



INTERACTIVE LEARNING MODULES

# Synergies and tradeoffs in food, land and water systems

## LIST OF CONTRIBUTORS\*



### Ana Maria Paez Valencia, Social Scientist, Gender, ICRAF

Ana Maria supports ICRAF's Gender unit in developing an operational framework for effectively integrating gender and inclusion into ICRAF's work and in the coordination of the gender cross-cutting theme in the CGIAR Research Program on Forests, Trees and Agroforestry. Before joining ICRAF she worked with the Statistics Division and the Gender, Equity and Rural Employment Division at FAO, supporting the capacity development strategy for Member Countries on production and use of gender-disaggregated agricultural data and addressing gender and social equality in agricultural and food security programmes. She has nine years of work experience on the design, planning, execution, and M&E of development projects, particularly on indicators design with a gender lens.



### Anne Rietveld, Associate Expert, Alliance of Bioversity International and CIAT

Anne is a rural sociology and gender scientist, she conducts and manages social research related to farming in Africa. Key-themes are gender, farming systems, sustainability, scaling of agricultural innovations, banana, resilience, agro-ecological intensification, value chains and youth. She is also the gender focal point for CRP-RTB, contributing to making the research within this program more responsive to the different needs, constraints and opportunities of men and women.



### Avinandan Taron, Researcher - Investment and Institutional Analyst for RRR Business Development, IWMI

Avinandan works in the Economics Research Group at the International Water Management Institute (IWMI). He works on issues related to the promotion of circular economy in the rural-urban interface, valuation of ecosystem services, and sustainable business models towards water and agriculture. He completed his Ph.D. in economics from Institute for Social and Economic Change, India, and joined IWMI as a postdoctoral fellow. During this engagement, he worked on valuing the environmental and social impacts of different business opportunities leading to the circular economy. He taught at the Tata Institute of Social Sciences, India, graduate courses on environmental economics, environmental justice, and statistics. Before rejoining IWMI, he worked as a socioeconomist at the Centre for Agriculture and Bioscience International (CABI), UK, leading projects across south and southeast Asia.

Expertise: circular economy and sustainable business model analysis, environmental and resource economics.



### Carl Timler, Lecturer & Researcher, Wageningen University & Research

Carl is a South African national, however has been in the Netherlands since 2002. He has a Masters Degree in Organic Agriculture and a PhD from Wageningen University & Research. He is a lecturer and researcher at the Farming Systems Ecology group at the same university. His primary research interests include smallholder farming systems analysis, whole-farm bio-economic modelling, sustainable and ecological intensification, and farm(er) diversity. His experience on these topics lies mostly in Eastern and Southern Africa.



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### Chris Dickens, Principal Researcher, International Water Management Institute (IWMI)

Dr. Chris Dickens is Principal Researcher at IWMI based in Sri Lanka. He is an aquatic ecologist and has worked on the management of rivers, lakes and wetlands especially in Africa, and has pioneered various approaches to resource management, written monitoring methods and programs, and written policy and regulations for countries across Africa, that deal with managing of aquatic ecosystems.



### Cory Whitney, Associate Scientist, University of Bonn

Cory is a researcher at the University of Bonn. He uses collaborative research and holistic analysis approaches to describe systems and model decision impact pathways. Cory works with diverse groups including researchers, food activists, small-scale farmers and indigenous communities to address issues of direct relevance and offer new lenses through which to view the development process. His work is related to human ecology, ethnobotany and agrobiodiversity.



### Dharani Dhar Burra, Principal Data Scientist, VARDA AG

Dr. Dharani Dhar Burra is the principal data scientist with VARDA AG. In his previous roles, he worked as Agri-Food systems Data Scientist with the United Nations Global Pulse Lab in Jakarta, Indonesia and the CGIAR Platform for Big Data in Agriculture at the International Center for Tropical Agriculture (CIAT) Cali/Colombia and Hanoi/Vietnam. At VARDA AG, his role is to leverage private sector data, in combination with earth observation to develop monitoring tools and impact assessment approaches that will contribute to sustainable crop production, ecosystem and environmental health. His interests and expertise lie at the intersection of sustainable development, Big Data and Agri-Food systems.



### Eike Luedeling, Head of Department of Horticultural Sciences, University of Bonn

Eike Luedeling worked at the World Agroforestry Centre in Nairobi, Kenya for 8 years, and at the Center for Development Research (ZEF) in Bonn for 4 years. He is now leading the Horticultural Sciences group within the Institute of Crop Sciences and Resource Conservation at the University of Bonn, Germany.



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### **Ermias Betemariam, Land Health Scientist-Soils, ICRAF**

Dr. Ermias Betemariam is a land health scientist working with Center for International Forestry Research (CIFOR) and the World Agroforestry (ICRAF). His research area include soil health, agroforestry, landscape restoration, spatial sciences, and decision analysis to understand land health constraints and targeting interventions to sustain ecosystem services. He is a member of the Science-Policy Interface of the UNCCD in which, he promotes dialogue between scientists and policy makers on desertification, land degradation and drought



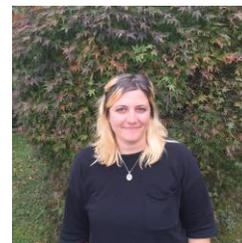
### **Fabrice DeClerck, Senior Scientist, Alliance of Bioversity International and CIAT / EAT**

Fabrice holds a joint appointment with Bioversity International and the EAT Foundation. He leads innovative and synthetic food systems research using systems-based approaches to set clear science targets for healthy and sustainable foods systems. Using global targets, he works closely with multiple networks to drive uncommon collaborations between disciplines (agriculture, environment, health) and domains (science, business, policy) for food systems transformations. He holds a PhD in geography and ecology from the University of California, Davis, USA



### **Genowefa Blundo-Canto, Scientist, CIRAD**

Genowefa Blundo-Canto is a researcher based at the French Agricultural Research Center for International Development (Cirad). Previously based at Bioversity International as a research fellow and the International Centre for Tropical Agriculture (CIAT) as a post-doc in impact assessment. A development economist, her work focuses on impact evaluation of agricultural research for development (AR4D) interventions with a focus on mixed methods, systemic approaches and navigating complexity at multiple scales. Thematically, she focuses on the links between interventions enhancing the use of agricultural biodiversity and their multidimensional impacts, with a special interest in food and nutrition security and social equity.



### **Haley Zaremba, Researcher, Alliance of Bioversity International and CIAT**

Haley Zaremba works with the Gender Team at the Alliance of Bioversity International and CIAT. Previously she has conducted research about conservation and patrimonialization of Indigenous agricultural systems.



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### **Hannah van Zanten, Associate Professor at the Farming Systems Ecology group, Wageningen University & Research**

Dr. Hannah van Zanten is the project leader of the circular food systems project. She is Associate Professor at the Wageningen University Farming Systems Ecology group. It is her ambition to unravel how circular food systems can contribute to producing healthy foods for a growing population within the carrying capacity of the Earth.



### **Heather Zornetzer, Sustainable diets research consultant, Alliance of Bioversity International and CIAT**

Heather supports this project in the co-design of the learning modules and as co-editor of content and formatting for the learning materials. She also supports the Alliance of Bioversity International-CIAT as a sustainable diets research consultant and is the Coordinator of the Innovative Food System Solutions (IFSS) portal initiative that launched in March of 2021. Prior to working with the Alliance, Heather was a consultant on research projects at the intersection of rural community development and health system strengthening in the Americas and Africa. From 2008-2016 she directed the eHealth Program for the NGO the Sustainable Sciences Institute based out of Nicaragua, leading public-private sector collaborations across the LAC region to design, implement, and evaluate innovative low-cost ICT tools for improving health outcomes. Heather has a MS in International Agricultural Development from the University of California, Davis (2007) and a MPH from the University of California, Berkeley (2009).



### **Iliana Monterroso, Scientist, CIFOR**

Iliana Monterroso is Scientist with the Equity, Gender, Justice & Tenure team at the Center for International Forestry Research. Coordinator of Gender and Social Inclusion Research. Iliana has a BSc in Biology and an MSc and PhD in Environmental Sciences. Her research focuses on gender, tenure, collective rights, environmental governance and socio-environmental conflicts predominantly in Latin America.



### **Jeroen Groot, Associate professor, Farming Systems Ecology Group, Wageningen University & Research**

Jeroen Groot specializes in farming systems analysis, model-based landscape planning and design, and participatory modelling and gaming. He holds a PhD in Agronomy and MSc in grassland science, animal physiology and tropical animal husbandry.

Currently, Dr. Groot has a coordinating role in integrated farming systems analysis addressing multi-scale issues of productivity, natural resource management, human nutrition and gender equity for CGIAR Research Programs. Project sites are located in Asia (e.g. Nepal, Bangladesh), Africa (e.g., Ghana, Tanzania, Ethiopia, Malawi) and Latin America (e.g., Ecuador, Uruguay, Mexico).



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### **Jessica Fanzo, Bloomberg Distinguished Associate Professor of Ethics, Global Food & Agriculture, Johns Hopkins Berman Institute of Bioethics**

Jessica Fanzo is the Bloomberg Distinguished Professor of Global Food Policy and Ethics at the Berman Institute of Bioethics, the Bloomberg School of Public Health, and the Nitze School of Advanced International Studies (SAIS) at the Johns Hopkins University in the USA. She also serves as the Director of Hopkins' Global Food Policy and Ethics Program, and as Director of Food & Nutrition Security at the JHU Alliance for a Healthier World. Before coming to Hopkins, she has also held positions at Columbia University, the Earth Institute, Food and Agriculture Organization of the United Nations, the World Food Programme, Bioversity International, and the Millennium Development Goal Centre at the World Agroforestry Center in Kenya. She was the first laureate of the Carasso Foundation's Sustainable Diets Prize in 2012 for her research on sustainable food and diets for long-term human health.



### **Joshua Wafula, Research Associate, World Agroforestry (ICRAF)**

Joshua is a Decision Analyst with diverse experience in research and development. He has worked with Topimage Limited, a below-the-line advertising agency, as a Trade Development Representative and he currently works with the International Center for Research in Agroforestry (ICRAF) as a Research Associate. He has supported decisions for different organizations including the Intergovernmental Authority on Development (IGAD) in its program on biodiversity management. He holds a B.Sc. degree in Microbiology from Kenyatta University, and he is currently pursuing an MBA degree in Management Information Systems (MIS) at the same university. His current work focuses on scientific advice and foresight in complex systems, where he strives to learn from interventions targeting livelihoods and soil health.



### **Kuldeep K. Lal, Director, ICAR-National Bureau of Fish Genetic Resource, Lucknow**

Dr Kuldeep K Lal is Director of ICAR-National Bureau of Fish Genetic Resource, Lucknow, India. His research interest include molecular marker development and their application in conservation genetics and aquatic genetic resource management.



### **Lisa Biber-Freudenberger, Junior Professor & LANUSYNCON Research Group Leader, Center for Development Research, Bonn University**

Lisa Biber-Freudenberger currently works at the Center for Development Research, University of Bonn. She does research in Ecology, Biogeography and Geostatistics. Her current project is "At the Science Policy Interfaces: Land Use, Synergies, and Conflicts within the framework of the 2030 Agenda" (LANUSYNCON).



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### Lulseged Tamene, Scientist, Alliance of Bioversity International and CIAT

Lulseged Tamene is a Scientist at the International Center for Tropical Agriculture (CIAT), based at the Chitedze Agricultural Research Station, Malawi.



### Markus Ihalainen, Senior Research and Engagement Officer, CIFOR

Markus Ihalainen is a senior research officer with the Center for International Forestry Research, based in Dakar, Senegal. His current work focuses on examining gender equity in various forest- and tree crop value chains across Sub-Saharan Africa. He is also interested in the gender dynamics of rural migration, intra-household labor allocation and forest landscape restoration, as well as developing and applying more intersectional approaches to forestry research. He holds a Master's degree in Development Studies from the University in Uppsala.



### Marlène Elias, Gender Lead, Alliance of Bioversity International and CIAT

Marlene is the Gender Lead at the Alliance of Bioversity International and CIAT, and the Gender Research Coordinator for the CGIAR Research Program on Forests, Trees and Agroforestry. She is also the leader of the Alliances Module of the CGIAR GENDER Platform. Her research focuses on on gendered dimensions of forest management and restoration, local ecological knowledge(s), and forest/agri-food value chains, predominantly in West Africa and South and Central Asia. Before joining the Alliance, Marlène conducted research on gender, forest-based livelihoods, and tree resource management in Latin America and Africa. Among other positions, she has worked in UNESCO's Division for Gender Equality and as a Fellow in the Department of Anthropology of Université Laval in Canada.



### Matthew Peter McCartney, Sustainable Water Infrastructure and Ecosystems Research Group Leader, International Water Management Institute

Matthew McCartney co-leads the WLE Research Theme on Variability, Risk, and Competing Uses and is Research Group Leader for Sustainable Infrastructure and Ecosystems at the International Water Management Institute (IWMI). Matthew's experience stems from participation in a wide range of research and applied projects, often as part of a multi-disciplinary team. He is experienced in application of hydrological methods and the calibration and use of computer models, as well as planning, designing, managing and coordinating research studies. He is particularly interested in the co-dependencies of human-made water resource infrastructure and natural infrastructure and how the two should be designed and managed together to enhance livelihoods and sustainability.



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### **Mirja Michalscheck, Researcher & Project Manager, WUR, Öko-Institut e.v., University of Basel**

Dr. Mirja Michalscheck has completed her PhD in Farming Systems Research at Wageningen University & Research. For five years, she worked with the Research for Development Project Africa RISING in Northern Ghana, Zambia and Ethiopia. She used whole-farm modelling in combination with social science approaches to investigate options for sustainable intensification among smallholder farm systems. Being passionate about both, sustainable social and natural resource management, Mirja now

works as a Researcher at the Öko-Institut in Germany, as a Systemic Coach and Trainer and as a Project Manager at the University of Basel.



### **Nadia Bergamini, Associate Scientist, Alliance of Bioversity International and CIAT**

Nadia Bergamini is an Associate scientist at the Alliance of Bioversity International and CIAT who works on participatory and field research into sustainable production landscape management and socio-ecological resilience of agro-ecosystems to adapt to climate change.



### **Namukolo Covic, Research Coordinator, IFPRI Addis Ababa**

Namukolo Covic (PhD) is a Registered Nutritionist with the Health Professions Council of South Africa (HPCSA). She is a Senior Research Coordinator at the International Food Policy Research Institute (IFPRI) for the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH). She is based in Addis Ababa, Ethiopia where her work includes promoting the use of evidence by African Union and Ethiopian Government efforts that address food security and nutrition. With a dual background in agriculture and nutrition, her expertise straddles the interface of policy, dynamics of agriculture and

food systems and related interventions and how research could inform the intended impacts on nutrition, health and sustainability outcomes for Low-Middle-Income-Countries (LMICs) with special focus on Africa. She is a capacity strengthening expert with notable strength on bringing together different stakeholder groups on common goals. She is a member of the African Academy of Sciences Steering Committee on Food and Nutrition Security and the current president of the African Nutrition Society.



### **Natalia Estrada Carmona, Associate Scientist, Alliance of Bioversity International and CIAT**

Dr. Natalia Estrada-Carmona is an Associate Scientist with The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT). She co-led the flagship on “Enhancing sustainability across agricultural systems” of the CGIAR research program on Water, Land, and Ecosystems (WLE). Her research focuses on estimating agrobiodiversity's contribution to multifunctional and sustainable farms and landscapes. She believes that agriculture can play a pivotal role in achieving sustainability goals, but

this potential can be untapped only through multidisciplinary and systems research. Natalia has contributed to projects in Latin America and the Caribbean (Costa Rica, Cuba, and Colombia), Africa (Zambia and Burkina Faso), and Asia (Viet Nam). She has a Ph.D. in natural resources management from the University of Idaho, US, and CATIE. She holds an MSc in environmental socioeconomics from CATIE, Costa Rica.



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### Nathaniel Matthews, CEO, The Global Resilience Partnership

Nathaniel Matthews is Chief Executive Officer at the Global Resilience Partnership, a group of over 60 organisations joining forces to surface and scale innovation, share knowledge, influence policy and advance thinking on resilience.

Nate previously worked in leadership roles with the CGIAR, UNEP, the International WaterCentre, NGOs and in the private sector. He has experience overseeing the implementation of hundreds of resilience and adaptation projects and programs in partnership with governments, NGOs and the private sector across more than 30 countries. This dovetails with extensive policy engagement from local to global scales. Nate's expertise has been recognized through contributions to various global networks, boards and committees including as a Lead Author in The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), an Obama Foundation Mentor, a Munich Re Risk Award Judge and as part of the leadership team of the Ocean, Risk and Resilience Action Alliance. He has a PhD in Geography from King's College London and has published over 65 research articles and two books on climate change, agriculture, water management and ecosystems.



### Pablo Titonell, Principal Research Scientist, CONICET-INTA

Dr. Pablo Titonell is Principal Research Scientist at Argentina's National Council for Science and Technology ([CONICET](#)) with a seat at the Instituto Nacional de Tecnología Agropecuaria ([INTA](#)), in San Carlos de Bariloche, Argentina. He also holds a part-time WWF-endowed Chair Professorship on [Resilient Landscapes](#) at the Groningen Institute of Evolutionary Life Sciences in The Netherlands. Pablo Titonell has been chair Professor of the group Farming Systems Ecology of Wageningen University, in The Netherlands, and attached to the Department of Tropical Production Systems of Cirad,

France. He has participated in a diversity of research and development projects around the world on design, resilience and adaptation of farming systems, with a focus on social-ecological processes at the agriculture-nature interphase.



### Pay Drechsel, Senior Fellow and Research Quality Advisor, International Water Management Institute (IWMI)

Pay Drechsel is co-leader of the Sustaining Rural-Urban Linkages Research Flagship of WLE. He has 30 years of experience working as environmental scientist in projects aiming at the safe recovery of resources from human waste, integrated natural resources management and sustainable agricultural production in developing countries. Over the past 20 years, Pay has coordinated several multi-disciplinary projects, mostly on urban and peri-urban agriculture, solid and liquid waste management and related

environmental and health impact mitigation in the agriculture-sanitation interface. He has authored or co-authored over 300 publications, and received the global IWA Water & Development Award for Research in 2015. Pay holds a PhD in environmental sciences from the University of Bayreuth, Germany.



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### **Roos de Adelhart Toorop, Post-doctoral Researcher, Wageningen University & Research**

Roos de Adelhart Toorop is post-doctoral researcher at the Farming Systems Ecology group - Wageningen University & Research, The Netherlands. She looks at ways to sustainably redesign farming systems in both Asia as Europe. She is interested in farmers' objectives and constraints and based on this she models how changes in farm management influence livelihoods. Point of departure is the cohesion between systems-components soil, crops, animals, manure and the household.



### **Roseline Remans, Senior Scientist, Multifunctional Landscapes Team, Alliance of Bioversity International and CIAT**

Roseline Remans is a bio-engineer and senior scientist with the Multifunctional Landscapes Team of the Alliance. Her research focuses on biodiversity in food systems for healthier diets, better livelihoods and environmental sustainability. Her approach is cross-sectoral and has contributed to public and private sector in-field applications, policies as well as cross-disciplinary publications. Remans previously worked as a Marie Curie & Earth Institute fellow and associate research scientist at Columbia University based in New York (2008-2013) and Addis Ababa (2013 -2016). She has a PhD in Biosystems engineering from KULeuven in Belgium with work in Cuba, Mexico and Colombia. Currently, Remans is the co-lead of the flagship on Enhancing sustainability across agriculture systems of the CGIAR research program Water, Land and Ecosystems, of the Consortium for Improving Agricultural Livelihoods in Central Africa (CIALCA), and of the Agrobiodiversity Index.



### **Sabine Douchamps, Forage Based Crop-Livestock Systems Specialist, Alliance of Bioversity International and CIAT**

Sabine is a Senior Scientist - Asia coordinator, Tropical Forages Program. Coordinating the Tropical Forages Program in South East Asia, leading the development and implementation of projects with a focus on forage-based crop-livestock-tree systems. Since November 2018, country leader of the CGIAR Research Program on Livestock in Vietnam. Since December 2020, country representative for the Alliance Bioversity-CIAT in Vietnam.



### **Sarah Jones, Associate Scientist, Alliance of Bioversity International - CIAT**

Dr Sarah Jones is an Associate Scientist at The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT), based in Montpellier, France. Her research focuses on understanding how to diversify farms and landscapes to produce nutritious food in an ecologically and socially sustainable way. Sarah leads the WLE Sustainable Foods through diversity-based practices project (2019-21) through which the team are conducting global meta-analyses and modelling to quantify the impact of diversified farming on biodiversity, yields, and farm profitability. Alongside this, Sarah co-leads the Alliance Agroecology Transitions Nexus, which focuses on how to implement and scale agroecology for more sustainable food systems. She contributes to the Flipping the Coin (2021) and Agrobiodiversity Index (2017-present) projects, where she collates, creates and analyzes spatial data on agrobiodiversity to understand how to use and conserve it for more sustainable food systems. Sarah is also a researcher on the FOLU Food, Agriculture, Biodiversity, Land-use and Energy (FABLE) initiative (2017-present) coordinating work on quantifying progress towards global biodiversity targets.



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### **Silvia Araujo de Lima, Research Assistant, Alliance of Bioversity International and CIAT**

Silvia Araujo de Lima provides project support to the Multifunctional Landscapes' team at the Alliance of Bioversity International and CIAT. She currently deals with projects websites administration and carries out translations and editing of project documents (protocols, internal and external communication material, and administrative texts). She also worked as RTB Program Management Officer of Bioversity liaising with key stakeholders and monitoring project schedules, publications, capacity development deliverables and annual reporting; and also provided administrative and logistical support organizing international events and workshops around the world, preparing and following-up agreements in the framework of multi-stakeholder cooperation and development projects (Cocoa of Excellence, Musanet, Cogent, BRAPI, Sustainable Foods, ABDI).



### **Stella D. Juventia, PhD Candidate, Wageningen University & Research**

Stella Dimitri Juventia (MSc Organic Agriculture) is a PhD candidate at the Farming Systems Ecology group at Wageningen University & Research, working on agroecological complex adaptive systems. Her current research focus is on producing actionable knowledge on designing crop diversification strategies – in particular strip intercropping – in the Netherlands by connecting experimental field observations, a model-assisted design framework and farmers' perspective.



### **Steven Cole, Senior Scientist, Gender Specialist, IITA**

Steven Michael Cole is a Senior Scientist and Gender Research Coordinator for the International Institute of Tropical Agriculture. He obtained his PhD in Biological Anthropology from the University of Arizona. He also holds a MSc degree in Agricultural and Resource Economics and a BSc in Health and Nutrition. His research employs both quantitative and qualitative methods to better understand the social and gender dynamics in agricultural contexts in low-income countries. He has extensive experience designing and piloting transformative approaches to overcome gender inequalities in agricultural development outcomes. His latest research integrates gender and other social science perspectives in biophysical research, including in research that aims to achieve gender-responsive breeding and seed system outcomes and more inclusive value chains.



### **Viviana Ceccarelli, Research Fellow, Alliance of Bioversity International and CIAT**

Viviana Ceccarelli is a Research Fellow at the Alliance of Bioversity International - CIAT in the Regional Office of Lima. She holds a MSc degree in Plant Sciences from Wageningen University and a BSc in Agricultural Sciences from University of Pisa. She is interested in species distribution modelling and other spatial analysis to support adaptation to climate change of agricultural systems and conservation and restoration of forests in Latin America and Africa.



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### **Wei Zhang, Senior Research Fellow, Environment and Production Technology Division (EPTD), IFPRI**

Wei Zhang leads the research program on ecosystem services and sustainable land management under EPTD's Natural Resource Management (NRM) theme. She conducts policy-relevant research on the intersection between agriculture, development, and nature. Wei's research interest includes valuing and modeling ecosystem services in relation to land use and management practices, managing landscape-based ecosystem services (e.g., natural pest regulation) for sustainable agriculture, biodiversity, and livelihoods, understanding the socio-economic, behavioral, and institutional factors in ecosystem services and natural resource management and common-pool resource governance, and using behavioral experiments (cooperative games) for research and social learning impact. She has extensive experience leading and implementing multidisciplinary research projects in Africa, south Asia, Eastern and Southeastern Asia.



### **Wuletawu Abera, Scientist, Alliance of Bioversity International and CIAT**

Dr Wuletawu Abera is a scientist with The Alliance of Bioversity International and CIAT. He works on understanding biophysical processes (hydrology, soil erosion, ecology, climate change) to optimize ecosystem services (agricultural productivity, water resources availability, soil erosion reduction, soil organic carbon sequestration, etc.) through input optimization (irrigation and fertilizer), land management (land restoration, climate smart practices), and digital tool development. He is also interested in and working on machine learning and Big Data analytics to tackle socio-ecological complex environmental and agricultural problems. He is working in various projects in Ethiopia and across Africa. Wuletawu obtained his PhD in Environmental Engineering, with special focus on hydrological modelling, from Trento University in 2016.



### **Xin Zhang, Associate Professor, University of Maryland Center for Environmental Science**

Xin Zhang's research takes transdisciplinary and data-driven approaches to understand the complex socio-economic and ecological dynamics involved in nutrient cycles and agriculture production, and consequently to inform decision-making by stakeholders in pursuit of sustainability. Collaborating closely with economists, modelers, and field experimentalists worldwide, Xin has published papers in interdisciplinary journals with high impact (e.g., Nature) and has received research grants from multiple institutions, including a prestigious CAREER award from the National Science Foundation.



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### **Yodit Kebede, Post-doctoral Researcher, IRD / The Alliance of Bioversity International and CIAT**

Yodit Kebede holds a Ph.D in landscape ecology and an MSc in Soil and Water Conservation from Wageningen University, The Netherlands and an MSc in agricultural engineering from VetAgroSup, France. She has work experiences in agroecology, natural pest control and soil and water management. Yodit works from the field to landscape scale and at both the scientific and policy level. She is currently working as post-doctoral researcher for IRD (French national Research Institute for Development), researching on the scientific and political perceptions of agroecology, particularly in the African context. Prior to this, she worked for UN-FAO agroecology unit. In her PhD research she analysed the socio-ecological processes that have shaped the landscapes in the region of Hawassa (Ethiopia) to understand some of the ecosystem services that agriculture is providing, particularly pest control.



### **Yusuf Karimjee, Research Associate, World Agroforestry (ICRAF)**

Yusuf is a young scholar with multidisciplinary interests ranging from Development Economics, Decision Analysis (DA), sustainable agriculture, climate change, soil and land health, agro-ecology, landscape restoration, and much more. He holds a BSc in Microbiology from Kenyatta University, and an MSc in Agricultural and Resource Economics from the University of Tokyo. He is currently a Research Associate with ICRAF's Land Health Decision unit, where he works as a risk analyst.



### **Yvonne Tamba, Research Assistant, Decision Analysis, World Agroforestry (ICRAF)**

Yvonne Tamba is a research assistant with ICRAF's Land Health Decisions Unit. She is part of the decisions team in Kenya that offers quantitative decision support to decision makers. Her work revolves around estimation of uncertainties, construction of probabilistic and participatory models and the calculation of value of information of uncertain variables.