

Advancing integrated approaches to health through the new transdisciplinary CABI One Health resources

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We are delighted to announce the launch of three inter-related CABI One Health resources which aim to promote evidence-based One Health information through an online journal, a case study database and a knowledge bank.

One Health and CABI

Our collaboration with CABI (Centre for Agriculture and Biosciences International) began in the early 1990s in the Gambia when we were studying the gastrointestinal worms of cows, small ruminants and equids. We sent small containers of individual worms to the CABI helminthology unit in St Albans, UK for confirmation of their taxonomic identity. We then knew that CABI was a world renowned reference for insects, parasites and fungi.

Today, CABI provides a good example of a global scientific research partnership. 'CABI is a not-for-profit inter-governmental development and information organization focusing primarily on agricultural and environmental issues in the developing world, and the creation, curation and dissemination of scientific knowledge' (www.cabi.org accessed 4 April 2022). A globally broad-based membership of 49 member countries guides CABI on its mission and orientation. The development of CABI, founded in 1910, is impressive. Very early on, entomological research was integrated to jointly focus on plants, animals and humans. In addition, there is a strong focus on food security and agriculture. This makes CABI an ideal complement to the One Health approach (see below), which centres on the interdependence between the health of humans, other animals, plants and the environment.

In 2014, we were invited to develop a One Health textbook with CABI. *One Health: the Theory and Practice of Integrated Health Approaches* was published in 2015 (Zinsstag *et al.*, 2015) and the French translation followed from Quae Editions in 2020 (Zinsstag *et al.*, 2020a). The second edition was published by CABI in 2020 (Zinsstag *et al.*, 2020b) and a Mandarin translation is expected in 2022, in a collaboration with Hainan University.

The importance of a One Health approach

We attach great importance to a solid theoretical basis of One Health. Without this foundation, it is not possible to develop methods and test hypotheses. In-depth knowledge of the inescapably complex interactions and mutual dependencies between humans and their

socio-political systems, other animals, plants and their environments is imperative. We make no concessions to the excellence of the individual research disciplines involved in the study of these interactions, and indeed, we stress the essential value of subject-specific expertise in all disciplines. We also emphasize that in order to gain a deeper systemic knowledge of these interactions, we need sustainable collaborations and partnerships between human and veterinary medicine, social sciences and humanities, plant and environmental sciences, ecology, economics and many other relevant disciplines. The knowledge of socio-ecological systems is crucial but still not sufficient for a comprehensive One Health approach. We better understand how health is related to complex processes in socio-ecological systems, but we still know little about points of cross-system leverage or the benefits of cooperation between different sectors and disciplines. A One Health approach should demonstrate an *added value* of this closer cooperation between the academic disciplines, *which cannot be achieved without such cooperation*. The added value may be quantitative or qualitative. For example, it can be measured as better human, animal and plant health; financial savings; more resilient human and animal populations; or sustainable livelihoods, food systems, ecosystem functioning and services. For example, animal wellbeing, greater biodiversity, and clean water and air have value on their own, beyond utility to humans.

Improving animal welfare remains a permanent challenge in any effort and ethical aspiration of One Health (Zinsstag *et al.*, 2020c). Including the health of animals as co-creatures and the 'health' of the environment and ecosystems by sustaining their services such as clean air, clean water, nutritious and safe food, shelter and the right to health is the foundation of *our* human health and wellbeing. It opens up a post-anthropocentric ethical perspective (Ferdowsian, 2021), no longer putting only humans in the centre of our collective attention. This broader co-creational perspective has considerable potential to change natural resource management adaptation to climate change and approaches taken by the social sciences and humanities (Zinsstag *et al.*, 2020d).

One Health is transdisciplinary

Extensive knowledge about integrated approaches to health, such as One Health, exists outside the realm of academic disciplines as practical or local knowledge. In our many years of experience

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with One Health research, we have always connected with diverse stakeholders at a very early stage. We have variously involved public authorities, the affected citizen population, private actors and non-governmental organizations in participatory processes to understand local priorities and goals. In doing so, we often succeeded in combining both academic and practical knowledge. This then resulted in feasible solutions to social and environmental problems that we could not have devised or even imagined coming from a purely academic perspective. Such transdisciplinary co-production of transformational knowledge between academic and non-academic actors has become an integral part of the One Health approach. The CABI One Health resources profile the transdisciplinary approach, specifically through development of *One Health Cases* and the One Health Knowledge Bank (see below). At the same time, as editors of the *CABI One Health* journal, we will focus on useful examples of transdisciplinary research involving academic and non-academic actors. The conjunction of One Health with CABI's established foci on environment, ecology, agriculture and nutrition makes the new CABI One Health resources very comprehensive.

A holistic approach to One Health knowledge and research

CABI's One Health initiative includes three complementary resources: (i) an open access scientific journal, *CABI One Health*; (ii) a collection of practical and educational case studies, *One Health Cases*; and (iii) a searchable database of One Health content and information, the One Health Knowledge Bank.

The journal will feature a wide range of article types, including original research and reviews. We seek active dialogue about the future direction of One Health through commentaries and encourage best practices through papers on both research methodology and the ethics of that research: how it is conducted and how the results from it will be used, including the consequences these could have. We aim to explore the intersection of science and politics, with policy forums that highlight the implications of research for policy development and implementation.

Combined, these CABI One Health resources become much more than just another scientific journal. They bring together original research from the journal, a literature feed from other leading journals in One Health, high-quality evidence-based case studies, along with hard-to-access grey literature, datasets and other contributions and debates from the field across the world, on all kinds of One Health relevant topics. With a powerful search functionality, this provides quality-controlled, curated resources that enable scientists, authorities and practitioners to access information quickly and easily in the areas of interest to them. Authorities, policy makers, organizations and practitioners share their knowledge and experiences, extending scientific, academic knowledge to include contributions from those implementing One Health. This makes CABI One Health resources uniquely transdisciplinary.

In the future, we envision developing teaching and training resources and online webinars covering the content areas of CABI

One Health resources, with an emphasis on how to conduct and implement One Health research and practice. We hope this will lead to further quality improvements in One Health implementation.

The CABI One Health editorial team

We, Lisa Crump and Jakob Zinsstag, are both veterinary epidemiologists at the Swiss Tropical and Public Health Institute (Swiss TPH) in Basel and, since late 2021, in Allschwil, Switzerland. Swiss TPH is committed to improve the public's health worldwide in over 160 countries through research, development and teaching (www.swisstph.ch accessed 4 April 2022). We are joined in this endeavour by a global editorial and advisory board that covers human, animal, plant and ecosystem health, along with experts who bring a deeper understanding of related social, cultural, economic and political dimensions. We are very grateful for the help and advice of our editorial board members and are delighted to be part of a team of people who are leaders in their disciplines and also open to engage in a truly inter- and transdisciplinary dialogue. Just as importantly, we are working towards a gender-balanced board that represents all six continents.

Be part of the community

Our global network, in partnership with CABI, has the potential to make these One Health resources an important catalyst for future One Health research and practice. Please consider joining our editorial board, contributing your original research articles, and sharing your case studies and practical experiences with the world. We look forward to hearing from and interacting with you.

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