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[New Approaches in Development Cooperation](#)

A Holistic View of Health

The One Health Concept in International
Development Cooperation

Martina Kaiser

The COVID-19 pandemic has turned the spotlight on how global health risks can arise from interactions between humans, animals, and the environment. Consolidating the One Health approach is vital if we are to adequately counter this threat. The approach focuses on these interdependencies to reduce the resulting health risks. Governments and multi-lateral organisations also increasingly incorporate this approach into their development strategies.

Health Challenges at the Interface of Humans, Animals, and the Environment

The end of 2019 marked the emergence of SARS-CoV-2, a previously unknown virus in humans. The origin of SARS-CoV-2, which was first observed when cases of unexplained pneumonia were noted in the city of Wuhan, China, and how it was transmitted to humans is still not fully understood. However, according to a recent study by experts at the World Health Organization (WHO) and Chinese scientists, it is “likely to very likely” that SARS-CoV-2 jumped from bats to humans via another animal.¹

This spillover led to the emergence of COVID-19, a new infectious disease that is life-threatening to humans. This is not a new phenomenon – some two thirds of all infectious diseases occurring in humans are so-called zoonoses, diseases that are transmitted reciprocally between humans and animals by pathogens such as bacteria, parasites, fungi, or viruses.² There are over 200 diseases of this type, including Ebola, tuberculosis, and rabies.

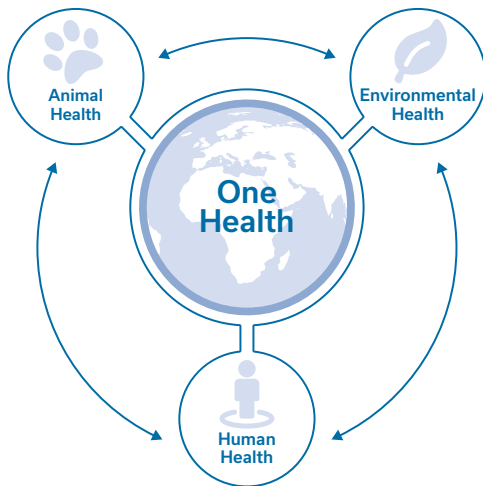
One of the factors that favours zoonoses is the increasing contact between humans and animals, such as that resulting from human encroachment into previously untouched natural environments. One reason for this increased contact is due to population growth, with its associated demand for food and intensified agriculture. Other factors favouring the occurrence of zoonotic diseases are poor hygiene, for example in food production, trade with wild

animals, and the increasing impact of climate change.

Zoonoses are one of the symptoms of a complex interplay of factors affecting the health of humans, animals, and the environment and can lead to global health threats such as epidemics and pandemics. Another health challenge at the human-animal-environment interface is the growing worldwide problem of antimicrobial resistance (AMR). AMR is mainly caused by the improper use of antibiotics, for example in human and veterinary medicine and in livestock farming, and harbours the risk that dangerous infectious diseases will one day no longer be treatable.

Experts are calling for the One Health approach to be expanded to adequately address these interactions, build global health resilience, and reduce the risk of pandemics owing to zoonotic disease outbreaks. This concept was first formulated in 2004 in the Manhattan Principles on “One World – One Health”³ and updated and expanded in 2019 by the Berlin Principles on One Health.⁴ The concept focuses on the interactions between people, wildlife, farm animals, plants, and their environment so as to identify and mitigate health threats posed by zoonoses and AMR at an early stage. It pursues a holistic, interdisciplinary approach: One Health aims to align and integrate programmes, research, and policy guidelines across different sectors to achieve better public health outcomes.⁵

Fig. 1: The One Health Approach



Source: Own illustration based on German Federal Ministry for Economic Cooperation and Development: Entwicklungspolitik. Gesundheit. One Health, in: <https://bit.ly/3f5PLYQ> [21 May 2021].

The core idea underpinning the One Health approach is that human health depends on the integrity of ecosystems and a healthy planet. Therefore, when seeking solutions to human health challenges, their impact on animal health and the environment must also be considered.⁶ With regard to health threats posed by zoonoses, the integrated One Health approach aims to improve epidemic and pandemic prevention.

Health as a global public good is a key issue for international development cooperation.

The COVID-19 pandemic has highlighted the dangers that can arise when zoonotic outbreaks are detected too late and cannot be effectively prevented. It has also illustrated the need for integrated approaches to understanding the complex relationships between humans, animals, and the environment. As a result of the growing incidence of zoonoses

such as SARS, MERS, Ebola, and, most recently, COVID-19, One Health has grown in significance over recent years and has increasingly found its way into national governments' and multilateral organisations' development programmes. As a result, countries such as Germany and the US have subsequently adapted their One Health strategies and taken steps to incorporate the One Health approach into development cooperation. This article will examine why One Health is an issue for development cooperation, what role it plays in the development strategies of these countries and relevant multilateral organisations, and what contribution development cooperation can make to mitigating health threats through the One Health approach.

One Health as a Focus of Development Cooperation

Health represents the basis for a self-determined life. The possibility to lead a healthy life is an expression of human dignity. Health is inextricably linked to sustainable development. Low-income countries in particular face numerous health challenges, which pose an obstacle to their social and economic development. These problems include poor health care systems, lack of preventive measures, and infectious diseases. Promoting health as a prerequisite for sustainable development in low-income countries and as a global public good is, therefore, a key issue for international development cooperation.

Development policy goals in the health sector are inextricably linked to developments in other sectors, particularly regarding climate change and the environment, agriculture, and nutrition. If health threats emanating from zoonoses or antimicrobial resistance are to be contained and lasting improvements made to public health, it is vital to pursue holistic approaches such as One Health as part of development cooperation. This is not only because infectious diseases pose a threat to people's health, but they can also threaten and even unravel progress in other vital areas, such as fighting poverty and hunger. The COVID-19 pandemic has demonstrated this all too well.⁷

The basic principles of the One Health concept are also reflected in the 2030 Agenda, initiated by the United Nations in 2015 as a global framework for transforming every area of our lives. Like the One Health approach, the 2030 Agenda with its 17 Sustainable Development Goals (SDGs) calls for an interdisciplinary approach and cross-sectoral ways of addressing global challenges.

Although the approaches and overarching goals of One Health and the 2030 Agenda are closely linked – sustainable development for the benefit of people, animals, and the environment, taking into account economic, environmental, and social dimensions – the 2030 Agenda makes no direct mention of the One Health approach in its wording. However, the connection to it is clear when we examine Sustainable Development Goal 3 (Ensure healthy lives and promote well-being for all at all ages) and its associated health-related SDGs.

Parallels with the One Health approach also become clear in interdependencies with SDG 6 (Ensure availability and sustainable management of water and sanitation for all). Aside from having severe consequences on health, contaminated water pollutes the environment and affects animals and plants, which in turn undermines agriculture and the human food supply.

Achieving SDG 3 on health also increasingly relies on making progress on SDG 13 (Take urgent action to combat climate change and its impacts). Like One Health, the 2030 Agenda highlights the impact of climate change on human, animal, and environmental health.

There are many other parallels between the 2030 Agenda and One Health regarding the role of sustainable agricultural and food systems in ensuring the health of people, animals, and the environment.

On the one hand, the agricultural sector is essential for providing people with a balanced diet while also contributing towards numerous environmental and health problems. Its vital role at the interface of people, animals, and the environment, and as a priority of development strategies, makes this sector a key area for implementing the One Health approach.

People and animals live cheek by jowl, which can lead to the transmission of potentially dangerous pathogens and zoonoses.

Agriculture dominates the economies of many developing countries. It is vital for ensuring food security as a basic element of human health and economic development. As the world's population grows, the agricultural sector must be able to meet the growing demand for food. This requires sufficient agricultural land and innovative approaches, such as adapting plant breeding to a changing climate. Agricultural and food systems must be made sustainable to prevent agriculture from having negative repercussions on the planet or animal health, such as through extinction, soil degradation, and the destruction of natural ecosystems. This is the only way to avoid undesirable side-effects while working towards health goals.

When implementing One Health in agriculture, particular attention must be paid to animal health and food hygiene, since a large proportion of farmers in development cooperation partner countries keep livestock. An important lever in this context is the responsible use of veterinary medicines such as antibiotics. Their improper use promotes the spread of antimicrobial resistance, in turn making it difficult to deal with infectious diseases that were easy to treat

in the past. Today, AMR poses one of the most serious threats to global health. It is estimated that 700,000 people die each year because of multidrug-resistant pathogens.⁸

Along with synergies, the aims of agriculture and environmental protection can also be conflicting.

It is also important to put the One Health approach into practice in the sustainable management of agricultural land. Expanding agricultural land through large-scale deforestation or draining wetlands destroys wildlife habitats. This means people and animals live cheek by jowl, which can lead to the transmission of potentially dangerous pathogens and zoonoses. Unsustainable soil management, such as the excessive use of chemicals and fertilisers, also leads to the loss of agricultural land, which again puts pressure on food systems and human health. This problem is further exacerbated by the effects of climate change, as illustrated by the increasing frequency of extreme weather events such as heat waves and floods.

The Difficulties Involved in Implementing One Health

The above-mentioned interdependencies highlight difficulties inherent in implementing the One Health strategy. There is no doubt that the holistic approach can create synergies, but conflicting objectives between individual sectors, such as agriculture and environmental protection, may also arise. These cross-sectoral conflicts and diverging interests need to be addressed and overcome if One Health is to be truly effective. Policymakers need to create appropriate framework conditions to ensure the interests of all sectors involved are considered and to reduce existing disparities in the balance of power.



Regarding One Health, scientists and experts need to abandon the silo mentality and work in an interdisciplinary way to find solutions to challenges arising at the interface of people, animals, and the environment. The same applies to the political sphere, where information and



Risky proximity: Due to human intrusion into wildlife habitat, the threat of disease transmission from animals to humans rises. [Source: © Ricardo Moraes, Reuters.](#)

knowledge should be regularly exchanged and a coordinated approach adopted towards the implementation of One Health at both the national and the international level. Finally, programmes to implement One Health should be viewed as active preventive measures, not just

against the backdrop of future health threats such as epidemics and pandemics but also as a means of preventing ecological disasters like extinction and climate change. These programmes should receive adequate funding not just at the national but also at the multilateral level.

Multilateral Initiatives for Implementing One Health

It is essential to find global solutions to the aforementioned health challenges, which are caused and exacerbated by global megatrends such as population growth, urbanisation, and climate change. Multilateral organisations have an important role to play here by creating synergies and ensuring knowledge about One Health is fed into policy and transferred to the public.

Tripartite Alliance for One Health

The WHO, the World Organisation for Animal Health (OIE), and the Food and Agriculture Organization of the United Nations (FAO) are making a vital contribution to implementing the One Health strategy. These three organisations joined forces in 2010 to form the Tripartite Collaboration. The aim of this initiative is to combat health risks at the nexus of humans, animals, and the environment in a targeted manner by creating synergies and pooling expertise. Its focus includes the early detection and prevention of human and animal diseases, research into zoonoses, capacity building in national health care systems, promoting food safety, and combating antimicrobial resistance.⁹ In 2019, the three organisations jointly published a comprehensive guide to addressing zoonotic diseases to support member states develop a multi-sectoral One Health strategy.¹⁰

To strengthen One Health as a holistic concept, the three organisations extended their cooperation to the environmental sector in late 2020 and incorporated the United Nations Environment Programme (UNEP) as an additional partner. As part of the Paris Peace Forum in November 2020, the alliance also agreed to convene a multidisciplinary One Health High-Level Expert Panel (OHHLEP). This is intended to address health risks at the human-animal-environment interface more effectively by providing data and research findings. Along with representatives from all four agencies, it will also bring in experts from human, animal, environmental, and social sciences. One of the

Panel's main tasks will be to keep the public informed and to feed reliable scientific evidence relating to One Health into public policy.¹¹

In 2018, the European Commission presented a programme that specifically follows the One Health approach.

A tangible result of the work undertaken by WHO, OIE and UNEP in the area of pandemic response and addressing One Health challenges such as zoonotic diseases is the publication of an interim guidance document on “Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets”.¹² This contains a set of recommendations for how national governments can reduce risks emanating from the transmission of zoonotic diseases in food markets and wild animal markets.

EU Initiatives to Strengthen One Health

As the world's largest donor of development aid, the European Union has set up the Neighbourhood, Development and International Cooperation Instrument (NDICI) – a well-funded programme for promoting sustainable development in its partner countries.¹³ The One Health approach is not specifically mentioned in any of the three underlying NDICI pillars. However, the One Health-related issues of health, food security, and climate change are defined in the thematic pillar and described as “global challenges” that “are best addressed at a supranational level”.¹⁴ The “crisis response” pillar also seeks to strengthen resilience and link humanitarian and development actions in a more effective way.¹⁵ Although it does not specifically refer to One Health as an overarching concept, the NDICI is aligned with this approach.

In 2018, the European Union already launched the One Health European Joint Programme

(OHEJP) within the European Commission’s Horizon 2020 research and innovation programme. The OHEJP specifically follows the One Health approach. It was set up to facilitate collaboration between European research institutions in the fields of human and veterinary medicine and consumer health protection in the food sector.¹⁶ The three main focus areas of the five-year project are: foodborne zoonoses, antibiotic resistance, and emerging hazards. One of the programme’s overarching goals is to generate scientific data, methods, and software and make them available to national and European institutions for the assessment of health risks and potential preventive action.¹⁷

One Health in German Development Cooperation

German development cooperation has harnessed the COVID-19 pandemic as an opportunity to adjust its priorities in global health and to strengthen its commitment to One Health. At the institutional level, this increased focus on One Health finds expression in the creation of a new unit at the Federal Ministry for Economic Cooperation and Development (BMZ) to tackle global health, pandemic prevention, and One Health. All the individual measures involved in the One Health approach will be bundled in this new unit, which will also coordinate international cooperation and launch new initiatives in areas such as human and animal health.¹⁸ The Ministry has also set up the One Health Advisory Board, an interdisciplinary body that will advise the BMZ on priorities relating to One Health.

Global health and One Health are also embedded in the “BMZ 2030 reform strategy”.

In April 2020, shortly after the outbreak of the COVID-19 pandemic, the BMZ presented an emergency response plan, whose aim was to help developing and emerging countries tackle the health, economic, and social impacts of the

pandemic.¹⁹ This includes working with the International Livestock Research Institute (ILRI) to establish the One Health Research, Education and Outreach Centre in Africa (OHRECA), based in Kenya, to promote interdisciplinary exchange on human and animal health. The approach behind this project is to build structures for monitoring disease outbreaks among humans and animals to be better prepared for future pandemics. Together with the World Bank, the BMZ is also working to improve agricultural and food systems to prevent the emergence of zoonotic pathogens in food production and improve their early detection.²⁰

Global health and One Health are also embedded in the “BMZ 2030 reform strategy”, which was published in April 2020 as well. The BMZ has consolidated its portfolio and incorporated health, pandemic response, and One Health into its new strategy as one of ten initiative areas that will be focused on for a set period of time.²¹ The aim of this initiative area is “to systematically anchor One Health as a holistic and trans-sectoral approach in international cooperation, and in relevant core areas and fields of action of German development cooperation”.²² In its strategy paper “One Health in Development Cooperation”²³, the BMZ sets out its approach to implementing One Health and defines four strategic fields of action.

- The first area of action envisages anchoring the One Health approach more firmly in German bilateral development cooperation and helping partner countries to draw up national One Health strategies and emergency plans for epidemic and pandemic prevention.
- The second area of action focuses on promoting cooperation between international organisations and supporting research alliances and networks in the field of One Health. It particularly focuses on strengthening the mandate of the WHO as the lead coordinating body for global health and the role of the Tripartite Collaboration, including its potential expansion to include other UN agencies such as UNEP and possibly UNDP.

- The third area of action focuses on capacity building and strengthening health infrastructure in both human and veterinary medicine. It also emphasises the need to train interdisciplinary personnel on the One Health approach and to improve risk communication and public information campaigns on preventing zoonotic diseases and AMR.
- The fourth area of action addresses the particularly relevant topic of political agenda setting, i.e. embedding One Health in development cooperation and the development policy debate. This includes raising awareness among decision-makers and the public of health risks posed by zoonoses and AMR and the importance of preserving pristine habitats and sustainable forms of livestock



Key role: German Development Cooperation seeks to strengthen the mandate of the World Health Organization.
Source: © Laurent Gillieron, Reuters.

farming in minimising these risks. This component also aims to feed the One Health approach into EU strategies such as the NDICI.

One Health in US Development Cooperation

Global health represents a distinct area of US development cooperation, which pursues the fight against infectious disease outbreaks as one of its three strategic objectives.²⁴ Since 2009, the United States Agency for International Development (USAID), the agency responsible for development assistance, has invested more than 1.1 billion US dollars in this priority area. The funds are used to ensure systems are in place in partner countries to detect and prevent outbreaks of infectious diseases at an early stage and respond quickly and effectively to emergencies.²⁵

USAID aims to train health workers in the area of One Health.

For example, regarding One Health, USAID focuses on promoting and implementing projects that support partner countries to address zoonotic and AMR-related health risks, building laboratory and surveillance capacity, and improving risk communication to inform the public and health workers about infectious diseases.²⁶ Another objective is to train the next generation of health workers in partner countries in One Health capacities. To this end, USAID is supporting the One Health Workforce – Next Generation (OHW-NG) project, which intends to help regional university networks in Africa and Southeast Asia develop a cross-sectoral workforce for effective disease surveillance and control.²⁷

Another focus of the US' commitment to One Health is research into zoonotic diseases and their causes. The PREDICT project was set up in 2009 as part of the Emerging Pandemic Threats

research programme (EPT). Its primary aim was to investigate the most likely sources of zoonotic disease and the places and practices most likely to expose people to pathogens.²⁸ This should make it easier to identify dangerous pathogens at an early stage and reduce the associated risks. Interdisciplinary research teams have discovered over 1,000 previously unknown viruses, including a new strain of Ebola.²⁹ Shortly before the COVID-19 pandemic broke out, the regular funding period of ten years expired, and the project was not extended at first.

However, in September 2020, USAID launched Strategies to Prevent Spillover (STOP Spillover), a new programme designed to build on its predecessor project, PREDICT. STOP Spillover has a budget of 100 million US dollars for a period of five years. Based on data and knowledge collated by the previous project, the project now aims to develop measures for strengthening national capacities in selected but yet undefined partner countries to reduce the risk of dangerous pathogens being transmitted from animals to humans.³⁰

Building Back Better with the One Health Approach

Development cooperation focuses on removing obstacles to social and economic development in partner countries. Along with combating poverty and hunger, priority goals are the promotion of health as a fundamental human right and the basis for an independent life.

Since the turn of the 21st century, we have increasingly witnessed the emergence of infectious diseases that originate in wild animals, such as SARS, MERS, Ebola and, most recently, COVID-19. This is mainly due to human intervention in wildlife habitats. Development cooperation seeks to achieve its aims by focusing on several key sectors, such as agriculture, which have an impact on the emergence of health threats like zoonotic diseases and AMR. Development cooperation can make a sustainable contribution to reducing the health risks arising from zoonotic diseases and AMR. It can do so

by incorporating One Health into its strategic planning and the implementation of its development agendas in these sectors; by promoting cross-sectoral and interdisciplinary collaboration; by fostering research cooperation; and particularly by political agenda setting and feeding the One Health approach into policy discussions in partner countries.

The COVID-19 pandemic has long since triggered a debate on how we can rebuild our economic and social systems to be more sustainable and future-proof in the wake of the pandemic. But it is not only about economic recovery. COVID-19 should be seen as a wake-up call to develop sustainable strategies for the benefit of humans, animals, and the environment in order to reduce the risk of pandemics and build global resilience. Integrated concepts such as the 2030 Agenda and One Health point the way forward in this respect.

- translated from German -

Martina Kaiser is Policy Advisor on Global Health at the Konrad-Adenauer-Stiftung.

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