

# Ways out of the global health crisis

Healthy people, healthy animals and a healthy environment  
worldwide with the One Health approach

by Karolin Seitz

The COVID-19 pandemic has drastically demonstrated just how close the link is between humans, animals, and the environment, and has highlighted and aggravated existing challenges. The destruction of natural habitats and displacement of species, trade in wild animals, resource-intensive lifestyles and conditions, non-sustainable food systems and, in particular, industrial agriculture and intensive livestock farming are the causes of the emergence of zoonoses as well as numerous other communicable and non-communicable, chronic diseases.

The One Health approach focuses precisely on such interaction between humans, animals, and the environment. This approach emphasizes the additional value of trans-, multi- and interdisciplinary collaboration in the thematic areas referred to above. During the last few years, a multidimensional One Health approach has gained increasing significance, and various actors now regard it as an approach to prevent and respond to future pandemics. France and Germany have launched a high-level Expert Panel on One Health. The German Federal Ministry for Economic Cooperation and Development (BMZ) has proclaimed One Health a new initiative area and developed a corresponding strategy. And the German Federal Government's new global health strategy has also adopted One Health as a focal topic.

In the course of the corona pandemic, the topic of global health has attracted considerably more attention and significance, although the discourse on overcoming the COVID-19 crisis is frequently restricted to preventing and combating pandemics. The political initiatives are largely limited to crisis management. This is also the case with the BMZ's One Health strategy in development cooperation<sup>1</sup>, and with the Federal Government's strategy for global health<sup>2</sup>. Instead of adopting a holistic view of health and concentrating on fulfilling the human right to health, the focus is increasingly put on preventing future pandemics and on treating the symptoms instead of the causes. A holistic approach forms the basis of the Sustainable Development Goals (SDGs), although the corona pandemic has pushed it into the background.

Restricting global health to individual aspects and approaches had also been clearly visible prior to the corona pandemic, and this has been emphasized even more by the interest of some global health actors, including those from the chemical and pharmaceutical industry branches.<sup>3</sup> Thus it is often limited and short-term, usually technical solutions which are promoted with a view to securitizing (viewing health topics from a foreign and security policy angle), verticalizing (focusing on combating a certain health problem, usually a disease),<sup>4</sup> or medicalizing (viewing health problems as a purely medical problem)

1 [https://www.bmz.de/resource/blob/57862/7fb10bef2f1835dd3e95c5d1f26d9148/Strategiepapier550\\_Initiative%20area%20One%20Health%20in%20development%20cooperation](https://www.bmz.de/resource/blob/57862/7fb10bef2f1835dd3e95c5d1f26d9148/Strategiepapier550_Initiative%20area%20One%20Health%20in%20development%20cooperation)

2 [https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5\\_Publikationen/Gesundheit/Broschueren/Global\\_Health\\_Strategy.pdf](https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5_Publikationen/Gesundheit/Broschueren/Global_Health_Strategy.pdf)

3 Precisely which actors these are is explained in the boxes on the securitization, medicalization, and verticalization of health.

4 Unlike a horizontal approach, which seeks to comprehensively address the overarching health problems on a long-term basis by strengthening the health systems and providing general health care.

health – for the current crisis and also for other global health challenges.

A holistic implementation of the One Health approach has to go beyond measures relating to the predominantly medico-technical prevention of spreading and containing of zoonoses and resistance to antibiotics and must in particular focus on the structural causes of global health problems and develop solution strategies. This above all

calls for supporting approaches based on sustainability and justice – for example agroecology at the agriculture interface – which prevent negative impacts on the environment, climate and health of humans and animals and avoid causing them. Public services for the treatment and health maintenance of humans, animals and the environment have to be strengthened, and finally, action has to be taken that is politically coherent and accountable to the population.

### An imbalanced relationship between humans, animals, and the environment

“We can’t expect to stay healthy in a sick world,” Pope Francis wrote in a letter on the occasion of World Environment Day, on the 5<sup>th</sup> June 2020. His intention was to point out just how closely human health is linked to an intact environment and that this relationship has become unbalanced.

The COVID-19 pandemic has drastically demonstrated the close connection between humans, animals, and the environment and made visible and aggravated existing challenges in global health.

Already during the past slightly more than one hundred years, outbreaks of Ebola, SARS-1, HIV/Aids, avian flu, and other forms of influenza, including Spanish flu, clearly pointed to pathogens increasingly crossing the species barrier between animals – among them domesticated animals, livestock, and wild animals – and humans, especially where they were interacting in a common environment. Zoonoses can represent a considerable health risk for humans and animals alike. Zoonoses can be foodborne, waterborne or vector-borne (carriers of pathogenes), or transmitted through direct contact with domesticated or wild animals, but also indirectly via fomites (contaminated objects) or environmental contamination.<sup>5</sup>

A United Nations Environment Programme (UNEP) report identifies seven drivers of increased occurrence of zoonoses:<sup>6</sup>

(1) the increasing **demand for animal protein;**

(2) the unsustainable **intensification of agriculture and industrialization** of meat, milk, and egg production;

(3) the increased **use and exploitation of wildlife;**

(4) the **unsustainable use of natural resources**, which is being accelerated by urbanization, changes in land use, and extractive industries;

(5) the **growing mobility of people and increasing trade in goods** including animals and animal products;

(6) **food supply chains which are becoming longer and more diversified** as well as more possibilities for diseases to spread; and

(7) **climate change.**

All these factors are interwoven and mutually reinforced. They also show the crucial role that food systems play in this context. From production to the choice of food in the retail sector, there are a wide range of factors impacting on the emergence of zoonoses.

According to a study, the ruthless intensification of agriculture with its accompanying phenomena such as the excessive use of pesticides, fertilizers, antibiotics, and water, land-use change, deforestation, soil destruction through soil compaction and sealing, as well as the erosion of humus and its acidification through the high level of nitrogen immission from intensive agriculture,<sup>7</sup> the loss of biodiversity and more intensive human contact with livestock

5 <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>, pp. 15-18 and <https://www.who.int/publications/i/item/taking-a-multisectoral-one-health-approach-a-tripartite-guide-to-addressing-zoonotic-diseases-in-countries>, p. 2

6 <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

7 According to the German Federal Environment Ministry (BMU), today, excessive ammonium nitrogen immissions from agriculture are the chief reason for soil acidification in Germany (<https://www.umweltbundesamt.de/daten/flaeche-boden-land-oekosysteme/land-oekosysteme/ueberschreitung-der-belastungsgrenzen-fuer>).

and wild animals could be related to 25 percent of all infectious diseases and 50 percent of all zoonoses since 1940.<sup>8</sup> Here, ultimately, the emergence of zoonoses is a symptom of misguided agro-industrial farming systems worldwide which are oriented too little on the requirements of sustainable, just, and healthy food systems.

Intensive livestock farming, which is widespread nowadays and enables a growing, unsustainable and inflated global demand for meat consumption, is one example of this. A large number of genetically homogenous animals are kept in a minimum of space, making them very vulnerable to infections. In addition, long supply chains in the food industry provide opportunities for cross-contamination, complicate traceability of a product, and are usually not sufficiently regulated regarding hygiene and health standards. Owing to precarious conditions employees work in and non-compliance with hygiene standards, large industrial meat-processing plants are places where diseases can spread, as was demonstrated by the COVID-19 outbreaks in slaughterhouses in industrialized countries, but also in the fishing industry.<sup>9</sup>

Today's global industrialized food systems, which are neither healthy nor sustainable, do considerable harm to human, animal, and environmental health. Overexploitation of forests worldwide, whether to grow feed for livestock, produce palm oil, or obtain tropical timber, is further limiting the already constantly shrinking retreat areas of wild animals, reducing the buffer zones between wildlife and people and contributing to an accelerating loss of biodiversity. The increased emergence of zoonoses is a clear warning that One Health and Planetary Health – i.e. the health state of human civilization and the environment surrounding it – are facing a massive threat.

### An unhealthy ecosystem – the cause of communicable and non-communicable diseases

Many of the drivers of zoonoses are not only responsible for the increased incidence of infectious diseases. Human intrusion into nature also has other impacts on people's health and wellbeing.<sup>10</sup>

The best example of this is chronic, non-communicable diseases (NCDs),<sup>11</sup> which were the cause of 70 percent of all mortalities worldwide in 2018,<sup>12</sup> with a rising tendency. It is above all people in poorer countries (85 percent) who die of NCDs.<sup>13</sup> The group of NCDs includes cardiovascular diseases, cancer, respiratory diseases and diabetes. The chief risk factors for NCDs are a lack of physical exercise, unhealthy diets, tobacco consumption, and alcohol abuse. These diseases are also influenced by factors such as individual living and housing conditions, behavioral modes, and the disposition to a disease. Increasingly too, exposure to air pollution, noise, and poisonous chemicals are being recognized as causal agents of NCD.<sup>14</sup> Unhealthy living conditions in cities and growing environmental pollution through industry and traffic play a considerable role in the strong increase these diseases are seeing.<sup>15</sup>

Alongside tobacco consumption,<sup>16</sup> air pollution, caused by particulate matter or nitrogen oxides, is one of the most important global health risks and causes considerable excess mortality as well as a loss in life expectancy, especially owing to respiratory and cardiovascular diseases.<sup>17</sup> In many cases, overlapping disease burdens occur, which means that suffering from a chronic disease frequently makes people more susceptible to an infection with a communicable pathogen. In addition, infectious diseases frequently result in lifelong, chronic ailments. Recent research results suggest that air pollution increases the risk of dying of a COVID-19 infec-

8 Rohr, J.R., Barrett, C. B., Civitello, D. J., Craft, M. E., Delius, B., DeLeo, G. et al. (2019). Emerging human infectious diseases and the links to global food production. *Nature Sustainability*, 2, 445-456. <https://doi.org/10.1038/s41893-019-0293-3>

9 <https://link.springer.com/article/10.1007/s40152-020-00205-y>

10 Ibid. [https://wedocs.unep.org/bitstream/handle/20.500.11822/27652/GEO6SPM\\_GE.pdf?sequence=17&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/27652/GEO6SPM_GE.pdf?sequence=17&isAllowed=y) and [https://apps.who.int/iris/bitstream/handle/10665/204585/9789241565196\\_eng.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/204585/9789241565196_eng.pdf?sequence=1&isAllowed=y)

11 Annette Prüss-Ustün et al. (2019). Environmental risks and non-communicable diseases

*BMJ* 2019; 364:k1265, <https://www.bmj.com/content/364/bmj.k1265> and [https://apps.who.int/iris/bitstream/handle/10665/204585/9789241565196\\_eng.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/204585/9789241565196_eng.pdf?sequence=1&isAllowed=y)

12 <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>

13 Ibid.

14 Prüss-Ustün et al. (2019)

15 Ibid.

16 Ibid.

17 Jos Lelieveld, Andrea Pozzer, Ulrich Pöschl, Mohammed Fnais, Andy Haines, Thomas Münzel (2020). Loss of life expectancy from air pollution compared to other risk factors: a worldwide perspective, *Cardiovascular Research*, Volume 116, Issue 11, 1 September 2020, Pages 1910–1917, <https://doi.org/10.1093/cvr/cvaa025>

tion.<sup>18</sup> In 2016, air pollution<sup>19</sup> caused by industry, power generation, transport and agriculture was responsible for more than 4.2 million people dying from non-communicable diseases worldwide.<sup>20</sup>

Here, fossil fuels are among the chief risk factors. According to a 2020 survey by Greenpeace South-east Asia and the Center for Research on Energy and Clean Air, they are responsible for an annual 4.5 million premature deaths caused by air pollution (within households and outdoors).<sup>21</sup>

This example shows that the drivers of anthropogenic climate change simultaneously have a direct impact on people's health.

Meanwhile, the effects of climate change represent one of the greatest human health hazards. Not only do many zoonoses respond very sensitively to changes in the climate and are set to thrive better and therefore go beyond their geographical range in a warmer and moister climate. The direct influence of climate change on humans is also immense.<sup>22</sup> The degradation and pollution of the environment is causing more and more disasters such as floods, forest fires, cyclone, or water scarcity to occur, which dry up or destroy the soils, and humanitarian emergency situations and refugee movements develop. Furthermore, heat waves and high ozone levels close to the ground can have serious health consequences especially for older people and individuals with cardiovascular or respiratory conditions.

In addition, the negative impacts of climate change on fisheries and agriculture are already jeopardizing global food security, especially for people hit most strongly by poverty. The United Nations Food and Agriculture Organization (FAO) estimates that almost 690 million people worldwide are suffering

chronic hunger.<sup>23</sup> Taking the overall number of people affected by medium or severe food insecurity, in 2019, two billion people had no regular access to safe, nourishing and sufficient food. These figures are based on estimates made before the COVID-19 crisis set in; since then, the situation has worsened in many places. Malnutrition and undernutrition as well as migration resulting from food scarcity, environmental disasters, epidemics, political crises, and violent conflicts bear consequences for physical and mental health. Conversely, a diversified and healthy diet is crucial in combating hunger, malnutrition and nutritional deficiency, as well as chronic diseases such as diabetes, heart diseases, stroke, and cancer.<sup>24</sup>

### The One Health approach – a holistic view of the ecosystem

The One Health approach aims at multidimensional interaction between the areas of human, animal and environmental health, at addressing the causes of the imbalance in global health instead of limiting action to treating symptoms. There are a wide range of definitions of One Health. For example, the Lancet One Health Commission, set up in 2019, sees One Health as a concept viewing the complex intertwining and mutual dependence of all living creatures and the environment.<sup>25</sup>

Irrespective of the definition taken, the One Health approach emphasizes the additional value of trans-, multi- and interdisciplinary collaboration on the topics of humans, animals and the environment regarding the health of all three elements.<sup>26</sup>

The core elements are the local identification of problems and communication, coordination, and cooperation between different sectors, disciplines and levels.<sup>27</sup> Balanced, eye-level participation of

18 <https://www.escardio.org/The-ESC/Press-Office/Press-releases/study-estimates-exposure-to-air-pollution-increases-covid-19-deaths-by-15-world> and <https://advances.sciencemag.org/content/6/45/eabd4049> sowie <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7812988/>

19 A distinction is generally made between indoor air pollution (by private households) and air pollution outdoors (from industry, traffic, power generation, agriculture). Taking both types together, the WHO estimates that more than 7 million people die each year as a result of air pollution (cf. <https://www.who.int/data/gho/data/themes/air-pollution>).

20 [https://www.who.int/en/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/en/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

21 <https://www.greenpeace.org/usa/wp-content/uploads/2020/02/The-Price-of-Fossil-Fuels-full-report.pdf>

22 Nick Watts, Markus Amann, Nigel Arnell, et al. (2019). The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. *Lancet* 2019; 394: 1836–78 <https://www.researchgate.net/publication/337228916> and <https://www.klimawandel-gesundheit.de/>

23 <http://www.fao.org/documents/card/en/c/ca9692en>

24 Ibid.

25 Amuasi JH, Lucas T, Horton R, Winkler AS (2020). Reconnecting for our future: The Lancet One Health Commission. *Lancet*. 2020 May 9;395(10235):1469–1471 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31027-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31027-8/fulltext)

26 Ibid.

27 <http://documents.worldbank.org/curated/en/703711517234402168/pdf/123023-REVISED-PUBLIC-World-Bank-One-Health-Framework-2018.pdf> und Carsten Richter et al. (2015). Towards operational criteria for ecosystem health approaches, *EcoHealth*, [https://www.researchgate.net/publication/274729003\\_Toward\\_Operational\\_Criteria\\_for\\_Ecosystem\\_Approaches\\_to\\_Health](https://www.researchgate.net/publication/274729003_Toward_Operational_Criteria_for_Ecosystem_Approaches_to_Health)



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all relevant actors in the various sectors of science, politics, and civil society and the local, regional, national, and global level is a precondition for the successful implementation of the approach.<sup>28</sup> The active involvement of local communities and community based approaches, which make them co-determining actors, is indispensable.

One Health can only succeed if its actions are guided by fundamental socio-ecological change. The core of the issue is enabling healthy living conditions for all, taking a comprehensive view of people's health needs.

In this respect, the One Health approach can contribute to progress in implementing Agenda 2030,

adopted by the 193 UN Member States in 2015, with its 17 Sustainable Development Goals (SDGs), as a whole. The SDGs address all dimensions of sustainable development (the social, ecological, and economic dimensions), and are guided by the overarching principle of reaching those first who have so far been neglected most ("Leave No One Behind"). The One Health approach also brings the human right to health for all center stage.

Our food system represents an essential interface between human, animal, and environmental health, and has already been identified as such by the Lancet One Health Commission and others. The COVID-19 crisis, too, has demonstrated how the industrial and increasingly globalized economic

28 <http://www.fao.org/3/ca2942en/ca2942en.pdf>



and food systems are contributing considerably to ecological destruction and the occurrence of zoonoses, as well as other nutrition-related diseases.

### Agroecology and One Health

To enable the One Health approach, a fundamental shift towards sustainable food production systems in the area of agricultural production and food systems is inevitable. Here too, a concept is required which pursues a holistic approach, just like One Health. Agroecology provides a science-based and practical approach aimed at producing safe food in an environmentally compatible manner, not applying any harmful chemicals, conserving biodiversity, supporting fair and sustainable marketing channels, protecting the rights of employees, backing local food systems, and respecting the wellbeing of animals and the environment.<sup>29</sup> The 10 elements of agroecology defined by the FAO<sup>30</sup> and the 13 principles of agroecology defined by the High-Level Panel of Experts (HLPE) of the Committee on World Food Security (CFS)<sup>31</sup> complement each other and provide a political guide to secure food and achieve the right to food. The deep rooting of this approach both in human rights and in farmers' movements, established in the 2015 Nyeleni Declaration,<sup>32</sup> reflects the crucial significance of agroecology in implementing the One Health approach. Agroecology qualifies from a human rights angle in particular, since it focuses on the right to food.

### The role of One Health in politics

The One Health approach is not new but also entered into German and international politics as a result of the spreading of avian flu in 2006 and in response to the considerable manifestation of resistance to antibiotics. Since 2006, a research consortium consisting of Germany's Federal Ministry of Education and Research (BMBF), Federal Ministry of Food and Agriculture (BMEL), Federal Health Ministry (BMG), and Federal Ministry of Defense

(BMVG) has been addressing threats arising from zoonoses, opting for One Health as a suitable approach to combat them.<sup>33</sup>

Since 2007 at the latest, the topic of resistance to antibiotics, and hence the One Health approach, have entered debates at the level of the G20. Since 2010, the FAO, the World Health Organization (WHO), and the World Organisation for Animal Health (OIE) have been cooperating on the approach, with a particular focus on zoonoses and resistance to antibiotics as well.<sup>34</sup>

More recently, the One Health concept has enjoyed considerably more attention as a result of the 2014 Ebola epidemic and, now, the corona pandemic, and particularly at the level of the German Federal Government, it is treated as a top priority. Various actors are increasingly calling for One Health to be applied as an approach to prevent and respond to future pandemics.<sup>35</sup>

For example, on the 12<sup>th</sup> November 2020, in the context of their Alliance for Multilateralism, French Minister for Foreign Affairs Jean-Yves Le Drian and his German counterpart Minister Heiko Maas announced the appointment of a new One Health High-Level Expert Panel (OHHLEP).<sup>36</sup> Accommodated at the WHO,<sup>37</sup> and with the participation of the OIE and the FAO, international experts from the fields of human and veterinary medicine as well as environmental research and social sciences are to collaborate.<sup>38</sup> In recognition of the environmental dimension, the United Nations Environment Programme (UNEP) has been added to the Tripartite Alliance of the WHO, the OIE and the FAO as a new partner.<sup>39</sup> The Panel is to compile and publish research on the topic of One Health, make recommendations, and support governments in preventing pandemics. Furthermore, One Health was on the agenda of the G20 Global Health Summit in May 2021, with a focus on preventing and responding to pandemics.<sup>40</sup>

29 [https://www.misereor.org/fileadmin/user\\_upload\\_misereororg/publication/en/foodsecurity/position-paper-strengthening-agroecology.pdf](https://www.misereor.org/fileadmin/user_upload_misereororg/publication/en/foodsecurity/position-paper-strengthening-agroecology.pdf)

30 <http://www.fao.org/3/i9037en/i9037en.pdf>

31 <http://www.fao.org/3/ca5602en/ca5602en.pdf>

32 <https://www.foodsovereignty.org/forum-agroecology-nyeleni-2015-2/>

33 [https://www.bmbf.de/files/Forschungsvereinbarung\\_Zoonosen.pdf](https://www.bmbf.de/files/Forschungsvereinbarung_Zoonosen.pdf)

34 [https://www.who.int/foodsafety/zoonoses/final\\_concept\\_note\\_Hanoi.pdf](https://www.who.int/foodsafety/zoonoses/final_concept_note_Hanoi.pdf) and <https://extranet.who.int/sph/sites/default/files/document-library/document/English.pdf>

35 <https://www.unenvironment.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

36 <https://multilateralism.org/wp-content/uploads/2020/11/2020-11-11-Press-release-meeting-AfM-12-November-2020-final-version-EN.pdf>

37 <https://news.un.org/en/story/2021/02/1084982>

38 [https://www.who.int/news-room/articles-detail/call-for-experts-one-health-high-level-expert-panel-\(ohhlepe\)](https://www.who.int/news-room/articles-detail/call-for-experts-one-health-high-level-expert-panel-(ohhlepe))

39 For example by UNEP, see <https://www.unenvironment.org/news-and-stories/story/unep-joins-three-international-organizations-expert-panel-improve-one-health>

40 <https://www.g20.org/second-health-working-group-meeting.html>

The German Federal Government is also boosting its own capacities for the topic. In January 2021, Germany's Federal Ministry for Economic Cooperation and Development (BMZ) published a Strategy Paper on One Health.<sup>41</sup> Already in 2020, Development Minister Gerd Müller had announced One Health and preventing pandemics as new initiative area for his ministry and declared the approach a guideline for strategic action. BMZ Directorate 10 "Global Health; Pandemic Prevention; One Health" and the Special Staff for "Combating Pandemics" were established. This includes Division 102, "Pandemic Prevention, One Health, Animal Health, Biodiversity". As the ministry's Special Representative, and supported by an eight-member One Health Scientific Advisory Council, Parliamentary State Secretary Maria Flachsbarth coordinates international cooperation. The BMZ intends to invest 30 million euros in the One Health approach – these funds are part of the ministry's 4.3-billion-euro corona emergency program.<sup>42</sup> Projects supported with this money include the development of a One Health Pandemics Center in Kenya to share human and animal health expertise.<sup>43</sup>

### One Health – an opportunity or a threat to achieve the SDGs?

It is to be welcomed that the concept has come so much to the fore among various political actors both in Germany and globally and is also being given attention at German Government level. As described above, the One Health approach offers a holistic and in-depth perspective regarding all types of health problems, and highlights the links between them. However, a closer look reveals that the One Health approach as understood by the German Federal Government concentrates almost exclusively on antibiotic resistance and infectious diseases (in particular zoonoses) and the prevention of pandemics. This is particularly apparent in the "One Health" strategy published by the German Federal Ministry for Economic Cooperation and Development in January 2021.<sup>44</sup> Here chronic, non-communicable diseases are effectively excluded, despite their severe consequences. Whereas the introductory section refers to them as a significant

health burden, they are then absent in the section on the strategic orientation of German development cooperation in the One Health area. Rather, the paper states: "With its One Health strategy, the BMZ wants to contribute directly towards improving the options and capacities that developing countries and emerging economies have with regard to the prevention, early diagnosis and containment of infectious diseases."<sup>45</sup> Neither does the strategy adequately address the need to improve general living and working conditions or poverty and disadvantage as significant causes of the emergence of diseases and their spreading.

In the German Federal Government's 2020 Global Health Strategy, One Health is also addressed as a priority item, with a special focus on the management of health crises in the sense of a securitization (see Box 1).<sup>46</sup>

Furthermore, a clear strategy on the coordination with and integration of the other ministries as well as coordination with cross-cutting topics is lacking. Since the approach is very extensive and calls for far-reaching, structural changes particularly also in the agricultural sector (towards an agroecology), strategies presented so far fall way short of what is required. In order to sustainably establish One Health, health, food and agricultural systems have to be reformed, and corresponding actors need to be integrated in crucial contexts.

In the course of the corona pandemic as a whole, one can observe health topics gaining attention and significance while the discourse on COVID-19, as well as global health as a whole, are however frequently confined to preventing and combating pandemics in the sense of a securitization of health (see Box 1). Crisis management is prioritized over other interventions. Instead of setting out from a holistic concept of health and concentrating on respecting human rights, crisis prevention is performed, thus addressing symptoms rather than causes. A more holistic approach with a longer-term perspective was already launched in 2015, with the Sustainable Development Goals, but was thwarted by the corona pandemic.

41 [https://health.bmz.de/wp-content/uploads/Strategiepapier550\\_one\\_health\\_en.pdf](https://health.bmz.de/wp-content/uploads/Strategiepapier550_one_health_en.pdf)

42 [https://globalcompactrefugees.org/sites/default/files/2020-06/BMZ\\_emergency\\_covid19\\_support\\_programme.pdf](https://globalcompactrefugees.org/sites/default/files/2020-06/BMZ_emergency_covid19_support_programme.pdf)

43 [https://www.bmz.de/de/presse/aktuelleMeldungen/2020/oktober/201027\\_pm\\_035\\_Minister-Mueller-kuendigt-Aufbau-eines-neuen-One-Health-Schwerpunkts-im-BMZ-an/index.html](https://www.bmz.de/de/presse/aktuelleMeldungen/2020/oktober/201027_pm_035_Minister-Mueller-kuendigt-Aufbau-eines-neuen-One-Health-Schwerpunkts-im-BMZ-an/index.html)

44 [https://health.bmz.de/wp-content/uploads/Strategiepapier550\\_one\\_health\\_en.pdf](https://health.bmz.de/wp-content/uploads/Strategiepapier550_one_health_en.pdf)

45 [https://health.bmz.de/wp-content/uploads/Strategiepapier550\\_one\\_health\\_en.pdf](https://health.bmz.de/wp-content/uploads/Strategiepapier550_one_health_en.pdf) p. 10

46 Cf. [https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5\\_Publikationen/Gesundheit/Broschueren/Global\\_Health\\_Strategy.pdf](https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5_Publikationen/Gesundheit/Broschueren/Global_Health_Strategy.pdf), p. 10. and p. 15.

A restricted view of global health is further encouraged by the interests of some global health actors, including those in chemical and pharmaceutical industry. Here, correspondingly limited and partly short-term approaches to solutions in the sense of medicalization (see Box 2) are being promoted not

only for the current crisis, but also for other and future global health challenges.

There is a chance that increased attention can also act as a pump-primer for urgently required health financing worldwide.

### Box 1: Securitization

In Global Health Security, health risks such as cross-border pandemics are regarded as security threats to a country's own population and economy and to the stability of entire regions which have to be combated just like terrorism. For this reason, the topic of health again and again appears on the agenda of the UN Security Council and the Munich Security Conference, as was the case recently at a roundtable meeting early in November 2020.<sup>47</sup>

Such an approach generally bears the danger of health issues only then being considered relevant if they represent a global security threat. As a result, other challenges are then marginalized: chronic, non-communicable diseases, social aspects of diseases and health, such as being discriminated because of disease, or restricted access to prevention and treatment owing to socioeconomic conditions, weak health systems, and hence insufficient access to treatment in poorer countries. Priorities are shifting more and more from a needs-focused to a risk-focused approach. In the current corona crisis, limited medical and personnel resources are concentrated on containing the pandemic. Essential health services such as preventive check-ups, mother-and-child health including midwifery, vaccination programs,<sup>48</sup> and tuberculosis and HIV treatment have been restricted. In addition, national interests in distributing vaccines against COVID-19 are prioritized.

### Box 2: Medicalization

In medicalization, health problems are predominantly seen as challenges which can be treated with vaccinations, medicines, or medico-technical measures.<sup>49</sup> Structural, socioeconomic, or political determinants of health and corresponding social or ecological measures are neglected. In contrast, according to the preamble of the WHO constitution, health is defined as: „a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.“<sup>50</sup>

Pharmaceutical industry is attributed a significant influence on the growing medicalization of health.<sup>51</sup> Agroecological approaches opting for a successive reduction or complete abandonment of pesticides and fertilizers as well as antibiotics in intensive livestock farming do not figure in any of the industry's proposed solutions. Rather, the branch is strongly lobbying against such an approach at various political levels.<sup>52</sup> It does not recognize its own contribution to the wide range of health problems occurring worldwide, including from industrialized agriculture and intensive livestock farming.<sup>53</sup>

47 <https://www.swp-berlin.org/10.18449/2019C32/>

48 <https://www.who.int/news/item/15-07-2020-who-and-unicef-warn-of-a-decline-in-vaccinations-during-covid-19>

49 Jocalyn Clark (2014). Medicalization of global health 1: Has the global health agenda become too medicalized? *Global Health Action*, *Lancet*, [https://www.researchgate.net/publication/262531473\\_Medicalization\\_of\\_global\\_health\\_1\\_Has\\_the\\_global\\_health\\_agenda\\_become\\_too\\_medicalized](https://www.researchgate.net/publication/262531473_Medicalization_of_global_health_1_Has_the_global_health_agenda_become_too_medicalized)

50 [https://www.who.int/governance/eb/who\\_constitution\\_en.pdf](https://www.who.int/governance/eb/who_constitution_en.pdf)

51 Clark (2014)

52 Cf. e.g. the massive lobbying activities by chemical industry and the agricultural corporations against the EU's 2020 „Farm to Fork“ and biodiversity strategy, as reported by Corporate Europe Observatory ([https://corporateeurope.org/sites/default/files/2020-10/CAP\\_Farm-to-Fork-Final\\_0.pdf](https://corporateeurope.org/sites/default/files/2020-10/CAP_Farm-to-Fork-Final_0.pdf)).

53 The chemical industry figures particularly among those branches posing a high risk for humans as well as the environment along its entire supply chain. However, the VCI (Verband der Chemischen Industrie) was among the industrial associations strongly campaigning against a German supply chain law which obliges German companies to protect human rights and the environment in their global supply chains (<https://lieferkettengesetz.de/wp-content/uploads/2020/07/Initiative-Lieferkettengesetz-Briefing-Wirtschaftslobby-gegen-Menschenrechte.pdf>).



At the same time, however, there is the danger of global resources for other important health problems and the social, economic, and ecological determinants of health being further reduced and being concentrated almost exclusively on preventing pandemics in the sense of a verticalization (see Box 3). COVID-19 has shown what a disadvantage such a focusing can cause. By not having previously succeeded in establishing healthcare coverage as a result of further concentrating resources on COVID-19 and measures to contain the pandemic, maternal and child mortality has risen, communicable diseases (tuberculosis, HIV) have

increased, and vaccinating against other diseases has been suspended.

Owing to COVID-19, setbacks have to be feared regarding achievements in the health sector over the last 20 years and concerning the SDGs, and it is going to be even more difficult than it was before the corona pandemic to achieve SDG 3 and other health related SDGs.

The restriction of the One Health approach is reflected in particular by the stronger focus on securitization, medicalization, and verticalization of health.

### Box 3: Verticalization

In verticalization, healthcare services are oriented on combating individual diseases such as tuberculosis, malaria, polio or HIV/Aids. It is in contrast to a horizontal and hence more holistic provision of health services via public-funded health systems, which is also referred to as comprehensive Primary Health Care (PHC) in the sense of the 1978 international Declaration of Alma-Ata.<sup>54</sup>

Tackling malaria, a further zoonosis – with genetically engineered mosquitos is an example of such a technical, vertical solution,<sup>55</sup> which contrasts with promoting good environmental and living conditions offering functioning wastewater systems and protected habitats.<sup>56</sup> The Bill & Melinda Gates Foundation has opted for this approach in particular with the so-called “Gene-Drive” technology, and is attempting to achieve an acceptance of this controversial technology with massive lobbying campaigns, as the so-called Gene Drive Files revealed in late October 2017.<sup>57</sup>

For donors and political institutions, vertical programs are attractive because they swiftly show measurable results and are simpler to manage than horizontal programs. Vertical health interventions have contributed to the extermination of smallpox and to significant progress in combating tuberculosis and HIV/Aids. However, they have also concentrated personnel and financial capacities of the already scarce resources that national health systems and international health financing dispose of solely on these disease areas. Creating healthy living conditions to prevent diseases and improving general healthcare have been marginalized.<sup>58</sup> Furthermore, diseases not attracting the attention of the donors have been neglected, such as the so-called Neglected Tropical Diseases (NTDs) and non-communicable, chronic diseases. All in all, an imbalanced healthcare system has developed. The consequences of this health policy have become apparent in the COVID-19 crisis, which has revealed completely overburdened health systems in which it has neither been possible to maintain regular healthcare services nor to respond to the pandemic.<sup>59</sup> Therefore, measures addressing certain diseases should also always strengthen the existing health systems and become horizontally integrated.

54 [https://www.who.int/publications/almaata\\_declaration\\_en.pdf](https://www.who.int/publications/almaata_declaration_en.pdf)

55 <http://genedrivefiles.synbiowatch.org/>

56 <https://www.brot-fuer-die-welt.de/blog/2019-malaria-kleiner-biss-grosse-wirkung/>

57 <http://genedrivefiles.synbiowatch.org/>

58 Cf. e.g. Béhague, D. P., & Storeng, K. T. (2008). Collapsing the Vertical–Horizontal Divide: An Ethnographic Study of Evidence-Based Policymaking in Maternal Health. *American Journal of Public Health*, 98(4), 644–649. doi:10.2105/ajph.2007.123117, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2376990/>.

59 Cf. e.g. <https://www.undp.org/content/undp/en/home/librarypage/transitions-series/covid-19-and-health-system-vulnerabilities-in-the-poorest-develop.html> and <https://www.healthpolicy-watch.org/the-covid-19-crisis-in-health-systems-prospects-for-recovery-the-view-from-italy/>

The first lessons that can already be learnt from the corona pandemic aim at a more or less successful change in behavior among the population (especially through hygiene measures). Furthermore, pursuing a securitization, medicalization, and verticalization, and for lack of an efficient and specific treatment of COVID-19 with drugs, one has opted almost exclusively for containment via vaccination and for stepping up pandemic response capabilities. But the corona pandemic in particular also shows how important the social determinants of health are and how vulnerable people living in poverty are. Frequently, poor people show higher levels of morbidity and mortality.<sup>60</sup>

### What German politicians ought to do to implement the One Health approach

A holistic implementation of the One Health approach has to **go beyond medico-technical measures to prevent zoonoses and resistance to antibiotics and above all address the systemic and structural causes of global health problems, including non-communicable diseases**. In order to restore a balance between humans, animals, and the environment, and thus strengthen the global health of all, and to strengthen the resilience of societies towards future pandemics, we call on the Federal Government to support the following measures both in Germany and in bilateral and multilateral cooperation:

#### 1. Supporting approaches avoiding negative impacts on the environment and the climate and overcoming underlying causes of diseases:

» improving the social, economic, and ecological determinants of health,<sup>61</sup> in particular to **overcome unequal distribution of power, income, and access to goods and services**, for example through measures to achieve gender justice, participation of vulnerable groups, a just architecture of (world) trade, in particular of the patent system, towards universal access to essential medicines,<sup>62</sup>

» **promoting balanced diets** with local production and diversified cultivation of food,

» **strengthening local food production systems and smallholder farmers** as well as regional economic areas to promote the resilience of societies,

» **changing agriculture, the food and livestock systems including the use of the seas and fish farming in the sense of agroecology**,

» **measures to combat climate change** in the sense of the One Health approach and support and adaptation measures for victims of climate change,

» **measures to maintain natural habitats and conserve biodiversity**.

#### 2. Strengthening public services and infrastructure for healthy people, animals, and the environment:

» **strengthening local public health systems**, for universal access to quality health services, especially for underserved and poor sections of the population (“Leave No One Behind”), and focusing on intersectoral, horizontal approaches such as Primary Health Care,

» **integrating indigenous, natural and allopathic medicine approaches as complementary health systems**,

» **strengthening public research and development capacities in the field of prevention, vaccines, diagnostics, and therapeutics** in the countries of the Global South and adapting them to the local health needs,

» **strengthening public veterinary health systems** in all their core activities taking into special consideration the provision of government

60 <https://www.bbc.com/news/world-asia-india-53576653> and Fernando Flores Tavares and Gianni Betti (2020). Vulnerability, Poverty and COVID-19: Risk Factors and Deprivations in Brazil

[https://www.researchgate.net/publication/340660228\\_Vulnerability\\_Poverty\\_and\\_COVID-19\\_Risk\\_Factors\\_and\\_Deprivations\\_in\\_Brazil](https://www.researchgate.net/publication/340660228_Vulnerability_Poverty_and_COVID-19_Risk_Factors_and_Deprivations_in_Brazil) and Adhikari S, Pantaleo NP, Feldman JM, Ogedegbe O, Thorpe L, Troxel AB (2020). Assessment of Community-Level Disparities in Coronavirus Disease 2019 (COVID-19) Infections and Deaths in Large US Metropolitan Areas. JAMA Netw Open. 2020;3(7):e2016938, <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2768723?resultClick=1>

61 <https://www.who.int/publications/i/item/WHO-IER-CSDH-08.1> and [https://www.who.int/social\\_determinants/strategic-meeting/en/](https://www.who.int/social_determinants/strategic-meeting/en/)

62 <https://www.patents-kill.org/>

veterinary services for underserved peripheral regions and running of combined vaccination campaigns for humans and animals for underserved groups of the population, in particular pastoralists.<sup>63</sup>

### 3. Politically coherent and accountable action:

- » **eye-level involvement of various actors based on the human rights approach**, in particular local civil society actors and communities in the formulation of strategies and considerations regarding political measures to prevent and cope with future health crises, with the **identification of possible conflicts of interest and power asymmetry among actors**,
- » **avoiding negative external effects of German politics and business**, e.g. through the mandatory obligation to respect environmental standards and human rights in global value chains, trade policy, and ending exploitative trade practices,
- » **promoting trans-, multi- and interdisciplinary cooperation** on One Health by the WHO, FAO, OIE, and UNEP, strengthening environmental authorities and ministries in countries of the Global South, and considering trans- multi- und interdisciplinary collaboration on One Health in development cooperation,
- » **active implementation of the One Health approach** in Germany, including through increased cooperation between the relevant Ministries (e.g. BMZ, BMEL, BMU, BMG, BMWi).<sup>64</sup>

63 Zinsstag et al. (2018). Climate change and One Health. In: FEMS Microbiol Lett. 2018 June; 365(11): fny085, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5963300/>

64 Federal Ministry for Economic Cooperation and Development (BMZ), Federal Ministry of Food and Agriculture (BMEL), Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Federal Ministry of Health (BMG) and Federal Ministry for Economic Affairs and Energy (BMW).<sup>64</sup>

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