Dysfunctional food systems are resulting in a high per capita prevalence of zoonotic and foodborne disease (much of it zoonotic) in sub-Saharan Africa, in particular in Eastern and Southern Africa (ESA). Combined, these factors at the interface of human, animal, plant and environmental health, pose a challenge for public health and impede development.

**CHALLENGE**

Threats to animal, human, plant and environmental health, many of which occur at the interface of these health domains, can be addressed by looking at food systems and ecosystems through an integrated One Health (OH) approach. The operational capacities of a wide array of public and private OH stakeholders will be strengthened in the design and implementation of state-of-the-art research and innovation (R&I) activities and OH policies. Combined with a social-ecological system (SES) framework that explicitly builds resilience into health and ecosystem management, the adaptive capacity of the SES actors will be strengthened to prevent and cope with emerging health and environmental risks.

**RATIONALE**

With their rapidly growing populations and unique biodiversity and ecosystems threatened by current global and local changes, ESA countries are in a very fragile environmental state. The expansion of the agricultural sector for food production is contributing to the transfer of diseases and affecting environmental health. This is compounded by low levels of sanitation, rapid urban expansion with extensive human-livestock-wildlife interaction, uncontrolled use of agri-chemicals and medicines, and weak regulation across the OH domains.

OH is a collaborative and multi-sectoral approach to achieve optimal health outcomes and recognise the interconnection between people, animals, plants and their shared environment. It addresses complex issues that require close collaboration across sectors, stakeholders and countries, to tackle global priority issues including emerging pathogens, zoonosis, foodborne illness, livestock associated antimicrobial resistance (AMR) and environmental contamination. These issues are aggravated by other agricultural challenges. Non-zoonotic livestock diseases reduce the productivity of livestock and lead to massive mortality, reducing income and nutrition security, and hampering the necessary transformation of the livestock sector towards higher sustainability and productivity. Plant pests directly impair human food production and, by reducing feed and fodder production for livestock, are another constraint to transforming agricultural and livestock production.

Institutions and frameworks that are linked to OH challenges need to overcome existing barriers such as governmental institutions and departments working in silos; health solutions not adapted to local contexts or adopted by final beneficiaries; and inadequate research infrastructure, funding and integration. Other barriers include professionals not trained to deal with complex, transdisciplinary issues; poor capacity building and awareness raising; and a widespread but neglected informal sector.
EXPECTED RESULTS

Impacts
Inclusive R&I ecosystem, facilitating rapid uptake, adaptation and adoption of solutions to OH issues, with the OH concept embedded across society in ESA.

Outcomes
- Increased salience of OH research and policies.
- Enhanced national and regional cross-sectoral collaboration between government entities with OH mandates and OH stakeholders across society.
- Educational and research institutes equipped to train the next generation workforce in tackling OH issues.
- Increased capacity of government and non-governmental stakeholders (research and education institutes, service providers and PPPs) to identify and deliver OH solutions to final beneficiaries.

Outputs
- Information on OH research and policies promoted.
- Capacity of government entities with OH mandates and OH stakeholders across society built in cross-sectoral collaboration around OH.
- Capacity of government entities built in the development of evidence-based OH strategies and policies.
- Local secondary, tertiary and vocational education institutes strengthened in providing OH courses for the next generation workforce.
- Capacity of research institutes built in training next generation OH researchers.
- Capacity of research institutes built in the identification, development, adoption and delivery of OH solutions.
- Capacity of service providers built in the adoption and delivery of OH solutions.
- OH related PPPs strengthened in the delivery of OH solutions and consultation on OH issues.

METHOD
Diverse local and central government institutions, research and educational institutes, public, private and non-profit sector service providers (i.e. professional service providers and grassroots organisations), public-private partnerships (PPPs) and final beneficiaries (e.g. farmers, value chain actors, consumers, students) are all involved in COHESA. With participatory and inclusive approaches, COHESA is piloting collaborative and innovative OH approaches as models for up- and out-scaling, and is promoting healthy environments.

COHESA is equipping countries with the ability to identify and assess OH threats, and to rapidly develop, adapt, adopt and deliver solutions.

COHESA is collaborating in partnership with various local organisations and will:
- Build OH capacity, assess the status quo of OH in the region and share information.
- Promote national and regional OH collaboration and governance.
- Build the future OH workforce.
- Deliver OH solutions for national OH priorities.

OH capacity building covers training, mentoring, information management and building skills in OH technologies and OH thinking. OH collaboration involves connecting activities relevant to OH, both nationally and between countries, ensuring the incorporation of relevant disciplines (ecology, socio-economics, development, gender), and supporting regional communication, learning and harmonisation.

PROGRAMME PRIORITIES
Access to digital literacy, knowledge and use of emerging technologies.
Links between R&I skills development and labour market.
Synergies in the R&I ecosystem (private sector, technology transfer, R&I uptake).
Local and indigenous knowledge.

SECTOR
One health

KEY WORDS
multi-stakeholder collaboration, capacity development, social-ecological system, research, policies, cross-sectoral collaboration