

The East African Journal of Science, Technology and Innovation EAJSTI, presents to you a special issue from the exchange fellowship organized and coordinated by the Mississippi State University.

Mississippi State University (MSU) hosted a twelve-week scientific exchange fellowship from August 8th to November 3rd, 2023. The program was supported by the United States Department of Agriculture, Foreign Agricultural Service (USDA-FAS), in collaboration with the African Union (AU). The program premised on the knowledge that a key barrier to adoption of the AU Sanitary and Phytosanitary Measures (SPS) Policy Framework (2019-2024) was human capital knowledge, support, and leadership in implementation, particularly of regional and continental policy instruments at national level.

The goal of this fellowship was to harmonize SPS regulatory regimes across the eight Regional Economic Communities (RECs) of the AU- namely - ECCAS, ECOWAS, EAC, SADC, COMESA, AMU, CEN-SAD and IGAD and establish an African Continental Free Trade Area (AfCFTA) with safe cross-border trade of agricultural products among member countries of the AU-RECs. The program supported the AU-RECs to establish SPS regulatory regimes in the AfCFTA that are based on science, and standards established through international standard setting bodies (Codex Alimentarius Commission-CAC), International Plant Protection Convention (IPPC), and the World Organization for Animal Health (WOAH, formerly OIE). The purpose was to reduce unnecessary obstacles to trade with a direct impact on improving international trade, food security, and economic growth in African emerging economies.

The fellowship facilitated twenty-seven fellows from the AU (8), AU-RECs (8) and eleven (11) from eight AU member states namely Botswana, Mozambique, Nigeria, Rwanda, The Gambia, Tunisia, Uganda and Zambia, to travel to the US. The program utilized keynote speeches, panel discussions, field and industry visits covering various SPS-related topics in food safety, animal health, and plant health. The fellows attended the World Food Prize conference in Des Moines, Iowa, and worked closely with USDA and MSU faculty researchers, academicians, and industry practitioners to build and streamline efforts within the AU-RECs toward adoption of a unified African sanitary and phytosanitary framework. At MSU, eleven fellows worked with faculty mentors to develop research projects for implementation on return home. MSU faculty conducted reciprocal visits to the fellows' institutions and countries in Africa in May to July 2024. A series of workshops and other trainings were conducted in Africa (Botswana, The Gambia, Mozambique, Nigeria, Uganda and Zambia). Additionally, African SPS experts (Food Safety Associates Limited and Utility Services Limited) supported the project.

The Sanitary and Phytosanitary (SPS) Policy Framework for Africa (2019-2024) <https://au.int/en/documents/20191004/sanitary-and-phytosanitary-sps-policy-framework-africa> is a roadmap that was developed by AUC (in consultation with RECs, Member States and other strategic partners) to guide AU Member States to integrate and form a prosperous Africa. The framework outlines key strategic areas that need to be accomplished to facilitate intra-African agricultural and food trade. This includes Annex 7 on Sanitary and Phytosanitary (SPS) measures which guided the research projects developed by fellows hosted under the MSU scientific exchange program. The implementation of AU SPS Policy Framework is ongoing guided by the following SPS strategies developed by the AU: the Food Safety Strategy for Africa (2022-2036),

<http://repository.au-ibar.org/handle/123456789/1405> the Animal Health Strategy for Africa (2019-2035). <http://repository.au-ibar.org/handle/123456789/539> and the Plant Health Strategy for Africa (2022-2036) <https://auiapsc.org/wp-content/uploads/2024/07/PLANT-HEALTH-STRATEGY-FOR-AFRICA-ENGLISH-VERSION-1.pdf>

The African Continental Free Trade Area (AfCFTA) agreement of 2019 <https://au.int/en/treaties/agreement-establishing-african-continental-free-trade-area> is one of AU Agenda 2063 projects aimed at enhancing intra African trade, prosperity, poverty reduction and economic integration. The World Bank estimates that when implemented fully, AfCFTA would connect 1.3 billion people across 55 countries in Africa (with more than 250 million youth between 15-34) and create the largest free trade area in the world. Together, the gross domestic product (GDP) of Africa would total US\$3.4 trillion, a huge economic boost that would support 30 million and 68 million people to get out of extreme and moderate poverty, respectively. The implementation of the AfCFTA Annex 7 on Sanitary and Phytosanitary (SPS) Measures has advanced to establishing a program that outlines regulatory harmonization efforts, and strategic initiatives. This includes monitoring the performance of SPS systems across AU Member States by tracking the Comprehensive Africa Agriculture Development Program (CAADP) Biennial Review (BR) SPS Index. These efforts aim to enhance food safety, protect animal and plant health, and facilitate trade across Africa by reducing unnecessary SPS-related barriers.

The special issue creates awareness to the East African Journal of Science Technology and Innovation (EAJSTI) contributors and readership of major agricultural economic transformations in Africa in the form of the AU SPS Policy Framework (2019-2024) and the African Continental Free Trade Agreement (AfCFTA-2019), and highlights collaboration among academia, industry, and policymakers in government to co-create SPS related scientific knowledge. To accelerate AfCFTA, science, technology, and innovation and the EAJSTI in particular, will play a central role in generating the scientific knowledge needed to enhance food safety, and protect human animal and plant health. The special issue summarises the two AU transformative frameworks; the SPS Policy Framework for Africa (2019-2024) and the African Continental Free Trade Agreement (AfCFTA-2019), and a selection of primary research papers that fall within SPS major themes of food safety, human, animal and plant health.