




Preface

Recent financial, economic, social, environmental and health crises have led to the renewed recognition that collaborative approaches between disciplines and sectors are needed to address such wicked problems. Antibiotic resistance or outbreaks of highly infectious diseases, e.g. highly pathogenic avian influenza (HPAI), Ebola, severe acute respiratory syndrome (SARS), Zika virus disease, but also obesity, food security and green urbanisation are examples where integrated approaches to health such as One Health can be employed. One Health emphasises the commonalities of human, animal, plant and ecosystem health. In this perspective, the term can be used in lieu of many other integrated approaches to health across these highly interlinked components¹. While there is considerable literature describing the characteristics of integrated approaches to health, there are no recognised guidelines so far on how to evaluate to what extent the underlying integration contributes to constructive management of complex health problems. There is thus a need to provide evidence on the added value of One Health to governments, researchers, funding bodies and other stakeholders, and to explore how to evaluate integrated approaches to health. The Network for Evaluation of One Health (NEOH) (<http://neoh.onehealthglobal.net>) is an initiative funded by the European Cooperation in Science and Technology (COST) that has tackled this challenge by bringing together over 250 scientists and One Health practitioners from more than 30 countries globally. One important result of our collaborative efforts is this handbook for the evaluation of One Health.

Integrated approaches to health are challenging because they represent complex systems of communication and collaboration that are difficult to delimit. In addition they are embedded in an ecological and cultural context where no element can be considered independently. Evaluation under such conditions requires a good understanding of the dynamics within the system and its tangible as well as intangible elements. For example, cultural practices may have a major impact on alimentary habits, which may in turn affect the prevalence of diabetes. This framework has therefore taken a systems approach to evaluation and employs qualitative and quantitative techniques and models developed in systems science. Moreover, we have considered outcomes of integrated health initiatives in the three pillars of sustainable

¹ Related examples are Ecohealth, Global Health, Planetary Health, Ecological Public Health, or Health in scaled Social-Ecological Systems.



development – ecology, society, and economy. The relevant chapters on these topics give the reader an introduction to the relevant theory, metrics, and methods used in these fields and help to understand possibilities emerging from collaboration and integration of disciplines. Further, we provide some novel insights into the governance of One Health and make a call for suitable governance mechanisms in this evolving field.

This handbook evolved over four years in an iterative process between conceptualisation, application and feedback. The concepts are thus framed to fit the many ways in which One Health can be put into practice. The result is a comprehensive overview on what integration can mean, how we can measure it, what outcomes such integrated approaches can have and how we can assess those. It is therefore suitable not only for One Health practitioners and evaluators who want to enhance their knowledge on One Health evaluation, methods, and metrics, but also for policy makers or funding bodies who are considering to support integrated health initiatives. The content and tools are broad and can be adapted to individual needs. We hope that you will find them useful to assess what we implicitly expect when employing an integrated approach to health. First applications of the framework have also been published in a special issue of *Frontiers* (<https://www.frontiersin.org/research-topics/5479>).

The development and the application of the handbook has provoked many discussions in the Network on aspects of health which we did not expect to encounter. We kept our minds open and tried to be open to suggestions from all. In this spirit, we hope to inspire you to an open-minded reflection on health and evaluation of integrated approaches to health. The handbook should provide a frame for this reflection and allow a systematic approach. We hope you will enjoy this book as much as we all enjoyed exploring these topics and writing the chapters. We also hope that you will feel encouraged to apply our concepts and tools in your work as you continue to contribute to the field.

The editors

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