COFER: Creating a framework for developing effective nutrition and One Health interventions

Summary

Tackling problems in human and animal health often requires a multidisciplinary approach among scientific-health and environmentally related disciplines. The Swiss network made up of the Human Nutrition Laboratory, ETH Zurich; the Swiss Tropical and Public Health Institute, University of Basel; and the Institute for Information and Process Management, University of Applied Science St. Gallen, is uniquely placed to act as an incubator for research and education on nutrition and One Health with its partners in the Global South. By leveraging the competences of the different partners, synergies will be created and lead to joint research proposals, better-quality graduate courses and capacity strengthening.

One Health can be defined as the added value in terms of improved human and animal health or financial savings or environmental services resulting from a closer cooperation of both health sectors. In the face of the current hunger crisis in East Africa and the high prevalence of malnutrition, One Health is inextricably linked to nutrition of humans, including food security and livestock.

Together with the partners from the Global South – the Jigjiga University in Ethiopia, the School of Public Health, Jomo Kenyatta University of Agriculture and Technology in Kenya, and the Cayetano University in Peru – we have agreed upon four work packages:

1. Building capacity by modernizing academic courses on nutrition and public health at the Southern partner institutes. This will include: A) integration and adaptation of the existing One Health MOOC, B) workshops on dietary assessment and food composition analysis, C) generation of case studies, which can be included into regular lectures or in the above mentioned MOOC and which will be discussed on an online collaboration platform, and D) know-how exchange on the use of new visually oriented learning tools such as digital storytelling and/or pencasts that address also a broader non-academic audience (WP 1).

2. Developing a repertoire of tools for a mobile-based completion of dietary assessment surveys in partner countries as well as for an accurate and (semi-)automated analysis of survey data evaluation (WP 2).

3. Exploring mobile solutions for syndromic surveillance and response systems to accelerate the detection of emerging zoonoses in Latin America and East Africa, but also in Switzerland (WP 3).

4. Designing behavioral economic approaches to make interventions more effective and sustainable both at household (microeconomic) and environmental (macroeconomic) level (WP 4).
The four work packages will set the groundwork for novel interventions by providing the knowledge and research tools to detect nutrition and public health problems at an early stage and design interventions in a timely manner. Interventions aimed at improving the health and livelihood will be tailored to the targeted population groups and be made more effective and sustainable by integrating insights from behavioral economics. Grant proposals will be written to identify, test and assess potential interventions if possible in multi-country trials. Thus, our collaborative network will eventually transfer research findings into practice and foster both forward and reverse innovation between Swiss, African and Latin American partners from a broad range of expertise in nutrition, human and animal health, systems- and household-based interventions including water and sanitation, health service provision, and behavioral economics.