what gender-neutral policy responses mean for women's agricultural-based livelihoods; what it means to intentionally position gender at the core of policymaking to achieve impactful results in the lives and livelihoods of women during and after pandemic; and inform participants on how policymaking and program design can borrow from experiences of the three countries and evade the errors that were made.*

Moderator/organisers: Linda Etale, International Rice Research Institute (IRRI)

Gaudiose Mujawamariya, AfricaRice

#### **A gendered outlook on the COVID19 effects and response policies and measures in the agricultural sector in Senegal**

Maru Lubungu, Indaba Agricultural Policy Research Institute (IAPRI), Zambia

#### **Gendered policy response measures of COVID-19 in Zambia**

Mastewal Yami Degefa- Independent Consultant

#### **Examining gender-responsiveness of Covid-19 policy measures in Ethiopia**

### Fri 3.0 **Closing Plenary: A forward-looking agenda for gender in agriculture and food systems research**

*The final conference plenary will close the week of eventful sessions and offer directions for future research on gender in agriculture and food systems. The best poster award will be announced, and the winning 3-minute poster pitch will be played. An esteemed panel of representatives from different sectors, including academia and research, NGOs, donors, CGIAR, and the UN Food System Summit, will then contemplate a future research agenda. Panelists Bettina Bock, Professor Rural Inclusion, Wageningen University; Rolando Cerda, Researcher and Professor, CATIE; Noline de Haan, Director CGIAR GENDER Platform; Jemimah Njuki, Africa Director International Food Policy Research Institute (IFPRI) and UNFSS Custodian for Gender Equality and Women's Empowerment; Philip Otieno, Executive Director, Advocates for Social Change Kenya (ADSOCK); and Vicki Wilde, Senior Program Officer, Bill and Melinda Gates Foundation will leave participants with plenty of food for thought for impactful research that will keep them busy until the next gender in food systems conference!*

Moderator/organisers: Seema Arora Jonsson, The Swedish University of Agricultural Sciences

Panelists:

- Jemimah Njuki, International Food Policy Research Institute (IFPRI)
- Rolando Cerda, Tropical Agricultural Research and Higher Education Center (CATIE), Costa Rica
- Vicki Wilde, Bill and Melinda Gates Foundation
- Phil Otieno, Advocates for Social Change Kenya (ADSOCK)
- Bettina Bock, Wageningen University and Research, Netherlands
- Nicolien de Haan, CGIAR GENDER Platform