



## ARTICLES

# ONE HEALTH IN THE EU: THE NEXT FUTURE?

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ABSTRACT: The *Article* investigates how the One Health concept is used in the European Union and what functions are attributed to it in EU laws and policies. To this end we conduct a systematic analysis of EU laws and policy documents, with specific emphasis on the European Green Deal and its actions. The first section outlines the main conceptual features of the evolving One Health approach over time. The second section analyses how European laws and policies have considered One Health over time, showing its erratic use. The third section is dedicated to analysing how One Health is taken into account by the Green Deal's actions. The conclusion recognises that the EU conceptualization and operationalization of One Health is far from being clear, coherent or concrete. However, we argue that a transition may be underway and One Health has the potential to become a new political and legal principle capable of permeating future EU actions towards a new phase of policy integration and sustainability.

KEYWORDS: One Health – European Green Deal – EU law – EU policies – sustainability – integration.

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## I. INTRODUCTION

The term “One Health”, which loosely refers to the interconnectedness of human, animal, and environmental health, originated in the natural sciences in the last century (see section II). It promotes a holistic view to systematically address health threats by valuing the interrelationships between its three dimensions (human, animal, and environmental health). In recent years, the term has gone from being used mainly by medical, veterinary, and epidemiological professionals to being increasingly used also in the language of politics, policy and even law. This rapid evolution raises some questions about the value and meaning of One Health from a policy and legal perspective.

In this context, and with regard to the value of concepts and definitions aimed at creating a common language in the scientific discourse, it has been remarked that “every science tends to create its own particular way of expressing itself, and the introduction of technical terms and expressions is not only *inevitable*, but *beneficial to its precision and rigour*” (emphasis added).<sup>1</sup> One wonders, therefore, whether the introduction of One Health into EU policy and legal discourse is “inevitable” or “beneficial to the precision and rigour” of either of these fields.

As for its “inevitability”, certainly we did not need the One Health approach to recognize the link between human, animal, and environmental health. In fact, the history and evolution of One Health shows that what is innovative and effective in this notion is not its content.<sup>2</sup> Rather, it is the methodology required for its implementation, which tends to create mechanisms and procedures for coordination, communication, collaboration, and capacity building.

Then, to be “beneficial to the precision and rigour” of a scientific field – especially that of social sciences – One Health ought to be identified by well-defined features and a clear scope. Yet, it is evident that the One Health approach and its implications continue to appear unclear and vague when referring to it, at least in the legal and socio-political sphere.<sup>3</sup> This has several causes, which are briefly outlined as follows.

<sup>1</sup> AA Martino, *Le definizioni legislative* (Giappichelli 1975), cited in F Cortese and M Tomasi, ‘Le definizioni nel diritto. Atti delle giornate di studio, 30-31 ottobre 2015’ (2016) Quaderni della Facoltà di Giurisprudenza 8: “Ogni scienza tende a creare il suo particolare modo di esprimersi, e l’introduzione di termini ed espressioni tecniche, non soltanto è inevitabile, ma giova alla sua precisione e rigore” (translated into English by the authors).

<sup>2</sup> M Bresalier, A Cassidy and A Woods, ‘One Health in History’, in J Zinsstag and others (eds), *One Health: The Theory and Practice of Integrated Health Approaches* (CABI 2021) 1-14; JS Mackenzie and M Jeggo, ‘The One Health Approach – Why is it so important?’ (2019) *Tropical Medicine and Infectious Diseases* 88.

<sup>3</sup> By way of example, what does the Regulation (EU) 2021/522 of the European Parliament and of the Council of 24 March 2021 establishing a Programme for the Union’s action in the field of health (‘EU4Health Programme’) for the period 2021-2027 mean when it states in art. 3: “(...) It [the Programme] shall pursue the following general objectives in keeping with the One Health approach, where applicable (...)” (emphasis added)? Or, what does the EU Commission intend when establish in the Biodiversity Strategy (Communication COM (2020) 380 final from the Commission of 20 May 2020 on the EU Biodiversity Strategy

To begin with, there is no unequivocal definition of One Health, and existing definitions vary considerably.<sup>4</sup> Moreover, the concept of One Health still seems to be a prerogative of the natural sciences; the latter were certainly primarily responsible for its origin, and it seems clear that as of today they can also be considered the major contributors to its development.<sup>5</sup> One Health is most clearly relevant at the medicine-veterinary nexus, where it continues to be used mainly in relation to the prevention of pandemics, antimicrobial resistance (AMR), zoonosis, and emerging infectious diseases.

In parallel, one can observe a buoyant tendency (from both scholars and inter-governmental organizations) to broaden the scope of One Health, applying it to the fight against climate change and biodiversity loss, the achievement of food security, and the transition towards sustainable food systems, to name a few.<sup>6</sup> This tendency is compounded by the mainstreaming of the term “One Health” in public discourse: indeed, especially after the Covid-19 pandemic, One Health has been used often by public authorities and in official documents, although with little awareness of its implications.<sup>7</sup>

for 2030 Bringing nature back into our lives) that “the EU will enhance its support to global efforts to apply the One Health approach, which recognizes the intrinsic connection between human health, animal health and healthy resilient nature” (emphasis added).

<sup>4</sup> Several definitions are discussed in the following paragraphs of the text. A definition often considered by doctrine is: “One Health is an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes” (WHO, 2017, [www.who.int](http://www.who.int)).

<sup>5</sup> See S Humboldt-Dachroeden, O Rubin and S Sylvester Frid-Nielsen, ‘The state of One Health research across disciplines and sectors – a bibliometric analysis’ (2020) *One Health* 10, 100146: the bibliometric analysis showed an increasing interest for One Health in academic research. However, it revealed some thematic and disciplinary shortcomings, in particular with respect to the inclusion of environmental themes and social science insights pertaining to the implementation of One Health policies. It is worth also mentioning that the One Health European Joint Programme (OHEJP, see [www.onehealthjep.eu](http://www.onehealthjep.eu)), launched in 2018 with the aim of creating a European partnership to strengthen transdisciplinary cooperation and integration of activities between institutes, does not include social sciences in its mandate. But even the One Health High Level Expert Panel (see section I) is mostly composed of natural scientists: out of 26 experts only two have a background in social sciences (in the fields of public policy and anthropology) and no legal experts were involved (see [www.who.int](http://www.who.int)).

<sup>6</sup> See, among others, IOM (Institute of Medicine), ‘Improving food safety through a One Health approach’ (The National Academies Press 2012) 15; SN Garcia, BI Osburn and MT Jay-Russell, ‘One Health for Food Safety, Food Security, and Sustainable Food Production’ (2020) *Frontiers in Sustainable Food Systems* [www.frontiersin.org](http://www.frontiersin.org); Global Hunger Index, ‘One Decade to Zero Hunger - Linking Health and Sustainable Food Systems’, (2020); G. Parent and L Collette, ‘Transforming agri-food systems – Legislative interventions for improved nutrition and sustainability’ (FAO Legal Papers 107-2021); J Iain Gordon and others, ‘Food security and nutrition’, in J. Zinsstag and others (eds), *One Health: the theory and practice of integrated health approaches*, (CABI 2021), 327-343; C Stephen, C Duncan and S Pollock, ‘Climate Change: The Ultimate One Health Challenge’, in J Zinsstag and others (eds), *One Health: the theory and practice of integrated health approaches* (CABI 2021), 205-216.

<sup>7</sup> These mentions are frequently confined to the declaration of principle of wanting to adopt a One Health approach, without explaining what this means or entails. By way of example only, reference is made to the Communication of the Ministers of Agriculture on the occasion of the G7 Pathways Towards Sustainable Food

These trends are probably at the origin of the mounting interest in One Health that can be observed in social sciences<sup>8</sup>, which are expected to develop the role that One Health can play in the context of public policy and law, and to contribute to its implementation.

In other words, a conceptual transformation might be underway, with several drivers (sometimes pushing in opposite directions) determining not only a change in the notion of One Health, but also in its future applications. The European Union seems to be an intriguing testing ground to analyse this transition.

In this regard, the present *Article* seeks to investigate how the European Union conceives the One Health approach and what functions and role (if any) it attributes to it in its law and policy making, specifically in the green transition launched by the European Green Deal.<sup>9</sup> The research emphasises the European Green Deal (and its strategies) for two main reasons: 1) because it has the ambition to shape the future of the EU, outlining innovative commitments and directing future actions; 2) because its progressive implementation has been affected by the Covid-19 pandemic, with the result that most of the Green Deal's actions now contain public health considerations and measures alongside environmental ones. Thus, the awareness of the need to jointly address climate change and health threats has never been more intense. In this context, One Health could represent a crucial tool for the achievement of goal setting and profound structural change.

The following section outlines the main features of the One Health approach (section II). The third section provides the general context of the topic in question, illustrating how European laws and policies consider One Health and what role they respectively assign to it (section III). The fourth section is devoted to the analysis of the European Green Deal's actions (section IV). The conclusion presents the main findings, attempting to answer the following research question: how does the Green Deal address the One Health approach?

Systems in Times of Crises (Berlin, 14 May 2022) [www.bmel.de](http://www.bmel.de); the Declaration of the Ministers of Health on the occasion of the G20 (Rome, 5-6 September 2021), available at [www.salute.gov.en](http://www.salute.gov.en); to the Declaration of Rome concluded on the occasion of the Global Health Summit (Rome, 21 May 2021) [global-health-summit.europa.eu](http://global-health-summit.europa.eu); to the Speech by the President of the European Commission Ursula Von der Leyen, at the One Planet Summit for Biodiversity (Paris, 11 January 2021) available at [ec.europa.eu](http://ec.europa.eu).

<sup>8</sup> By way of example only, see: M Whittaker, B Obrist and M Berger-Gonzalez. 'The role of Social Sciences in One Health - Reciprocal Benefits', in J Zinsstag and others (eds), *One Health: the theory and practice of integrated health approaches* (CABI 2021), 71-87; L Wettlaufer and others, 'A Legal Framework of One Health: the Human-Animal Relationship', in J Zinsstag and others (eds), *One Health: the theory and practice of integrated health approaches* (CABI 2021), 135-144; MK Lapinski, JA Funk, LT Moccia, 'Recommendations for the role of social science research in One Health' (2015) *Social Science & Medicine* 51-60; S Humboldt-Dachroeden, 'A governance and coordination perspective - Sweden's and Italy's approaches to implementing One Health' (2022) *SSM - Qualitative Research in Health* 2, 100198.

<sup>9</sup> Communication COM (2019) 640 final from the Commission of 11 December 2019 on the European Green Deal.

## II. THE ONE HEALTH APPROACH: MAIN CONCEPTUAL FEATURES

One Health encapsulates a straightforward, and certainly not cutting-edge, concept which recognises the interconnection between human health, animal health and environmental health.<sup>10</sup> Its main feature is, thus, to embed an integrated and systemic idea of health, the implementation of which is essential not only for scientific progress, but also for the design of effective and coherent policies addressing global challenges. To do this, the three components of One Health are to be considered and managed together by scientists, policy-makers, and possibly stakeholders, through coordination, collaboration, and capacity building.<sup>11</sup>

The meaning of the term can be fully grasped through a quick overview of its history. “One Health” is derived from “One Medicine”, whose origin dates to the 20<sup>th</sup> century and is attributed to the American veterinarian Calvin W. Schwabe.<sup>12</sup> “One Medicine” was used primarily for the development of new treatments and vaccines for animals and humans and was based on the idea that human and veterinary medicine should contribute to each other’s development. Therefore, its implementation was meant to address new threats at the animal-human health interface, involving almost exclusively the epidemiological field. The evolution from “One Medicine” to “One Health” takes place “through practical implementation and careful validation of contemporary thinking on health and ecosystems and their relevance for global public and animal health development”.<sup>13</sup> Thus, the addition of the third component – ecosystem – has made it possible to go beyond the human-animal health nexus, by also taking into consideration the environment that they share and in which they co-exist.

The spread of the term “One Health” mainly occurred from 2004 onward, when the Wildlife Conservation Society organized the symposium “Building Interdisciplinary Bridges to Health in a Globalized World” in New York. The symposium gave rise to the expression “One Health, One World” and resulted in the “Manhattan Principles”, 12 recommendations addressed to governments, policymakers, and scientific institutions, to

<sup>10</sup> For an overview of the One Health approach and its foundations, see F Coli, ‘L’Approccio One Health’ *Rivista di Diritto Agrario* 3/2022 (forthcoming). The Author is currently pursuing a PhD in Agri-food law, with a project on the implementation of the One Health approach in the transition to sustainable food systems, focusing mainly on the European context.

<sup>11</sup> See, One Health High-Level Expert Panel (OHHLEP), WB Adisasmito and others, ‘One Health: A new definition for a sustainable and healthy future’ (2022) *PLoS Pathog* 2: “Central to this definition is actual implementation (...), taking One Health from theory to practice, as highlighted by the 4 Cs: Communication, Coordination, Collaboration, and Capacity building”.

<sup>12</sup> M Bresalier, A Cassidy and A Woods, ‘One Health in History’ cit.; MC Schneider and others, ‘One Health From Concept to Application in the Global World’ (2022) *Oxford Research Encyclopedia of Global Public Health*.

<sup>13</sup> J Zinsstag and others, ‘From “one medicine” to “one health” and systemic approaches to health and well-being’ (2011) *Preventive Veterinary Medicine* 149.

holistically approach issues linked to diseases among human, domestic animal, and wild-life populations.<sup>14</sup> In 2019, the “One Planet, One Health, One Future” conference led to replace the “Manhattan Principles” with the so-called “Berlin Principles”.<sup>15</sup> The latter aimed at restoring the health and integrity of ecosystems in the logic of One Health, applying it also to the fight against climate change. This update revealed two main interdependent needs, which still exist today: to shed light on the environmental component of One Health, which has traditionally been overshadowed by the others (human and animal); and the attempt to broaden the scope of One Health, which is strongly limited to the epidemiological, medical, and veterinary fields.

A first step towards fulfilling the two requirements mentioned above seems to have been achieved in 2021, with a new and “comprehensive” definition of One Health that has the potential to gain legitimation and be endorsed by the most relevant actors and sources at the international, regional, and national level. The definition was put forward by the One Health High Level Expert Panel (OHHLEP), a group of 26 independent experts on One Health, which was created thanks to the so-called “Quadripartite” (or “Tripartite Plus”), the partnership on One Health involving FAO, WHO, OIE, UNEP. The “Quadripartite”, and its previous format the “Tripartite” (FAO, WHO, OIE), has given a fundamental boost to the development of the approach since the early 2000s, achieving several important results,<sup>16</sup> of which the creation of the OHHLEP is certainly one of the most significant. According to the definition:

“One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes that the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent. The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development”.<sup>17</sup>

It thus expresses the intention to make One Health a methodology potentially applicable to some of the key challenges facing humanity in this century (e.g., food and nutrition security and sustainable development), paving the way – at least in theory – for a new phase in the use of the term. This new phase requires One Health to become operational and to come closer to national and regional constituencies, including by finding its own place in the European legal system.

<sup>14</sup> The text of the “Manhattan Principles” is available at [www.oneworldonehealth.wcs.org](http://www.oneworldonehealth.wcs.org).

<sup>15</sup> The text of the “Berlin Principles” is available at [www.oneworldonehealth.wcs.org](http://www.oneworldonehealth.wcs.org).

<sup>16</sup> For instance, the *Tripartite Guide to addressing Zoonotic Diseases in Countries* (FAO, OIE, WHO, 2019), which sets forth best practices for countries to implement the One Health approach.

<sup>17</sup> One Health High-Level Expert Panel (OHHLEP), WB Adisasmito and others, ‘One Health: A new definition for a sustainable and healthy future’ cit.

### III. THE ONE HEALTH APPROACH IN EU POLICY AND LEGISLATION

Given the conceptual developments over time, we examine how the One Health concept is used in the European Union. In this section, we survey the One Health approach in EU policy and legislation by means of a systematic document analysis through EUR-Lex (the EU's official database for searching EU legal acts). From a purely quantitative point of view, the EUR-Lex query shows that the term 'One Health' was referred to a total of almost 450 times in EU documents.<sup>18</sup> It also shows that it has been used increasingly over the years: there is a stark increase from 2018 onwards (41 times in 2018 compared to 11 in 2017), with a peak in 2021 (where 116 citations were counted).<sup>19</sup> As far as the legal acts are concerned, the One Health approach is mentioned<sup>20</sup> in 8 Regulations,<sup>21</sup> 1 Directive (no longer in force)<sup>22</sup>, 7 Decisions,<sup>23</sup>

<sup>18</sup> According to EUR-Lex, the word "documents" should include legal acts, legislative acts, case-law, international agreements, preparatory documents, reports, and any type of document deriving from EU institutions, DGs and committees.

<sup>19</sup> As to the authority involved, the institution that has referred to the One Health approach more often is the European Commission (183 times), followed by the Council of the European Union (172 times), the European Parliament (91 times), the Directorate-General for Health and Food Safety (59 times) and the Committee on the Environment, Public Health and Food Safety (36 times). These results are updated to May 2023.

<sup>20</sup> These results are updated to November 2022.

<sup>21</sup> Regulation (EU) 2021/522, cit.; Regulation (EU) 2019/6 of the European Parliament and of the Council of 11 December 2018 on veterinary medicinal products and repealing Directive 2001/82/EC; Regulation (EU) 2022/123 of the European Parliament and of the Council of 25 January 2022 on a reinforced role for the European Medicines Agency in crisis preparedness and management for medicinal products and medical devices; Regulation (EU) 2019/4 of the European Parliament and of the Council of 11 December 2018 on the manufacture, placing on the market and use of medicated feed; Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013; Regulation (EU) 2016/429 of the European Parliament and of the Council of 9 March 2016 on transmissible animal diseases and amending and repealing certain acts in the area of animal health ('Animal Health Law'); Regulation (EU) of the European Parliament and of the Council of 6 October 2021 amending Regulation (EU) 2017/625 as regards official controls on animals and products of animal origin exported from third countries to the Union in order to ensure compliance with the prohibition of certain uses of antimicrobials and Regulation (EC) No 853/2004 as regards the direct supply of meat from poultry and lagomorphs; Council Regulation (EU) 2021/2085 of 19 November 2021 establishing the Joint Undertakings under Horizon Europe and repealing Regulations (EC) No 219/2007, (EU) No 557/2014, (EU) No 558/2014, (EU) No 559/2014, (EU) No 560/2014, (EU) No 561/2014 and (EU) No 642/2014.

<sup>22</sup> Council Directive 95/68/EC of 22 December 1995 amending Directive 77/99/EEC on health problems affecting the production and marketing of meat products and certain other products of animal origin.

<sup>23</sup> Commission Decision of 24 February 2022 declaring a concentration to be compatible with the common market; Decision (UE) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a General Union Environment Action Programme to 2030; Council Decision (EU) 2021/764 of 10 May 2021 establishing the Specific Programme implementing Horizon Europe – the Framework Programme for Research and Innovation, and repealing Decision 2013/743/EU; Commission Decision of 22 February 2011 concerning the adoption of a financing decision for 2011 in the framework of the second programme of

and as many as 22 Communications.<sup>24</sup> We analyse these in greater depth below.

### III.1. THE ONE HEALTH APPROACH IN EU POLICIES

We analysed the European Commission communications to understand how EU policies have addressed the One Health approach over the years. Communications represent the vision of the EU executive body, and as such they are useful administrative soft law measures, communication devices and interpretative tools about where the EU intends to go and by what means.

Community action in the field of health (2008-2013); Commission Implementing Decision of 1 July 2011 concerning the financing for the year 2011 of activities in the veterinary field related to the European Union's information policy, support of international organisations, disease notification and computerisation of veterinary procedures; 2009/158/EC: Commission Decision of 23 February 2009 on the adoption of the Work Plan for 2009 for the implementation of the second programme of Community action in the field of health (2008 to 2013), and on the selection, award and other criteria for financial contributions to the actions of this programme; 2006/89/EC: Commission Decision of 10 February 2006 adopting the work plan for 2006 for the implementation of the programme of Community action in the field of public health (2003-2008), including the annual work programme for grants.

<sup>24</sup> Communication COM (2022) 581 final from the Commission of 9 November 2022 on Revision of the EU action plan against wildlife trafficking; Communication COM (2022) 452 final from the Commission of 2 September 2022 on the EU response to COVID-19: preparing for autumn and winter 2023; Communication COM (2022) 404 final from the Commission of 16 June 2022 on the Conference on the Future of Europe; Communication COM (2022) 190 final from the Commission of 27 April 2022 on Covid-19 – Sustaining EU Preparedness and Response: Looking ahead; Communication COM (2021) 764 final from the Commission of 1 December 2021 on Addressing together current and new COVID-19 challenges; Communication COM (2021) 699 final from the Commission of 17 November 2021 on EU Soil Strategy for 2030; Communication COM (2021) 644 final from the Commission of 19 October 2021 on the 2021 Communication on EU Enlargement Policy; Communication COM (2021) 252 final/2 from the Commission of 18 May 2021 on the Global Approach to Research and Innovation; Communication COM (2021) 252 final from the Commission of 18 May 2021 on the Global Approach to Research and Innovation; Communication COM (2021) 400 final from the Commission of; Communication COM (2021) 82 final from the Commission of 24 February 2021 on Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change; Communication COM (2020) 761 final from the Commission of 25 November 2020 on Pharmaceutical Strategy for Europe; Communication COM (2020) 724 final from the Commission of 11 November 2020 on Building a European Health Union: Reinforcing the EU's resilience for cross-border health threats; Communication COM (2020) 442 final from the Commission of 27 May 2020 on the EU budget powering the recovery plan for Europe; Communication COM (2020) 381 final from the Commission of 20 May 2020 on a Farm to Fork Strategy; Communication COM (2020) 380 cit.; Communication COM (2019) 128 final from the Commission of 11 March 2019 on the European Union Strategic Approach to Pharmaceuticals in the Environment; Communication COM (2017) 0713 final from the Commission of 29 November 2017 on the Future of Food and Farming; Communication COM (2017) 339 final from the Commission of 26 June 2017 on A European One Health Action Plan against Antimicrobial Resistance (AMR); Communication COM (2017) 012 final from the Commission of 10 January 2017 on Safer and Healthier Work for All - Modernisation of the EU Occupational Safety and Health Legislation and Policy; Communication COM (2011) 0748 final from the Commission of 15 November 2011 on the Action plan against the rising threats from Antimicrobial Resistance; Communication COM (2010) 0128 final from the Commission of 31 March 2010 on the EU Role in Global Health.



Our analysis shows a clear and progressive change in the use of the term “One Health” by the European Commission over the period from 2010 to 2022.<sup>25</sup> To illustrate this path, we divided the reference period into three groups: 1) pre-Green Deal period, from 2010 to 2019; 2) transition period, from January 2019 to November 2019; 3) post-Green Deal period, from December 2019 to November 2022. This time partition is useful to assess whether the publication of the Green Deal coincided with a different conceptualization of One Health by the European Commission. Communications related to the Green Deal are not included here, as they are analysed in more detail in the next section.

1) In the pre-Green Deal period, we first encounter the term “One Health” in 2010<sup>26</sup>, where reference is made to “the concept of ‘one world, one health’”. Indeed, at that time, One Health was not perceived as an autonomous concept untethered from the Manhattan Principles (see Sec. II); instead, it appeared at best as an “initiative”<sup>27</sup> of the international arena. Moreover, the European Commission recognized One Health as expressing the unique link between human and animal health, not considering environmental health.<sup>28</sup>

Years later, the 2017 EU One Health Action Plan Against AMR was launched as a cornerstone of the One Health policy framework at the European level.<sup>29</sup> It represented a turning point for at least four reasons:

a) it includes the first ever definition of One Health provided by the EU.<sup>30</sup> The definition is noteworthy because it states that “the One Health approach *also* encompasses the environment” (italics added), which is only acknowledged as a link between humans and animals and as a source of new resistant microorganisms. Thus, the European Commission did not consider the three dimensions of One Health on the same level, instead adopting a rather intensely anthropocentric perspective that does not take into account the environment;

b) despite the narrow and likely inadequate formulation of the One Health definition, the Action Plan contains some remarks worth mentioning since they express the need to

<sup>25</sup> The analysis was conducted by searching the keyword “One Health” with the filter “Communication” on the official EU website “EUR-lex, Access to European Union law”. The search returned 22 results from 2010 to 2022. Of these 22 communications, those related to the Green Deal will not be considered in this section, as they will be analysed in more detail in the next section.

<sup>26</sup> Communication COM (2010) 0128 final, cit. 8.

<sup>27</sup> Communication COM (2011) 0748 final, cit. 4 and 14.

<sup>28</sup> Communication COM (2011) 0748 final, cit. 4: “Food and direct contact with animals may serve as a vehicle for the transmission of AMR from animals to humans emphasizing the link between human and veterinary medicine in line with the “One Health” initiative”; Communication COM/2017/0713 final, cit. 24: “In line with an ambitious and encompassing approach with regard to human and animal health - as embodied by the “One Health” concept - it should also promote the use of new technologies, research and innovation to reduce risks to public health”.

<sup>29</sup> Communication COM (2017) 339 final, cit.

<sup>30</sup> *Ibid.* 3: “One Health: is a term used to describe a principle which recognizes that human and animal health are interconnected, that diseases are transmitted from humans to animals and vice versa and must therefore be tackled in both. The One Health approach also encompasses the environment, another link between humans and animals and likewise a potential source of new resistant microorganisms”.

broaden One Health's scope. The document states, surprisingly, that "initiatives need to be broadened, for example by extending the One Health approach to include the environment"<sup>31</sup> and considers AMR as a "good example of a One Health matter"<sup>32</sup>. Thus, AMR is considered only as one of several issues where the approach is worth applying, paving the way to a wider understanding of One Health;

c) it correlates One Health with policy coherence, introducing the term in the context of policy-making;

d) it refers to One Health both as a "principle" and an "approach", giving it greater legitimacy than in the past, where it was acknowledged as an "initiative" or "concept"<sup>33</sup>.

2) In transition period, we only included one communication from March 2019, which was drafted a few months before the election of European Commission President Von der Leyen in July 2019, and thus before the publication of the Green Deal in December of the same year.<sup>34</sup> The communication refers to One Health as an "approach".<sup>35</sup>

3) In the post-Green Deal period, there are two communications that are worth noting. The first one, while returning to the use of the word "principle", puts the health of the planet at the centre, achieving a harmonious dynamic among the three dimensions of One Health: "the 'One Health' principle clearly recognizes that the health of the planet is closely linked with human and animal health. If one group is affected, this influences the health of the rest...".<sup>36</sup> The difference with the definition of the 2017 EU One Health Action Plan Against AMR is clear, in that "environment" is treated as an equal and not accessory dimension. The second communication of 2022, which takes a significant step forward, states that One Health should be emphasized as a "horizontal and fundamental principle encompassing all EU policies".<sup>37</sup>

The use of terms such as "approach" or "principle", rather than "initiative" or "concept", has the direct effect of rooting One Health within the European system. The term "approach" invokes a methodology, a way of doing something, a *modus operandi* that should be applied by institutions in their procedures. The term "principle" paves the way to a new configuration of One Health as means that should be taken into account by policy-makers in the policy-cycle process, or also by the judicial bodies in their legal interpretation.

### III.2. THE ONE HEALTH APPROACH IN EU LEGISLATION

In our research examining how One Health was incorporated in EU legislation, we identified 8 pieces of EU legislation that refer to it, largely in the recitals.

<sup>31</sup> Communication COM (2017) 339 final cit. 4.

<sup>32</sup> *Ibid.* 16.

<sup>33</sup> For example, Communication COM (2017) 713 final cit. 24 refers to it as a "concept".

<sup>34</sup> Communication COM (2019) 128 final cit.

<sup>35</sup> *Ibid.* 4.

<sup>36</sup> Communication COM (2021) 699 final cit. 12.

<sup>37</sup> Communication COM(2022) 404 final, document 2 cit. 8.

The earliest reference is in the Animal Health Law Amendment<sup>38</sup> (2016, recitals), which, however, simply refers to One Health, although its mention as a “principle” recognises – as said – its wider significance in law making and as a vision.

A number of legal instruments, such as the Mediated Feed Amendment<sup>39</sup> and the Veterinary Medicinal Products<sup>40</sup> regulations (both from 2019) in their recitals refer to the traditional understanding of One Health, i.e. narrowly denoting the intersection of animal and human health in the context of AMR. Other legal instruments through their recitals make an explicit link to the 2017 EU One Health Action Plan Against AMR – this is the case for the Official Controls from Third Countries<sup>41</sup> and the Horizon Europe Regulation.<sup>42</sup> The One Health Action Plan has also influenced the content of legislation. For instance, art. 118 of Veterinary medicinal products<sup>43</sup> ‘builds on’ the 2017 Communication.<sup>44</sup> Interestingly, the CAP Strategic Plan Regulation<sup>45</sup> enshrines a legal obligation to respect the 2017 EU One Health Action Plan Against AMR in art. 15(4)(c) on Farm Advisory Services, which stipulates that farm advisory services must cover “farm practices preventing the development of antimicrobial resistance as set out in the Commission communication”. Based on the overview of legal instruments that do mention the One Health approach to this date, we found that a majority deploys the One Health approach in its *AMR-specific* understanding.

However, even in its narrow iteration (which again, only recognises the interface between animal and human health in the context of AMR), the use of One Health is used to point to the need of engaging novel techniques, for “urgent and coordinated intersectoral action” (the Veterinary Medicinal Products Regulation<sup>46</sup>). The use of One Health in these legal instruments increasingly recognises the wider One Health concept as endorsed by the WHO and the World Organization for Animal Health, based on the understanding that human “health, animal health and ecosystems are interconnected”.

By far the most interesting legal development in legally binding instruments is put forward in the EU4Health Regulation, Regulation (EU) 2021/522.<sup>47</sup> It is synchronically adopted post-Green Deal, but ideologically it is not a result of the latter. The recitals refer to the 2017 EU One Health Action Plan Against AMR, but importantly, the document provides the first legal definition of the “One Health Approach” in its art. 2(5):

<sup>38</sup> Recital (9) Regulation (EU) 2016/429 cit.

<sup>39</sup> Recital (30) Regulation (EU) 2019/4 cit.

<sup>40</sup> Recital (41) Regulation (EU) 2019/6 cit.

<sup>41</sup> Recital (4) Regulation (EU) 2021/1756 cit.

<sup>42</sup> Recital (73) Council Regulation (EU) 2021/2085 cit.

<sup>43</sup> Art. 118 Regulation (EU) 2019/6 cit.: “Animals or products of animal origin imported into the Union”.

<sup>44</sup> As explicated in Recital (4) of the Official Controls from Third Countries, Regulation (EU) 2021/1756 cit.

<sup>45</sup> Regulation (EU) 2021/2115 cit.

<sup>46</sup> Recital (41) Regulation (EU) 2019/6 cit.

<sup>47</sup> Regulation (EU) 2021/522, cit.

“One Health approach’ means a multisectoral approach which recognises that human health is connected to animal health and to the environment, and that actions to tackle threats to health must take into account those three dimensions”.

Furthermore, the One Health approach acts as a binding (!) legal guiding principle in the pursuit of general objectives and specific objectives, that must be “pursue[d] (...) in keeping with the One Health approach” (arts 3 and 4). Within the Programme for the Union’s action in the field of health, One Health has therefore been elevated to an organisational principle.

With reference to the core conditions of One Health as applied in the EU4Health Regulation, some considerations can be made. The definition comprises a number of elements: *i*) multisectorial *ii*) human health-centered *iii*) need to recognise three dimensions (human health connected to animal and environment) and *iv*) an imperative for action to consider the three dimensions when taking action on health. The definition leaves a narrow focus of One Health to the context of AMR behind and broadens the scope of application of the One Health concept to all health actions. Added to this, One Health is implied to perform an integrative function across sectors – this notion of “multisectorial” is novel in the EU context, but may be regarded to flow from international policy documents.<sup>48</sup> Human, animal and environmental health are not obviously ranked, although the formulation of the definition presupposes human health as a *primus inter pares* and can therefore be regarded as anthropocentric. To compare, the official definition of OHHELP (or other international definitions) is that One Health recognizes that human health, animal health and environmental health are connected.

Interestingly, the novel wider definition of One Health has already been amplified by references to it in other legislation, namely the Reinforced EMA Regulation<sup>49</sup> (2022), which according to the recitals “reinforces” the EU4Health Regulation.

This view on EU legislation confirms the idea that One Health is an emergent underpinning approach or a principle. It shows an evolution from a narrow topical focus on AMR, and a specific policy (as enshrined in the 2017 Communication) towards a wider approach of integrative force. The definition of One Health in the EU4Health Regulation is specifically noteworthy, as it provides a legally anchored definition of One Health in the broad sense. This foreshadows that One Health can become a veritable approach or principle capable of fulfilling an integrative role in EU law and policy making to tackle health broadly, instead of AMR specifically.

<sup>48</sup> See *Tripartite Guide to addressing Zoonotic Diseases in Countries* cit., where there is the definition of “multisectoral” provided by the Tripartite.

<sup>49</sup> Regulation (EU) 2022/123 cit.

#### IV. THE ONE HEALTH APPROACH IN THE EUROPEAN GREEN DEAL

The European Green Deal<sup>50</sup> aims to change European society toward global well-being for present and future generations, with the ultimate goal of achieving climate neutrality by 2050. The communication consists of several instruments (e.g., legislative proposals, action plans, strategies) referring to different sectors, including climate, environment, energy, agriculture, transport, and industry, which are supporting the green transition.

We adopted a qualitative methodology to analyse whether and how the European Green Deal addresses One Health, following defined steps. We based our research on the Annex of the Communication on the European Green Deal, which provides the roadmap and key actions (strategies, action plans, proposed regulations, etc.). We analysed all actions in the Annex available as of July 2022, searching for the keyword 'One Health' within each of them. Out of more than fifty documents stemming from the Annex, just five of them refer to the One Health Approach: the Biodiversity Strategy<sup>51</sup>; the Farm to Fork Strategy<sup>52</sup>; the EU Strategy on Adaptation to climate change<sup>53</sup>; the Zero Pollution Action Plan for Water, Air and Soil<sup>54</sup>; and the Decision on a General Union Environment Action Programme to 2030.<sup>55</sup>

The Biodiversity Strategy, para. 4.2.3, states that the "EU will enhance its support to global efforts to apply the One Health approach, which recognizes the intrinsic connection between human health, animal health and healthy resilient nature". Quite innovatively, "resilient nature" is mentioned, introducing a new nuance to the concept. However, One Health is not presented as a guiding principle embedded in the EU system, but as an approach belonging to the international arena, which the EU can at best support ("support the global context").

The Farm to Fork Strategy, para. 2.1, only mentions One Health in relation to the Regulation on veterinary and medicinal products, which should "promote" it. This illustrates the Farm to Fork Strategy's dedication to a "narrow" or traditional conception of One Health, considering that the reference is made in the context of the fight against AMR.

The EU Strategy on Adaptation to climate change contains, in para. 2.1.3, an interesting reference to the term: "The Commission will pool and connect data, tools and expertise to communicate, monitor, analyse and prevent the effects of climate change on human health, based on a 'One Health' approach". One Health is, thus, considered as an approach (i.e., a tool; a methodology to adopt; a procedure to follow) to communicate, monitor, analyse, prevent and monitor the effects of climate change on human health.

<sup>50</sup> Communication COM (2019) 640 final cit.

<sup>51</sup> Communication COM (2020) 380 final cit.

<sup>52</sup> Communication COM (2020) 381 final cit.

<sup>53</sup> Communication COM (2021) 82 final cit.

<sup>54</sup> Communication COM (2021) 400 final cit.

<sup>55</sup> Decision (EU) 2022/591 cit.

This leads to two considerations. First, applying this step would involve an internal operationalization of One Health within the mechanism of the management of climate change's effects: this would be an intriguing European-level test case on how to use and institutionalize One Health. Second, the view emerging from the Communication reflects an anthropocentric perspective on the role of One Health, considering that not only humans are affected by climate change, but also animals and nature. Indeed, scholars noted that One Health could be pivotal in simultaneously protecting humans, animals and the environment from the impacts of climate change.<sup>56</sup>

The Zero Pollution Action Plan, in contrast, takes up the narrative of the “international arena” supported by the Biodiversity Strategy, establishing, in para. 3.3, that: “the Commission will work with the Tripartite Plus organisations (WHO, FAO, OIE, UNEP) to reach a renewed global and effective One Health consensus on environmental pollution”. However, it refers to “environmental pollution”, an issue that is not generally associated with One Health: this, on the one hand, confirms the tendency to try to broaden the scope of One Health; on the other, it risks remaining an empty statement, in the absence of any attempt at implementation.

Finally, Decision 2022/591 is noteworthy in that it emphasises, in Recital (27), the “Importance of applying the multi-sectoral One Health approach in policy-making”. This is significant, since it expresses the concrete needs to incorporate One Health in the policy-cycle procedure.

Overall, the use of the One Health concept in the Green Deal is highly erratic.

## V. CONCLUDING DISCUSSION

In our research, we have analysed One Health and its evolution over time by surveying policy documents and legislation. We show that next to the traditional AMR focused definition of One Health, a wider notion that recognizes the interconnection between human health, the environment and animal health is emergent, although very erratically so. The main findings of the research are the following:

*a) The Green Deal does not give a specific role to One Health:* the various policy initiatives do not systematically consider One Health or give it a defined purpose to enable its operation. As mentioned in the introduction, the link between public health and green and sustainable transition in Europe has never been as close as it is in recent years given the implementation of the Green Deal and its strategies. In this context, an operationalization of One Health as a means to achieve set goals could have been a choice of European

<sup>56</sup> J Zinsstag and others, ‘Climate Change and One Health’ (2018) FEMS Microbiology Letters 1: “The journal The Lancet recently published a countdown on health and climate change. Attention was focused solely on humans. However, animals, including wildlife, livestock and pets, may also be impacted by climate change. Complementary to the high relevance of awareness rising for protecting humans against climate change, here we present a One Health approach, which aims at the simultaneous protection of humans, animals and the environment from climate change impacts (climate change adaptation)”.

policymakers. Instead, what emerged from the research is that the EU Commission certainly referred to One Health in a few strategies, but assigned it different meanings, scopes and functions. In fact, it has been mentioned in relation to climate change, resilient nature, AMR, environmental pollution, and policymaking. Although these references have the undoubted value of linking the term to different issues other than AMR alone, they lack the leverage needed to go further and provide some inputs for its implementation or operationalization. Furthermore, the publication of the Green Deal does not appear to coincide with a different conceptualisation of One Health by the European Commission. Rather, the evolution of how the EU refers to the term seems to be the result of the different trends and pushes described in the introduction;

*b) One Health – AMR nexus is still dominating:* at the EU level, One Health is still mainly applied in the fight against AMR (and similar issues), despite the new all-encompassing definition of Regulation 2021/522 (as well as that of the OHHELP) and the isolated attempt of some Green Deal strategies to broaden its scope as identified above. Thus, the 2017 EU One Health Action Plan Against AMR is still considered the most relevant document embedding One Health at the EU level. In this context, the role of sustainability should be enhanced. Indeed, it could play a crucial role in overcoming the current limitations of the narrow One Health understanding in the context of the AMR nexus, emphasising the ecological dimension of health, rather than the medical or epidemiological one. Therefore, the new and wider One Health definition provided by the OHHELP, which opens a conceptual bridge between the human-animal-health interface and sustainability discourses, should be leveraged to lay the foundations for a solid, broader and more integrated conceptualisation of One Health;

*c) The inception of a future One Health approach or principle:* One Health is still mainly a “policy tool”, but it is creeping more and more into the legally binding texts. Regulation 2021/522 has the great merit to use, for the first time, One Health as a binding legal guiding principle in the pursuit of said objectives. This paves the way to a new phase in which One Health could be conceived as a tool to foster a paradigm shift not only in the health sector (*stricto sensu*), but also in the food, pharmaceuticals, chemicals, environmental and social ones. So far, the One Health principle is not read in relation to art. 168(1) TFEU that a high level of human health shall be ensured in all Union policies and activities, or in relation to the overarching mandate that environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities of art. 11 TFEU and animal welfare of art. 13 TFEU. Although capable of providing constitutional legitimacy for a One Health approach, a One Health principle goes further in that it addresses the interrelationship between these areas. In this regard, it should be emphasised that the Communication on the Conference on the Future of Europe<sup>57</sup> recommends that the term

<sup>57</sup> Communication COM (2022) 404 final, cit.

be conceptualized as a “horizontal and fundamental principle encompassing all EU policies”<sup>58</sup>. This not only implies the definitive adoption of the wide definition of One Health, but also its operationalization, and institutionalization. On this last point, is worth noticing that last October 2022 a new One Health Unit has been created within the DG SANTE (Directorate-General on Health and Food Safety) of the European Commission: the One Health role in the next future will depend also on its mandate and mission. Furthermore, the EU agencies have recognized the value of One Health in enabling transdisciplinary cooperation “with and among” EU agencies and are actively shaping this idea.<sup>59</sup>

The current political cycle represents a “green” and more widely “sustainable” re-orientation of all EU policy areas. However, this process, which formally started with the publication of the Green Deal and is still ongoing, has so far not led to a satisfactory integration of different policy-making arenas. Different sectors continue to develop in idiosyncrasy, and the integration or alignment of veterinary medicine, pharmaceuticals, food, chemical regulation, nature conservation, biodiversity, and other areas still seems to be a legal terrain to be explored. One Health can play an important role in systemic coherency, and it could represent the next generation, post-Green Deal, of political and legal principles, capable of permeating future EU actions, based on a new integrative and sustainable policy on the human-animal-environment health nexus.

<sup>58</sup> *Ibid.* document 2, p. 8.

<sup>59</sup> S Bronzwaer and others, ‘One health collaboration with and among EU Agencies–Bridging research and policy’ (2022) One Health, 100464.