Climate Change and Pandemics: The EU Risk-Management Strategy Under Scrutiny

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Abstract
Coronavirus and climate change are not two different crises. They represent two sides of the same significant turmoil relating to the progressive degradation of our environmental and health ecosystems. Against this backdrop, and in light of, not only, the cyclical time of pandemics, but also of the predictable occurrence of a new pandemic associated with the worsening of the climate crisis, what should EU law do to prevent and better manage the occurrence of such risks? To answer this question, the core claim of this paper is that the EU should implement a common, coordinated, and consistent risk management strategy.

Keywords
Climate change, Covid-19, risk-analysis, principle of subsidiarity, precautionary principle, principle of non-regression.

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“The time to fix the roof is when the sun is shining” (John F. Kennedy)

1. Introduction

“An absent dog does not bark, says an African proverb.” One can hardly accuse the media of being absent during the coronavirus pandemic; many outlets have run stories about little else. But focussing on the virus has distracted the media from its watchdog function on other matters of public importance, including the climate crisis. The same conclusion can be reached at the political level: the spreading of Covid-19 seems to have taken EU decision-makers away from pursuing the roadmap aimed at tackling the climate emergency. Yet, not only does climate change seem to have disappeared from the media and political discourse, but also some of the milestones in the fight against climate change may have been undermined by the coronavirus outbreak. As an example, hydro-alcoholic gel flasks, plastic-packaged food, and other single-use plastic products yesterday pointed at by zero-waste advocates and European regulators are now massively used. The situation is particularly striking with regard to polypropylene protective masks. Research shows that to support the lifting of containment measures in the coming months, in Italy alone more than 1 billion single masks may be used every month and very few of them will be recycled. The use of polymers, 99% of which are produced from oil, gas, or coal, is now spreading along with coronavirus. This represents a strong comeback that the plastic industry intends to exploit by promoting the slogan that plastic bags save lives and that plastic bags would be the ultimate guarantee of hygiene, unlike reusable cloth bags, which are accused of

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1 COVERING CLIMATE NOW, Silence of the Climate Watchdogs, 8 April 2020, https://www.coveringclimatenow.org/climate-beat/silence-of-the-climate-watchdogs.

2 N. DE SADELEER, J. GODFROID, COVID-19 is an Environmental Crisis Too, 6 April 2020, http://www.internationalaffairs.org.au/australianoutlook/covid-19-is-an-environmental-crisis-too/.

3 LA REPUBBLICA, Coronavirus, allarme smaltimento mascherine: *Non è sostenibile, serve filiera per il riciclo*, 7 May 2020, https://www.repubblica.it/ambiente/2020/05/07/news/coronavirus_allarme_smaltimento_mascherine_non_e_sostenibile_serve_fili.../255932095/?ref=fbpa&fbclid=IwAR1Q7Rh6lGtH0Pew7vKTYn96hN_C9tl4mggDxeuPPUPmSXHRjIJoqrr6bI8.

Electronic copy available at: https://ssrn.com/abstract=3648064
being breeding-grounds for viruses.\textsuperscript{4} This is despite the fact that scientific studies agree that plastic is, along with steel, the surface on which the coronavirus is most stable.\textsuperscript{5} Against this backdrop, the lobby of European plastic companies, in a letter to the EU Commission on 8 April, called on the Commission to postpone for at least one year the implementation of Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment.\textsuperscript{6} In this context, the Italian government decided to postpone until January 2021 the plastic tax of 45 euro cents per kilo, which was due to come into force in July 2020.

Despite the tendency to focus on the coronavirus crisis and to neglect the climate crisis, these two crises are intertwined. Coronavirus and climate change are not two different crises. They represent two sides of the same significant turmoil relating to the progressive degradation of our environmental and health ecosystems. In this regard, the French High Council for Climate underlined that most of the structural causes of the Covid-19 pandemic are also at the origin of climate change and, thus, it is necessary to accelerate the green transition to strengthen our resilience to both climate risks and health crises stemming from a pandemic.\textsuperscript{7} The correlations between climate change and the Covid-19 crisis are, at least, twofold. First, people generally think that viruses have always existed, that epidemics have nothing to do with the state of biodiversity or climate change. Yet, in recent decades, they have been on the rise. According to the World Health Organization (WHO), 60% of new human infectious diseases are of zoonotic origin, i.e., they are transmitted by animals: Rift Valley Fever, SARS, H1N1, yellow fever, avian influenza H5N1, H7N9, MERS-CoV, and now very likely Covid-19.\textsuperscript{8} Even if its origin is still uncertain, several virological, epidemiological, and ethnographic arguments suggest that coronavirus has a zoonotic origin. The pangolin, a species on the verge of extinction, is now suspected of having facilitated the transmission to humans of a virus that probably originated in a species of bat. Human predation “of wild fauna and the reduction in habitats have thus ended up creating new

\textsuperscript{4} CENTER OF THE AMERICAN EXPERIMENT, Plastic Bags Save Lives, So Why are “Environmentalists” Trying to Ban Them? 16 March 2020, \url{https://www.americanexperiment.org/2020/03/plastic-bags-save-lives-so-why-are-environmentalists-trying-to-ban-them/}.

\textsuperscript{5} N. Van Doremalen, T. Bushmaker, D.H. Morris, Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1 in \textit{The New England Journal of Medicine}, 16 April 2020, \url{https://www.nejm.org/doi/full/10.1056/NEJMc2004973}.

\textsuperscript{6} Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment, \textit{OJ L 155, 2019, p. 1–19}.

\textsuperscript{7} HAUT CONSEIL POUR LE CLIMAT, Climat, Santé: mieux prévenir, mieux guérir, \url{https://www.hautconseilclimat.fr/publications/climat-sante-mieux-prevenir-mieux-guerir/}.

\textsuperscript{8} LE MONDE, Coronavirus: « Les animaux qui nous ont infectés ne sont pas venus à nous ; nous sommes allés les chercher », 29 March 2020, \url{https://www.lemonde.fr/idees/article/2020/03/29/coronavirus-la-pandemie-demande-que-nous-re-definissions-un-contrat-naturel-et-social-entre-l-homme-et-la-nature_6034804_3232.html?utm_term=Autofeed&utm_medium=Social&utm_source=Twitter#Echobox=1585462267}.
interfaces that allow the passage of pathogens, mainly viruses, to humans.⁹ The emergence of these infectious diseases is, therefore, a consequence of our increasing attempts to control the natural environment. We are deforesting and bringing wild animals hounded from their natural habitat into contact with domestic livestock in unbalanced ecosystems close to urban areas. In this way, we are offering infectious agents new chains of transmission that benefit from the vast network of diffusion opened up by the interconnections between their potential hosts, humans.¹⁰ As has been clearly stated by some scientists, there is no doubt that by destroying biodiversity and deforesting, we are in the process of unearthing powerful monsters, of opening a Pandora's Box which has always existed, but which is now releasing a flood of ever-increasing microorganisms. Second, it appears that there might be a link between air pollution and coronavirus. On the one hand, some studies indicate that coronavirus causes a higher death toll among patients in areas - like the north of Italy - with slightly increased levels of a particularly dangerous form of air pollution. A study from Harvard University links an increase in fine particle exposure levels of just one microgram per cubic meter of air with a 15% higher death rate from Covid-19.¹¹ On the other hand, a sharp reduction in the concentration of nitrogen dioxide - a pollutant mainly emitted from motor vehicle emissions and produced as a result of road traffic - can be seen in Northern Italy during the coronavirus lockdown, which led to dramatically reduced traffic and industrial activities.¹² Data from the European Environmental Agency confirms this trend by stating that also in other EU Member States concentrations of nitrogen dioxide have significantly decreased where lockdown measures have been implemented.¹³ These data corroborate the existence of a relationship between human activities and climate change. Specifically, they suggest that the continuous degradation of the environment is not neutral for humans, but is an aggravating phenomenon that, in the context of future predictable pandemics, may play a major role in increasing the level of harm to the environment and our health.

⁹ DE SADELEER, J. GODFROID, COVID-19 is an Environmental Crisis Too, cit.
¹⁰ LIBÉRATION, La prochaine pandémie est prévisible, rompons avec le déni de la crise écologique, 8 April 2020, https://www.liberation.fr/debats/2020/04/08/la-prochaine-pandemie-est-previsible-rompons-avec-le-denier-la-crise-ecologique_1784471?utm_medium=Social&utm_source=Facebook#Echobox=1586329478.
¹¹ X.WU, R.C. NETHERY, Exposure to air pollution and COVID-19 mortality in the United States, Harvard T.H. Chan School of Public Health, 5 April 2020.
¹² DE SADELEER, J. GODFROID, COVID-19 is an Environmental Crisis Too, cit.
¹³ EUROPEAN ENVIRONMENT AGENCY, Air quality and COVID-19, 4 April 2020, https://www.eea.europa.eu/themes/air/air-quality-and-covid19.
Notwithstanding the interdependences between climate change and pandemics, when a danger appears, “we first try not to see it.”\textsuperscript{14} Even if the tremendous risks linked to climate change have been known since the 1970s, the actions taken to fight what can be considered as “the most urgent story of our time”\textsuperscript{15} have so far failed to address such risk.\textsuperscript{16} Likewise, even if the emergence of zoonotic pandemics was predictable and the outbreak of Covid-19 in China in January 2020 should have alerted EU Member States to the risks of rapid contagion, they delayed taking protective measures until the spread of coronavirus was already significant in their territories, thus exacerbating the consequences (sanitary, social, and economic) of the pandemic.\textsuperscript{17}

In this scenario, given the cyclical timing of pandemics - indeed, according to the WHO, pandemics may cause several waves of severe epidemics after the first outbreak\textsuperscript{18} - and the predictable occurrence of a new pandemic associated with the worsening of the climate crisis,\textsuperscript{19} what should EU law do to prevent and better manage the occurrence of such risks? To answer this question, the core claim of this paper is that the EU should implement a common, coordinated, and consistent risk management strategy.

2. A Common Risk-Management Strategy

First of all, EU institutions and Member States should implement a common risk-management strategy that encompasses both climate change and pandemics. The existence of a strict connection between health and environmental risks is not new. Article 191 para 1 TFUE provides that the protection of human health is an objective of EU environmental policy. This means – as stated by the Court of Justice of the European Union (“CJ”) - that when taking actions to preserve the environment, decision-makers must also ensure that human health is protected.\textsuperscript{20} Moreover, under the 7th Action Program for the

\textsuperscript{14} J. DELUMEAU, \textit{La peur en Occident (XIVe-XVIIIe siècles). Une cité assiégée}, in \textit{Annales}, pp. 1262-1266.

\textsuperscript{15} M. HERTSGAARD, K. POPE, \textit{Transforming the media's coverage of the climate crisis}, in \textit{Columbia Journalism Review}, 22 May 2019, \url{https://www.cjr.org/watchdog/climate-crisis-media.php}.

\textsuperscript{16} https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/

\textsuperscript{17} A. DONATI, \textit{The coronavirus crisis in Europe: is this the time of the precautionary principle}, in \textit{EU Law Live, Weekend Edition}, 27 March 2020, \url{https://eulawlive.com/weekend-edition/weekend-edition-no11/}.

\textsuperscript{18} WORLD HEALTH ORGANISATION, \textit{Guide to revision of national pandemic influenza preparedness plans}, 2017, \url{http://www.euro.who.int/en/health-topics/communicable-diseases/influenza/publications/2017/guide-to-revision-of-national-pandemic-influenza-preparedness-plans-2017}.

\textsuperscript{19} A RENDA, RJ CASTRO, \textit{Chronicle of a Pandemic Foretold}, in \textit{CEPS Policy Insights}, 5 March 2020.

\textsuperscript{20} Court of Justice, judgment of 5 mai 1998, case C-157/96, \textit{National Farmer’s Union}, EU:C:1998:191, paras 63 and 64; Court of Justice, judgment of 5 mai 1998, case C-180/96, \textit{United Kingdom vs European Commission}, EU:C:1998:192, paras 99 and 100.
environment covering the horizon 2013-2020 it is clearly stated that environmental problems and impacts continue to pose significant risks for human health (whereas Art. 25) and that the goal of EU action is to safeguard the Union’s citizens from environment-related pressures and risks to health and well-being (Art. 2).\textsuperscript{21} If the connections between environmental and human health risks are recognized, what about the interrelations between environmental risks and those incurred by animals and plant health, which, in turn, can significantly affect human health? As the Covid-19 crisis shows, most pandemics have a zoonotic origin, and the loss of biodiversity, as well as the strong human impact on the environment, has made the transmission of pathogens from plants and animals to humans more likely. In this context, a new evaluation and regulation of the connections between environmental risks, on the one hand, and plant, animal and human health risks on the other should be undertaken to foster the implementation of a more systemic and integrated approach for the prevention and management of such risks.\textsuperscript{22}

Furthermore, as the climate and coronavirus crises demonstrate, environmental and health risks can also trigger significant social, economic, and political risks. From this perspective, the management of such crises requires the adoption of a holistic and interdisciplinary approach that enables EU decision-makers to tackle transversally both the environmental and health dimensions of such risks and their consequences on the social, economic and political level. In particular this means that the definition and implementation of environmental and health objectives and requirements cannot be separated from the setting up of the political, social, and economic roadmap that will guide the EU in the coming months and years. Therefore, the ultimate goal of the EU Green Deal should be to link the achievements of economic objectives with the management of health and the environmental risks caused by climate change and the new predictable waves of pandemics, while mitigating the social impacts of the protective measures to be taken.\textsuperscript{23}

3. A Coordinated Risk-Management Strategy

Second, the EU should implement a coordinated risk-management strategy based both on better articulation of the relationship between EU institutions and Member States and a stronger partnership between public institutions and private stakeholders.

\textsuperscript{21} Decision 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 ‘Living well, within the limits of our planet’ OJ L 354, 2013, p. 171–200.

\textsuperscript{22} ECDC, \textit{Towards One Health Preparedness, Technical Report}, Expert consultation 11–12 December 2017.

\textsuperscript{23} Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic, and Social Committee and the Committee of the Regions, the European Green Deal, COM/2019/640 final.
3.1 The Coordination between EU Institutions and Member States

The on-going climate and coronavirus crises show the intense degree of interdependence achieved by our societies as a result of globalization, where not only the production, transportation, and consumption chain is extended, but also the risks are global. In such a scenario, there is a need to enhance the coordination of risk strategy by combining timely national and EU strategies. This is even more necessary as EU competences in the field of public health are limited. On the one hand, under Articles 6(a) and 168 TFEU, the Union's competence is restricted to taking action to support, coordinate or supplement the action of the Member States and to adopt incentive measures designed, in particular, to combat major cross-border health scourges and threats to health.24 On the other hand, according to Article 4(k), the Union has shared competence with the Member States to adopt measures relating to common safety concerns in public health matters, for the aspects defined in the Treaty. In this framework, in 2013, the EU adopted Decision 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health. This is the main legal document coordinating EU action related to crisis preparedness and responses to cross-border health threats. Yet, as the European Court of Auditors stated, significant gaps remain in the implementation of this measure,25 and the EU legislative framework remains extremely limited by the need to respect the competences of the Member States.26 In an attempt to strengthen Europe's response capability and to provide technical support to the Member States, a dedicated agency - the European Centre for Disease Prevention and Control (“ECDC”) was set up in. The ECDC is in charge of the surveillance, detection and risk assessment of threats, epidemiological surveillance and the operation of the Early Warning and Response System (“EWRS”) - a web-based platform linking the European Commission, ECDC and public health authorities of the Member States which is responsible for measures to control serious cross-border threats to health.27 A recent external evaluation highlighted some significant weaknesses in the activities of the ECDC, including the fact that it has not been able to adequately cover its staff costs and hire additional staff (the agency is currently understaffed and under-

24 Decision 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health and repealing, OJ L 293, 2013, p. 1–15.

25 EUROPEAN COURT OF AUDITORS, Special report no 28. Dealing with Serious Cross-Border Threats to Health in the EU, Important Steps Taken but More needs to be Done, 2016, https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=40126.

26 A. RENDA, R. CASTRO, Towards Stronger EU Governance of Health Threats after the COVID-19 Pandemic, in EJRR special issue, Taming Covid-19 by regulation, April 2020, p. 5.

27 ECDC, Early Warning and Response System (EWRS), https://www.ecdc.europa.eu/en/early-warning-and-response-system-ewrs.
budgeted), and it has not been able to establish efficient cooperation with the Member States.\textsuperscript{28} As an example of its weakness and limited powers, during the current coronavirus outbreak the ECDC has issued several recommendations, including on the criteria for social distancing\textsuperscript{29} and contact tracing.\textsuperscript{30} However, these recommendations are not binding on the EU Member States, and national authorities – by disregarding these recommendations and the request for coordination put forward by the agency – adopted their own decisions on testing, trace contacts, and social distancing.

Against this backdrop, and to foster the full implementation of the principle of subsidiarity, it would be worth considering an expansion of the scope of application of Article 4(k) and, more generally, strengthening EU health governance by ensuring more efficient equipment and operation of the ECDC. Indeed, as the coronavirus crisis has shown, it is mainly at the European level that public health policy can be efficiently adopted to prevent, coordinate and control the adoption of consistent protective measures in all EU Member States.\textsuperscript{31} Yet, “in spite of having a legally binding instrument (the Decision 1082/2013/EU) and a dedicated agency (the ECDC), the EU governance framework remains a work in progress.”\textsuperscript{32} This is critical for cross-border health threats - like pandemics and climate change -, which require harmonisation and coordinated action that supersedes national borders.

3.2 The Coordination Between Public Institutions and Private Stakeholders

While the management of environmental and health risks has been long perceived as the sole responsibility of public authorities, it is now conceived more as a collective work. Private stakeholders are also called upon to participate actively in risk management. Indeed, faced with the multiplication and increasing complexity of these risks, private decision-makers are often in a better position to control them since they are often at the origin of the risks.\textsuperscript{33} The unprecedented change required by

\begin{itemize}
  \item[28] ECDC, \textit{Third independent external evaluation of the ECDC in accordance with its Founding Regulation}, September 2019, https://www.ecdc.europa.eu/sites/default/files/documents/third-independent-external-evaluation-of-ECDC-report.pdf.
  \item[29] ECDC, \textit{Considerations relating to social distancing measures in response to COVID-19 – second update}, 23 March 2020, https://www.ecdc.europa.eu/en/publications-data/considerations-relating-social-distancing-measures-response-covid-19-second.
  \item[30] ECDC, \textit{Contact tracing: Public health management of persons, including healthcare workers, having had contact with COVID-19 cases in the European Union – first update}, 31 March 2020, https://www.ecdc.europa.eu/sites/default/files/documents/Public-health-management-persons-contact-novel-coronavirus-cases-2020-03-31.pdf.
  \item[31] S. RODRIGUES, \textit{Les chantiers de l'Europe post-Covid-19}, in blogdroiteuropéen, 9 May 2020, https://blogdroiteuropeen.com/2020/05/09/les-chantiers-de-leurope-post-covid19-par-stephane-rodrigues/.
  \item[32] A. RENDA, R. CASTRO, \textit{Towards Stronger EU Governance of Health Threats after the Covid-19 Pandemic}, cit. p. 5.
  \item[33] M.A.HERMITTE, \textit{Introduction générale}, in F. ROUSSEAU, K. FOUCHER, \textit{Les réponses du droit aux crises sanitaires}, Paris : L'Harmattan, 2016, pp. 13-14.
\end{itemize}
the International Panel on Climate Change ("IPCC") to cope with climate change, and in similar terms with pandemics, will only be possible if it takes place simultaneously across a range of sectors, and if it is carefully coordinated within an overall strategy that allows the implementation of pluralist and sustainable governance based on a partnership between public institutions and private actors. According to the UN’s Sustainable Development Goals 17, “these inclusive partnerships, built upon principles and values, a shared vision, and shared goals that place people and the planet at the center, are needed to allow the great transformation of our systems.”

From this perspective, the EU Green Deal explicitly recognizes the need to ensure wider involvement and commitment of both public and private stakeholders in the fight against climate change. To do so, three main measures have been announced by the EU Commission. First, partnerships with industry and the Member States will be encouraged to support research and innovation on transportation, clean hydrogen, low-carbon steel making, circular bio-based sectors, and the built environment. Second, while the EU and its Member States remain the world's leading donors of development assistance and provide over 40% of the world's public climate finance, the EU and its Member States will coordinate their support to engage with partners to bridge the funding gap by mobilising private finance. Third, a European Climate Pact will be adopted to inform, inspire, and foster cooperation between public institutions, citizens and other private stakeholders to accompany the transition towards a climate-neutral society. To reinforce its commitment to bridge the gap between public institutions and private stakeholders, on March 11, 2020 the EU Commission presented its new Industrial Strategy to accompany Europe's industry in their transition towards climate neutrality.

34 GROUPE D’EXPERTS INTERGOUVERNEMENTAL SUR L’ÉVOLUTION DU CLIMAT (« GIEC »), Global warming of 1.5°C, Summary for policy-making, 8 October 2018, https://www.ipcc.ch/sr15/.
35 UNITED NATIONS, Sustainable development goals, Goal n° 17, Strengthen the means of implementation and revitalize the global partnership for sustainable development, https://sustainabledevelopment.un.org/sdg17.
36 Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic, and Social Committee and the Committee of the Regions, cit. p. 22.
37 Ibid., p. 18.
38 Ibid., p. 22.
39 EU COMMISSION, European Climate Pact, https://ec.europa.eu/clima/policies/eu-climate-action/pact_en.
40 Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, a new Industrial Strategy for Europe, Com(2020) 102 final.
4. A Consistent Risk-Management Strategy

Lastly, the EU institutions and the Member States should implement a consistent risk-management strategy that takes into account the need to anticipate the occurrence of risks. This might be achieved by applying the precautionary principle and fostering the adoption of a new approach to nature based on the acknowledgment of the principle of non-regression.

4.1 The Application of the Precautionary Principle

As recently affirmed by the German philosopher Habermas, “il nous faut agir dans le savoir explicite de notre non-savoir” (we must act in the explicit knowledge of our non-knowledge). This statement translates the idea that the solution of both the climate and coronavirus crises requires a “transition to the era of precaution.” To tackle climate change and pandemics, it is necessary to prevent their occurrence as far as is possible by anticipating the time of action on the basis of the precautionary principle. This principle, laid down in Article 191 (2) TFEU and taken up by a multitude of directives and regulations, can be defined as a principle of anticipated action which, in a context of risk and uncertainty for the environment and public health, requires the competent authorities to take protective measures without waiting for certain scientific proof of the existence and extent of the risk in question. As both climate change and coronavirus show, if the precautionary principle is not applied in a timely manner and no preventive measures are adopted, it will be too late to act when the risk materializes. Consequently, decision-makers would be bound to act in the context of an emergency, where the need to mitigate (as much as possible) the risk’s effects would take over from the need to prevent the very materialization of the (already occurred) risk. Yet, if EU decision-makers are already struggling to mitigate the health and economic consequences of Covid-19, what will happen when the risk at stake is severe flooding, droughts, higher temperatures, and the rising sea levels as a consequence of climate change? If amid a health crisis, it seems essential to legislate in an emergency, EU law will "need to take its time" afterward. To avoid constructing a society commanded by subsequent “states of emergency” - which would undermine the very notion of democracy -
precaution should be the guiding principle of an EU risk-management strategy aimed at anticipating more than mitigating the risks stemming from climate change and pandemics.

4.2 A New Approach to Nature and the Principle of Non-Regression

The implementation of a consistent risk-management strategy requires re-examining our relationship to nature. Similar pandemics and even more severe climate change events will occur in the near future if the logic of current interactions between human populations and nature is not fundamentally challenged.46 Humans are omnivores that have become super-predators, degrading the equivalent of half of the EU’s arable land every year. To fight epidemics and climate change, the necessary changes required are at the level of civilization. As in the symbolism of yin and yang, we must accept the dual nature of what surrounds us. We need to completely reconsider our relationship with the living world, natural ecosystems, and their biological diversity, which are both the guarantors of great balances and the source of many dangers.47 From this perspective, a UN General Assembly resolution suggested incorporating in our legal systems the right to live in harmony with nature.48 This concept epitomizes the need for an epistemological shift in our relationship to nature, moving from a human-centred approach to an Earth-centred approach, which should ensure that human governance systems are consistent with natural systems. Another proposal worthy of consideration is the inclusion by Ecuador and Bolivia of references to the rights of nature in their constitutional texts.49 In Ecuador, nature is recognized as a legal entity. All persons, communities, and nations can call upon public authorities to enforce the rights of nature. In Bolivia, nature has not been recognized as a legal entity; however, the concept of harmony with nature is embedded in the Constitution, and it is considered as an ethical and moral principle to which the State adheres. Likewise, the Inter-American Court of Human Rights50 and the Council of Europe51 - by stressing the existence of a link between human rights and the right to a healthy environment - are starting to promote the idea that the environment is a common space of interaction between humans and nature. What all these proposals have in common is the

46 LE MONDE, Coronavirus: ‘L’origine de l’épidémie de Covid-19 est liée aux bouleversements que nous imposons à la biodiversité’, 4 April 2020, https://www.lemonde.fr/sciences/article/2020/04/04/pandemies-nous-offrons-a-des-agents-infectieux-de-nouvelles-chaines-de-transmission_6035590_1650684.html.
47 LE MONDE, Si nous ne changeons pas nos modes de vie, nous subirons des monstres autrement plus violents que ce coronavirus, 17 April 2020, https://www.lemonde.fr/idees/article/2020/04/17/jean-francois-guegan-en-supprimant-les-forets-primaires-nous-sommes-en-train-de-debusquer-des-monstres_6036871_3232.html.
48 UN General Assembly, Harmony with Nature, 17 January 2020, A/RES/74/224.
49 A. ACOSTA, E. MARTINEZ (eds), La naturaleza con derechos: de la filosofía a la política, Quito: Ediciones Abya-Yala, 2011.
50 Inter-American Court of Human Rights, opinion of 15 November 2017, case OC 23/17, paras 56-68.
51 E. LAMBERT, The Environment and Human Rights. Introductory Report to the High-Level Conference, Environmental Protection and Human Rights, Strasbourg, 27 February 2020.
acknowledgment that the vulnerability of humankind depends on the vulnerability of nature and that consequently the protection of humans against climate change and pandemics requires effective protection of nature. This means that nature can no longer simply be an “object” of human domination, but needs to progressively shift towards its consecration as a “subject” granted, like humans, rights and prerogatives.\textsuperscript{52}

The promotion of a new approach to nature must go hand-in-hand with the implementation of a principle of non-regression. This principle stems from the idea that the acquired level of environmental protection should not be reduced by the adoption of a subsequent act and that the highest level of environmental protection shall always be pursued.\textsuperscript{53} At the international level, the principle of non-regression is at the heart of two leading international projects - the Global Pact for the Environment;\textsuperscript{54} and the Pact for the Protection of Human Rights and the Environment.\textsuperscript{55} At the national level, several states are already applying the principle of non-regression. For instance, in Belgium, the Constitutional Court stated that Article 23 of the Constitution - which recognizes the right to a healthy environment - implies a stand-still obligation which prevents the competent legislator from significantly reducing the level of protection afforded by the applicable legislation in the absence of general interest.\textsuperscript{56} In France, the principle of non-regression was introduced in 2016. According to Article 2 of the legislation on biodiversity, the environmental code is completed with a principle of non-regression according to which the protection of the environment, as ensured by laws and regulations, can only be subject to constant improvement, taking into account current scientific and technical knowledge.\textsuperscript{57}

Under EU law, the principle of non-regression has not yet received formal consecration. However, the EU Parliament in its resolution of 29 September 2011 called for “the recognition of the principle of

\textsuperscript{52} On the rights to nature see: C.M. KAUFMANN, \textit{Mapping Transnational Rights of Nature Networks & Laws}: \textit{New Global Governance Structures for More Sustainable Development}, in International Studies Association Annual Conference, Toronto, March 29, 2020; M. CARDUCCI, \textit{Natura (diritti della)} in R. SACCO (eds), \textit{DIGESTO delle Discipline Pubblicistiche}, Bologna: Utet Giuridica, 2017.

\textsuperscript{53} M. PRIEUR, G. SOZZO, (eds), \textit{La non régression en droit de l'environnement}, Bruxelles: Bruylant, 2012.

\textsuperscript{54} UNITED NATIONS, \textit{Resolution adopted by the General Assembly on 10 May 2018, Towards a Global Pact for the Environment}, A/RES/72/277.

\textsuperscript{55} INTERNATIONAL CENTRE OF COMPARATIVE ENVIRONMENTAL LAW, \textit{Projet de Pacte international relatif au droit des êtres humains à l’environnement}, 2017, \url{https://cidce.org/wp-content/uploads/2017/01/Projet-de-Pacte-international-relatif-au-droit-des-êtres-humains-à-l%27environnement_16II_2017_FR.pdf}.

\textsuperscript{56} Cour Constitutionnelle Belge, judgment of 27 Janvier 2011, n° 8/2011.

\textsuperscript{57} Law of 8 August 2016 for the recovery of biodiversity, nature and landscapes, n°2016-1087.

Electronic copy available at: https://ssrn.com/abstract=3648064
non-regression in the context of environmental protection as well as fundamental rights." The adoption under EU law of the principle of non-regression would complete the 'toolbox' at the disposal of the EU institutions to ensure the protection of the environment and would constitute a necessary complement to the precautionary principle and the objective of a high level of environmental and health protection set down in Articles 191 and 168 TFUE. Not only would the EU legislator be able to anticipate the risk at stake, but it could also ensure that the high level of protection pursued by applying the precautionary principle would not be jeopardized by the adoption of subsequent legislation aimed at reducing the acquired level of protection. From this perspective, the principle of non-regression would help stabilize the environmental acquis and leave its legacy for future generations.

5. Conclusion
Over the centuries, pandemics have always laid down markers between different eras of human society. We must not wait to see if this current health crisis will open the door to the building of a new society, eventually ready to achieve the objective of the UN Sustainable Development Goals: peace and prosperity for people and the planet, now and into the future. The next pandemics are highly predictable; the effects of climate change are already visible and will increase in the coming years; it is time not only to “think the unthinkable” but also to take the risk to say and to do something different. It is, in other words, time - now or never - to anticipate the predictable, yet uncertain consequences of climate change and pandemics by adopting a common, coordinated, and consistent EU risk management strategy for the benefit of the current generation and future generations. In other words, it is essential that “once Covid-19 gradually disappears, the lessons learned from these months of lockdown become the foundations of a new approach to risk governance at EU and global levels.”

There are many ways to pursue sustainability, but not all of them are compatible with democratic values. The challenge for the EU is to find an adequate policy mix that safeguards individual rights and liberties, protects the economy, and, at the same time, strengthens the EU’s preparedness for cases of climate change and pandemics.

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58 European Parliament, Resolution of 29 September 2011 on developing a common EU position ahead of the United Nations Conference on Sustainable Development (Rio+20), P7 - TA(2011)0430, para 97.
59 FINANCIAL TIMES, Interview: Emmanuel Macron says it is time to think the unthinkable, 17 April 2020, https://www.ft.com/content/55ba601d-073e-4c3c-8f6b-2d51408466f9.
60 A. RENDA, R. CASTRO, Towards Stronger EU Governance of Health Threats after the Covid-19 Pandemic, cit., p. 10.
