CLARE ALLYSON NARROD

Joint Institute for Food Safety and Applied Nutrition University of Maryland College Park, MD 20742 cnarrod@umd.edu 9820 Kensington Parkway Kensington MD 20895 301 962-0227 cansam@aol.com

EDUCATION

University of Pennsylvania

Philadelphia. PA

Ph.D., Energy Management and Environmental Policy

1997 1991

M.S., International Development and Appropriate

1991

Technology

Wheaton College BA Anthropology Norton Mass.

Profile: Thirty years' experience answering policy questions using quantitative and qualitative socioeconomic and risk assessment modeling techniques to address food safety and agricultural health hazards to improve health and nutrition both domestically and abroad. Researched numerous food safety and agriculture health topics aimed at helping low- and middle- and high-income countries to meet the U.N. Sustainable Development goals of 2030. Over 20 years' experience training professionals and researchers in risk analysis techniques to support regulatory decisions. Over 12 years of experience conducting monitoring and evaluation of the impact of capacity building efforts aimed at improving food safety, health, and nutrition. Committed to creating mechanisms for the public and private sector to share data to improve food safety, health, and nutritional outcomes. Five years' experience reviewing analysis supporting regulation.

WORK EXPERIENCE

Joint Institute for Food Safety and Applied Nutrition, University of Maryland College Park, MD Director of the Food Safety Risk Analysis and Monitoring and Evaluation Programs. 1/2012-present Role: I am responsible for promoting and expanding the food safety risk analysis training program. I build partnerships and secure funding from public and private sector stakeholders to financially support the participation of professionals from lower- and middle-income countries (LMIC) in training. I oversee the design, implementation, and management of a monitoring and evaluation (M&E) program that measures the impact of all JIFSAN food safety training and have provided guidance to national and international donors interested in measuring the impact of their own food safety programs. I lead several research projects focused on improving food safety aimed at improving health and nutritional outcomes in informal markets and data sharing activities. I serve on scientific groups and expert panels.

International Food Policy Research Institute

Washington, DC

Senior Research Fellow, Food and Water Safety Program Lead

8/2005-12/2011

Role: Developed the Food and Water Safety Research Program with goals aimed at 1) understanding the cost of compliance of increased food safety requirements and private standards on the poor, 2) evaluating the socio-economic implications of foodborne, plant, and animal disease, the cost-benefit and cost-effectiveness of various food safety and animal health risk reduction measures, and 3) understanding institutional mechanisms that have been successful in improving smallholder's market access. I was responsible for obtaining funds to support research programs and managed relationships with over 20 partner organizations and donors. I oversaw all the research work which included mentoring and managing senior and junior nationals in study countries. I engaged with Ministries of Health and Livestock to get project buy-in. I developed knowledge products including research reports and interim project briefs. I kept donors informed of project progress, presenting results to donors, country Ministries, International Organizations, and at academic forums.

United States Department of Agriculture (USDA)

Washington, DC

Economist in the Office of Risk Assessment and Cost-Benefit Analysis (ORACBA), 9/2000–7/2005 Office of the Chief Economist (OCE)

Role: Reviewed risk assessments and cost-benefit/effectiveness analyses of proposed and final agriculture rules for Departmental clearance. Provided guidance to USDA Agencies to meet regulatory compliance regarding animal diseases, plant diseases and food safety concerns. Consulted regularly with administrators within the Food Safety Inspection Service and the Animal and Plant Health Inspection Service regarding workplans. Evaluated regulatory analyses in support of rulemaking to ensure analyses had no errors. Conducted rapid economic analyses, prepared questions, and answers regarding USDA positions on various sanitary and phytosanitary issues and provided succinct briefings to the Chief Economist to aid the Secretary in decision-making and support testimony at Congressional hearings. On leave to FAO 2001-2003. Detailed to Office of Information and Regulatory Affairs, Office of Management and Budget, June-August 2005, where I reviewed regulatory analyses from across the government.

Food and Agricultural Organization, United Nations

Rome, Italy

Natural Resource Economist in the Animal Production and Health Division 4/2001–6/2003 **Role:** Led projects between International Agencies and National Institutes that focused on the impact of the livestock industrialization process on smallholders and how external factors such as environmental, animal health, and food safety impacted the profitability of these producers. Project manager on a DFID-EU funded four-country study that focused on the impact of the livestock industrialization process on smallholders. Managed projects and provided technical assistance with National Institutes who were

establishing pilot studies to integrate intensive livestock production with crop production. Collaborated with National Institutes in low- and middle-income countries in designing household surveys, conducting economic and environmental impact analyses, and writing reports. Contributed to livestock and environmental projects focused on ways to integrate livestock and crop production activities to reduce negative environmental impacts associated with extensive livestock production.

American Association for the Advancement of Science Risk Fellowship

Washington DC 9/1999-8/2000

Risk Analysts in ORACBA, OCE.USDA

Role: Participated in reviews of risk assessments and cost-benefit/effectiveness analyses of proposed and final agriculture rules for Agency clearance. Consulted with USDA professionals on aspects of risk assessment and policy. Analyzed FSIS and APHIS data on interceptions of meat and plant products being imported to the U.S. to determine if any countries were having continual problems.

Risk Analyst for the Epidemiology and Risk Assessment Division

9/1998-8/1999

Office of Public Health, Food Safety Inspection Service, USDA

Role: Risk Analyst on the E. coli O157:H7 Farm to Table Risk Assessment. Managed the slaughterhouse segment of the model and provided technical documentation for public comment. Conducted cost-effectiveness analysis of various decontamination technologies in slaughterhouses. Wrote briefings for senior policy makers on the possible establishment of a single food safety agency.

PEER-REVIEWED PUBLICATIONS

B. Amin, K. Talukdar, S. Sraboni, R. Islam, H. Mahmud, D. Berendes, C. Narrod, S. Parveen, A. Islam, "Prevalence and antimicrobial resistance of major foodborne pathogens isolated from pangas and tilapia fish sold in retail markets of Dhaka city, Bangladesh," International Journal of Food Microbiology.

2023 H. Jin, L. Adewoye, E. Dupouy, J. Cheng Er, F. Geraghty, W. Hallman, M. Healy, Y. Jiang, E. Leon-Lim, C. Narrod, and A. Philpott, "Principles and practices of effective food safety risk communication – Introducing Asia-Pacific Economic Cooperation food safety risk communication framework, European Journal of Nutrition & Food Safety, volume 15 (Issue 8), pp 11-27.

- 2021 C. Narrod, X. Dou, T. Chfadi, M. Miller, "Participant Characteristics and Learning Outcomes: Lessons from International Food Safety Capacity Building." Food Policy, (March 2021).
- 2021 R. van Ree, D. Ballerda, M. Berin, L. Beuf, A. Chang, S. Choudhuri, G. Gadermaier, P. Guevera, K. Hoffmann-Sommergruber, E. Islamovic, L. Koski, J. Kough, G. Ladics, S. Mcclain, K. Mckillop, S. Mitchell-Ryan, C. Narrod, L. Mouriès, S. Pettit, L. Poulsen, A. Silvanovich, P. Song, S. Teuber, C. Bowman, "The COMPARE database: a public resource for allergen identification, adapted for continuous improvement," Frontiers in Allergy. 2:700533.
- 2020 M. Naggayi, A. Kaaya, J. Kauffman and C. Narrod, "Enhancing Nutritional Benefits and Reducing Mycotoxin Contamination of Maize Through Nixtamalization," Journal of Biological Sciences, 20 (4) pp153-162.
- 2020 C. Woteki, L. Antonine, M. Arriola, M. Bottazzi, J. Caswell, C. Narrod, J. Quick, J. Sharfstain, M. Taussig, R. Wigenge, C. Wirtz, and P. Yadev, "Stronger Food and Drug Regulatory Systems Abroad," Institute of Medicine, National Academy of Science. The National Academies Press, Washington DC.
- 2019 G. Mahuku, H. Nzioki, C. Mutegi, F. Kanampiu, C. Narrod, and D. Makumbi, "Pre-harvest management is a critical practice for minimizing aflatoxin contamination of maize," Food Control, Volume 96, 219-226.
- 2016 E. Lambertini, R. Buchanan, C. Narrod, R. Ford, R. Baker, A. Pradhan, "Quantitative Assessment of Human and Pet Exposure to Salmonella Associated with Dry Pet Foods," International Journal of Food Microbiology, Volume 216, (January), pp 79-90.
- 2015 E. Lambertini, R. Buchanan, C. Narrod, A. Pradhan, "Transmission of Bacterial Zoonotic Pathogens between Pets and Humans: The Role of Pet Food, Critical Reviews," Food Science and Nutrition, 56 (3), 364-418.
- 2015 H. de Groote, C. Narrod, S. Kimenju, C. Bett, R. Scott, M. Tiongco, and S. Gitonga, "Measuring Rural Consumers' Willingness to Pay for Quality Labels Using Experimental Auctions: The Case of Aflatoxin-free Maize in Kenya," Agricultural Economics, 47(1):33-45.
- 2013 C. Narrod, M. Tiongco, G. Mahuku, H. de Groote, J. Hellin, C. Bett, H. Nzioki, S. Collins, S. Guantai, F. Waliyar, J. Ndjeunga, D. Bamory, K. Ondie, D. Lamissa, P. Masuoka, and F. Wu. 2013. No chance for Aflatoxins. In Food Losses (03.04.2013). Rural21: The International Journal for Rural Development.
- 2012. C. Narrod, J Zinsstag, M. Tiongco, "A One Health Framework for Estimating the Economic Costs of Zoonotic Diseases on Society," EcoHealth, 9 (2), 150-162.
- 2012 J. Riviere, T. Bollyky, C. Brown, M. Brumfield, R. Buchanan, J. Chen, J. Chen, M. Doyle, J. Henney, C. Morel, C. Narrod, A. Stergachis, L. Wagstrom, P Yadav, Ensuring Safe Foods and Medical Products Through Stronger Regulatory Systems Abroad. ed J. Riviere and G. Buckley, Committee on Strengthening Core Elements of Regulatory Systems in Developing Countries, Institute of Medicine, National Academy of Science. National Academies Press, Washington DC.
- 2011 C. Narrod, M. Tiongco, and R. Scott, "Current and Predicted Trends in Production, Consumption and Trade in Live Animals and their Products, Special Issue on 'The Spread of Pathogens through International Trade." Revue Scientifique et Technique Office Inter. des Epizooties 30(1):31-49.
- 2011 J. Okello, C. Narrod, D. Roy, "Export Standards, Market Institutions and Smallholder Farmer Exclusion from Fresh Export Vegetable High Value Chains: Experiences from Ethiopia, Kenya and Zambia," Journal of Agricultural Science, vol 3 #4.
- 2009 C. Narrod, D. Roy, J. Okello, B. Avendaño, A. Thorat, "Public-Private Partnerships and Collective Action in High Value Fruit and Vegetable Supply Chains," Food Policy, 34(1), pp 8-15.

- 2009. P. Birthal, A. Jha, M. Tiongco, and C. Narrod. Farm-Level Impacts of Vertical Coordination of the Food Supply Chain: Evidence from Contract Farming of Milk in India. The Indian Journal of Agricultural Economics, Vol 64(3). Pp 481-496.
- 2008 C. Delgado, C. Narrod, and M. Tiongco, "Determinants and Implications of the Growing Scale of Livestock Farms in Four Fast-Growing Developing Countries," (with G. Camargo Barros, A. Catelo, A. Costales, R. Mehta, V. Naranong, N. Poapongsakorn, V. Sharma, and S. de Zen), Published as IFPRI Research Monograph/Book (formerly IFPRI Research Report) IFPRI Research Report # 157 (June).
- 2006 C. Delgado, P. McKenzie, C. de Haan, A. McLeod, A. Riviere-Cinnamond, and C. Narrod, "Enhancing Control of Highly Pathogenic Avian Influenza in Developing Countries through Compensation: Issues and Good Practice." World Bank, Agriculture and Rural Development.
- 2005 S. Malcolm, C. Narrod, T. Roberts, and M. Ollinger, "Evaluating the Economic Effectiveness of Pathogen Reduction Technologies in Cattle Slaughter Plants," Agribusiness: An International Journal, 20 (1), pp. 109-124.
- 2004 E. Ebel, W. Schlosser, J. Kause, K. Orloski, T. Roberts, C. Narrod, S. Malcolm, M. Coleman, M. Powell, "Draft Risk Assessment of the Public Health Impact of Escherichia coli O157:H7 in Ground Beef," Journal of Food Protection 67, 2004, pp 1824 –1828.
- 2000 C. Narrod and K. Fuglie, "Private-Sector Investment in Livestock Breeding," Agribusiness: An International Journal, 16 (4), pp. 457-470.

BOOK CHAPTERS and INSTITUTIONAL REPORTS

- 2019 C. Narrod, X. Dou, M. Miller, C. Wychgram, "Public Private Partnerships in Food Safety International Capacity Building," Chapter 14 in Food Safety Economics-Incentives for a Safer Food Supply, (Robert ed.) Springer.
- 2013 B. Avendaño, C. Narrod, M. Tiongco, "The Role of Public-Private Partnerships on the Access of Smallholder Producers of Mexican Cantaloupe to Fresh Produce Export Markets," Chapter 4 in Improving Import Food Safety, (W. Ellefson, L. Zach, and D. Sullivan eds.) Wiley & Sons. pp. 65-85.
- 2012 P. Trench, C. Narrod, D. Roy, and M. Tiongco, "Responding to Health Risks along the Value Chain," Chapter 11 in Reshaping Agriculture for Nutrition and Health, (Fan and Pandya-Lorch eds.) IFPRI, Washington, DC.
- 2012 M. Tiongco, C. Narrod, M. Kobayashi, R. Scott, J. Omiti, "Understanding Knowledge, Attitude, Perceptions, and Practices for HPAI Risks and Management Options among Kenyan Poultry Producers," in Health and the Future of Animal Agriculture, (D. Zilberman, J. Otte, D. Roland-Holst, and D. Pfeiffer eds.) Publisher Springer New York and The Food and Agriculture Organization of the United Nations, Rome, Italy. pp. 281-304.
- 2011 G. Gruère, C. Narrod, and L. Abbott, Agricultural, Food, and Water Nanotechnologies for the Poor: Opportunities, Constraints, and Role of the Consultative Group on International Agricultural Research, IFPRI Discussion Paper #01064.
- 2010 K. Rich and C. Narrod, The Role of Public—Private Partnerships in Promoting Smallholder Access to Livestock Markets in Developing Countries Methodology & Case Studies, IFPRI Disc. Paper 01001.
- 2010 C. Narrod, C. Delgado, and M. Tiongco. 2010. "Socio-Economic Implications of the Livestock Industrialization Process: How will Smallholders Fare," Chapter 14 in Livestock in a Changing Landscape, Volume 1: Drivers, Consequences and Responses, (H. Steinfeld, H. Mooney, F. Schneider, and L. Neville eds.) Island Press. Washington, DC. pp. 269-284.
- 2009 R. Mehta, C. Narrod, and M. Tiongco, Determinants of the Scaling up of Commercial Poultry Production in India. Research and Information System for Developing Countries Disc. Paper #146.
- 2009 J. Fonseca and C. Narrod, "Looking into the Future for Agriculture and AKST," Food Safety section in Chapter 5 in Agriculture at a Crossroads: Global Report. M. Rosegrant, M. Fernandez, A.

- Sinha, J. Alder, H. Ahammad, C. de Fraiture. (B. McIntyre, H. Herren, J. Wakhungu and R. Watson eds.) International Assessment of Agricultural Knowledge, Science and Technology for Development. Island Press, Washington DC. pp. 307-376.
- 2009 M. Tiongco, C. Narrod, and K. Bidwell, "Risk Analysis Integrating Livelihood and Economic Impacts of Wastewater Irrigation on Health," in Wastewater Irrigation in Low Income Countries: From Health Risk Assessment to Risk Mitigation, (Drechsel, et al, eds.) Earthscan, London. pp. 127-145.
- 2008 C. Narrod, D. Roy, B. Avendaño, and J. Okello, "Impact of International Food Safety Standards on Smallholders: Evidence from Three Cases," Chapter 17 in The Transformation of Agrifood Systems: Globalization, Supply Chains, and Smallholder Farmers, (E. McCullough, P. Pingali, and K. Stamoulis eds.) Earthscan Press, London. pp. 355-372.
- 2008 C. Narrod, C. Pray, and M. Tiongco, "Technology Transfer, Policies, and the Role of the Private Sector in the Global Poultry Revolution," IFPRI Discussion Paper #841. Washington, DC.
- 2008 P. Birthal, A. Jha, M. Tiongco, and C. Narrod, "Improving Farm-to-Market Linkages through Contract Farming: A Case Study of Smallholder Dairying in India," IFPRI Discussion Paper #814. Washington, DC.
- 2008 M. Catelo, C. Narrod, M. Tiongco, "Structural Changes in the Philippine Pig Industry and their Environmental Implications," IFPRI Discussion Paper #781. Washington, DC.
- 2007 C. Narrod, D. Roy, J. Okello, B. Avendaño, K. Rich. "The Role of Public-Private Partnerships and Collective Action in Ensuring Smallholder Participation in High Value Fruit and Vegetable Supply Chains," Collective Action and Property Rights (CAPRi) working papers 70, International Food Policy Research Institute, Washington DC.
- 2007 J. Okello, C. Narrod, and D. Roy, "Food Safety Requirements in African Green Bean Exports and their Impact on Small Farmers." IFPRI Discussion Paper DP #737, Washington DC.
- 2006 C de Haan, D Husni, C. Narrod, L Hagedoorn. L Ignacio, Vietnam Food safety and agricultural health action plan (English). Washington, D.C.: World Bank.
- 2004 C. Delgado, C. Narrod, and M. Tiongco, "Implications of the Scaling-Up of Livestock Production in a Group of Fast-Growing Developing Countries." in Livestock and Livelihoods: Challenges and Opportunities for Asia in the Emerging Market Environment (V. Ahuja ed.) National Development Dairy Board and Food and Agriculture Organization Press, Anand, India and Rome, Italy. pp. 95-131.
- 2003 J. Glauber and C. Narrod, "A Rational Regulatory Policy: The Case of Karnal Bunt." In Exotic Pests & Diseases: Biology and Economics for Biosecurity, (D. Sumner ed.) Iowa State University Press, Ames, Iowa, pp. 167-184.
- 2003 E. Ebel, W. Schlosser, K. Orloski, J. Kause, T. Roberts, C. Narrod, S. Malcolm, M. Coleman, and M. Powell, "A Risk Assessment of Escherichia Coli O157:H7 in Ground Beef." In Microbial Food Safety in Animal Agriculture: Current Topics, (M. Torrence and R. Isaacson eds.) Iowa State University Press, Ames. Pp 313-324.
- 2003 K. Wiebe, M. Soule, C. Narrod, and V. Breneman, "Resource Quality and Agricultural Productivity: A Multi-Country Comparison." In Land Quality, Agricultural Productivity and Food Security: Biophysical Processes and Economic Choices at Local, Global, and Regional Levels, (Wiebe, ed.) Edward Elgar, UK. pp. 147-165.
- 2002 C. Narrod, G.J. Carsjens, Somchai Chantsavang, D. Vadnjal, Ke Bingsheng, Zhao Xiaomin, Luo Qixiang, Li Guoxue. Integrated waste management in Wannian County, Jiangxi Province, Peoples Republic of China, FAO, Rome.
- 2001 J. Glauber and C. Narrod, "A Rational Risk Policy for Regulating Plant Diseases and Pests." AEI –Brookings Joint Center Paper Series on Regulatory Analysis 01-05. Washington, DC.

- 2001 D. Orden, C. Narrod and J. Glauber, "Least-Trade-Restrictive SPS Policies." In The Economics of Quarantine and the SPS Agreement, (K. Anderson, C. McRae and D. Wilson eds.) Centre for International Economic Studies and Agriculture, University of Adelaide, Australia. pp. 183-215.
- 2001 T. Roberts, C. Narrod, S. Malcolm, and M. Modarres, "An Interdisciplinary Approach to Developing a Probabilistic Risk Analysis Model." In Interdisciplinary Food Safety Research, (N. Hooker and E. Murano eds.) CRC Press, Boca Raton, Florida. pp. 1-24.
- 2000 R. Whiting, P. Coleman, C. Narrod, M. Powell, T. Roberts, and W. Schlosser, Risk Assessment in the Control of VTEC. In Verocytotoxigenic E. coli, (G. Duffy and P. Garvey, eds.) Food and Nutrition Press, Trumbull, Connecticut, pp. 337-351.
- 2000 K. Fuglie, C. Narrod, and C. Neumeyer, "Public and Private Investment in Animal Research." In Public-Private Collaboration in Agricultural Research: New Institutional Arrangements and Economic Implications, (K. Fuglie et.al eds.) Iowa State University Press, Ames, pp. 117-154.
- 1997 C. Narrod, "Potential Impact of Sanitary and Phytosanitary Barriers on Trade for the Americas." Inter-American Institute for Cooperation of Agriculture, Technical Series #106, Coronado, Costa Rica.
- 1995 C. Narrod and C. Pray, "Technology Transfer in the Poultry Industry: Factors Associated with Increased Production." In Animal Waste and the Land-Water Interface, (K. Steele ed.) CRC Press, Florida. pp. 523-532.

TRADE JOURNALS/BLOGS

- 2023 A. Stumpf, J. Scimeca, C., Karolenko, C. Narrod, W. Jones, "Sharing Data to Protect Public Health: The Why, the What, and the How," Food Safety Magazine. Oct/Nov Vol. 30
- 2023 A. Grover, G. Menon, C. Narrod, "Digital Transformation of Supply Chains to Meet Foreign Supplier Verification Program Requirements A move toward digitalizing supply chains may offer solutions to some of the challenges of FSVP compliance management, Food Safety Magazine. Aug/Sept Vol. 29.
- 2021 W. Jones, C. Narrod, A. Stumpf, "Building Safe Food Systems Starts with Partnerships," Agrilinks.
- 2021 C. Narrod, A. Stumpf, W. Jones, "A Public-Private Partnership to Promote Food Safety," Food Processing.
- 2021 C. Narrod, A. Stumpf, W. Jones, "Data Systems for Sustainable Solutions for Food Safety," Agrilinks.
- 2021 M. Badrul Amin and C. Narrod, 2021 "Improving Capacity in Bangladesh to Detect Fecal Pathogens in Aquaculture," Feed the Future Fisheries Innovation Laboratory, Success Story.
- 2015 J. Rushing, C. Narrod, M. Sudharshan, P. Chakravarty, J. Sproul, "Education and Training are Keys to Improving the Safety of Spice and Botanical Ingredients," Food Safety Magazine. August/September.
- 2013 C. Narrod, "No Chance for Aflatoxin," Rural 21.
- 2006. C. Narrod, T. Randolph, K. Rich, and C. Seré, "Finding Strategies that Work in Developing Countries: A One-Size-Fits-All Solution Won't Work," in Etwicklung & Landlicher Raum.

REFEREED PRESENTATIONS AND POSTERS (last 10 years)

- 2023 E. Owusu and C. Narrod, "Produce Safety Rule Trainings and Its Effect on Producer Capacity: The Case of the Training-the-Trainer Program in Latin America," American Agricultural Economic Association Meeting in Washington DC (July).
- 2023 E. Owusu, A. Arouna, and C. Narrod, "Is Personalized Better? Digital Advisory and Productivity Differentials in Rice Farming in Nigeria," American Agricultural Economic Association Meeting in Washington DC (July).

- 2022 C. Narrod and E. Owusu, "Ensuring Food Safety: Perspectives from the U.S. and Low- and Middle-Income Countries," American Agricultural Economic Association Meeting in California (July).
- 2022 C. Narrod, E. Owusu, X. Dou. "Monitoring and Evaluation of the Impact of International PSR Train-the-Trainer and Grower Trainings and Planned Behavioral Experiments," International Association for Food Protection, Pittsburgh (July).
- 2022 M Amin, M Hossain, S. Roy, S, Saha, M. Islam, Z. Mahmud, C. Narrod, S. Parveen, M. Islam. "Assessment of Fresh Fish in Retail Markets for Contamination with Major Fecal Pathogens and Antibiotic-Resistant Organisms." International Association for Food Protection, Pittsburgh (July).
- 2019 C. Narrod, X. Dou, M. Miller, T. Chfadi, D. Pahl, J. Beaulieu, American Agricultural Economic Association Meeting in Atlanta, Georgia (July).
- 2018 C. Narrod C. Wychgram, W. Zhao, "Evaluation of HACCP Capacity Building in the Caribbean." In selected session Targeting and Evaluating Investments in Food Safety in Low- and Middle- Income Countries, Agricultural and Applied Economics Annual Meetings, Washington DC (August).
- 2017 J. Beaulieu, D. Pahl, T. Chfadi, C. Narrod, C. Walsh, D. Martin, S. Micallef, "Determining Factors that Encourage Grower Adoption and Implementation of Good Agricultural Practices," Advancing Food Safety through Behavior Change hosted by Partnership for Food Safety Education, Washington, DC (January).
- 2017 C. Narrod, X. Dou, M. Miller, T. Chfadi, D. Pahl, and J. Beaulieu, "Measuring the Effectiveness of Good Agricultural Practices Training Through Maryland Extension Programs on Maryland Farmers," Northeastern Agricultural and Resource Economics Association Annual Meeting, Arlington, VA (June).
- 2016 C. Narrod and M. Miller, "Economic Incentives for Capacity Building in Food Safety," in session on Information and the Creation of Positive Economic Incentives for Food Safety Performance," International Association for Food Protection Annual Meeting, St Louis, Missouri (August).
- 2016 C. Narrod, M. Miller, & T. Chfadi, "Effectiveness of International Food Safety Train-The Trainer Programs in Good Agricultural and Aquacultural Practices: Evidence from Survey Instruments," Agricultural and Applied Economics Association, Boston, Massachusetts (August).
- 2015 D. Pahl, T. Chfadi, C. Narrod, C. Walsh, D. Martin, S. Micallef, "Evaluating the Effectiveness of Food Safety Trainings by Determining Factors that Influence Grower Adoption of Food Safety Certification Practices," International Association for Food Protection, Portland, Oregon (July).
- 2015 E. Lambertini, R. Buchanan, C. Narrod, A. Pradhan, "Modeling Foodborne Pathogen Transfer and Exposure in the Household Environment," International Association for Food Protection, Portland, Oregon (July).
- 2015 L. Matumba, C. Van Poucke, M. Sulyok, C. Narrod, S. De Saeger, "Is the Narrow Focus on Aflatoxins in Sub-Saharan Africa Plausible?" 37th Mycotoxin Workshop, Society for Mycotoxin Research, Bratislava, Slovakia (June).
- 2015 C. Narrod, M. Miller, T. Chfadi, "Building Capacity to Assure Food Safety in Low Income Countries: Progress Report on JIFSAN's Training Initiatives," in session on Food Safety as a Global Public Good: Recent Advances in Strengthening the Foundation for More Effective Food Safety Management Around the World, at the AAEA & WAEA Joint Annual Meeting Program, San Francisco, Ca (July).
- 2015 E. Lambertini, R. Buchanan, C. Narrod, A. Pradhan, "Frontiers in Quantitative Microbial Exposure and Risk Assessment for Salmonella Control: Applications to Managing Risk in the Dry Pet Food Production Chain," Society for Risk, Analysis Annual Meetings, Arlington, VA (December).

FUNDRAISING

Approximately \$18 million U.S. of teaching and research funding as a PI or Co-PI from Feed the Future Innovation Laboratory for Fisheries, Inter-American Institute for Cooperation in Agriculture, Nestle

Foundation, World Bank, Grocery Manufacturers Association, USDA/FSIS, USDA/NIFA, USDA/FDA, USDA/AFRI, Mars Incorporated, Malaysia-Ministry of Heath, Bill and Melinda Gates Foundation, DFID, CGIAR System-Wide Livestock Program, and CGIAR Science Council grant. Below are details of the grants while at University of Maryland and prior.

SERVICE ACTIVITIES

Reviewing Activities for Agencies and Foundations

- Lead panel reviewer USDA Agriculture Marketing Service (AMS) Specialty Crop Multi-State Program (SCMP) Grant Review (2019)
- Reviewer of USDA's Economic Research Service Food Safety Research Program five year (2019)
- Reviewer for concept note for the UK call Zoonoses & Emerging Livestock System: Reducing the Risk to Livestock and people – 17 million pounds of funding (DFID, 4 Research Councils, and NERC) (2013, 2014)
- Reviewer of proposals to the World Bank (2011, 2012); Report People, Pathogens, and our Planet, volume 2 The Economics of One Health 2012
- Reports for Pew Charitable Trust
- Numerous discussion papers for International Food Policy Research Institute
- Reports for FAO: State of the World Towards a Responsible Livestock Future 2009; FAO's Guidelines for the Preparation of Livestock Sector Reviews 2011; Milk human nutrition dairy products 2013

International Committees, Memberships, Panels, Working groups etc.

- 2023-2027- Joint FAO/WHO Expert Committee on Microbiological Risk Assessment (JEMRA).
- 2022-2023- Asia-Pacific Economic Cooperation (APEC) Probiotics Products Testing Expert Committee on Next-generation sequencing-based Microbial Testing for Probiotics Products: Guidelines Development and Laboratory Capacity Building.
- 2022 Working group on "Enhancing aflatoxin management in Ghana's maize and groundnuts;" led by Rose Omari, Science and Technology Policy Research Institute - Council for Scientific and Industrial Research; notified received Standard Trade Development funding 2024 for full project.
- 2021-present Food and Agriculture Organization, Scientific Advisory Committee of FAO's study
 on the Contribution of Livestock to Food Security, Sustainable Food Systems, Nutrition and
 Healthy Diets.
- 2021-2022 Lloyd's Register Foundation, Steering Committee. for Safety of Food: Evidence Context Project.
- 2020-2023 U.S, Academic representative to APEC Expert committee on Trade Facilitation through the Development of an APEC Food Safety Risk Communication Framework.
- 2020 -present- Academic rep. to APEC Food Safety Cooperation Forum Partnership Training Institute Network.
- 2019-2020 Appointed to the National Academy of Science on the Institute of Medicine's consensus committee on "Strengthening Food Safety Regulatory Systems in Developing Countries."
- 2017- 2021- Steering Committee for U.S. FDA's Produce International Partnership for Education and Outreach, and M&E working group lead.
- 2017-2020 Working group looking at Spillover effects with Standard Trade & Development Facility, WTO.
- 2016-present Steering committee of HESI COMPARE (The COMprehensive Protein Allergen REsource repository of protein sequences of known or putative allergens)
- 2016-present Working group of the Food Safety Risk Analysis Training Consortium for the Americas led by FAO, PAHO, and University of Minnesota, received STDF funding in 2024.
- 2014-2015 Working group on the Global Food Ethics Project at John Hopkins Berman Institute for Bioethics. Prepared paper Ethical Issues for Food Safety in Context of Global Food Security."

- 2014-2015 Expert Panel for a Global Regulatory Competency & Curricula Project with Regulatory Affairs Professionals Society.
- 2012-2015 Academic Co-Chair Technical Working group on Monitoring and Evaluation of the World Bank Global Food Safety Partnership.
- 2012-2015 Working group on the Risk Analysis Committee of the World Bank Global Food Safety Partnership.
- 2012-Member of Advisory Panel for Report People, Pathogens, and our Planet, Econ. of One Health.
- 2010-2012 Appointed to the National Academy of Science on the Institute of Medicine's consensus committee on "Strengthening Core Elements of Food Safety Regulatory Systems in Developing Countries."
- 2007-2010 Steering committee of the CGIAR System Wide-Livestock Commitee.

Corporate and Editorial Boards

- 2023 present Review Editor for Frontiers in Sustainable Food Systems-Agro-Food Safety
- 2023 present International Editorial Board of Vietnam Journal of Food Control.
- 2015-2021 Scientific Advisory Board; Institute for Food and Agric. Lit. at UC Davis, World Food Center.
- 2013-2019 Board of Directors, Center for Foodborne Illness, Research & Prevention.
- 2013-2015 International Editorial Board Member of the International Food Research Journal Malaysia.

Reviewer over the years on papers for following journals: Frontiers in Sustainable Food Systems, Food Policy, Food Control, International Food Research Journal, Journal of Development Studies, Chinese Economic Review, World Development, Journal of Rural Studies, Journal of Development Studies

Professional Memberships at various times: Agricultural & Applied Economics Association, International Association of Agricultural Economists, American Association for the Advancement of Science, Society for Risk Analysis, International Association for Food Protection, Northeastern Agricultural and Resource Economics Association

Country Project Experience: Bangladesh, Brazil, China, Costa Rica, Ethiopia, Ghana, India, Indonesia, Kenya, Mali, Mexico, Nigeria, the Philippines, Thailand, United States, Vietnam, Zambia

Country Teaching Experience: Bahamas, Bangladesh, China, Colombia, Egypt, Guyana, Hong Kong, Jamaica, Malaysia, United States, Vietnam, Zambia