The role of science in environmental and climate change adjudications in the European legal space: An introduction

by Serena Baldin

Abstract: The role of science in environmental and climate change adjudications in the European legal space: An introduction – This short paper introduces the monographic section that deals with the role played by science in the arguments of plaintiffs and in the reasoning of judges in environmental and climate change claims. The purposes are mainly to deepen this aspect and to highlight the existing links among human rights discourse, international law, and the weight given to scientific evidence in the judicial arena.

Keywords: Precautionary principle; Attribution science; Access to justice; Environmental law; Climate change law.

The unstoppable loss of biodiversity, the high rates of pollution and the incumbent climate breakdown are phenomena well ascertained by the scientific academy. The recent wave of lawsuits brought forward by NGOs, communities and individuals, especially in the climate change sector, has been put in correlation with the dissemination of scientific reports demonstrating the dramatic negative effects of human activities on ecosystems and the Earth's average surface temperature and the adverse impacts on the most vulnerable persons[1]. Drawing on the results published by the Intergovernmental Panel on Climate Change (IPCC), in the 2019 UN Sustainable Development Goals Report it has been stated that global heating is projected to increase by 1.5°C in the coming years if record-high greenhouse gas emissions are not cut in this decade. The compounded effects will be catastrophic and irreversible: potentially displacing up to 140 million people by 2050 as well as continuing land degradation and the loss of vital species with the

[1] See M. Torre-Schaub, *Ce 22 avril, défendre la liberté de la recherche pour défendre nos droits*, in *The Conversation*, 21 April 2017, at theconversation.com/ce-22-avril-defendre-la-liberte-de-la-recherche-pour-defendre-nos-droits-76477. This awareness has led even journals to update their style guide and to replace the word "change" with "crisis", "emergency" or "breakdown". Indeed, the term climate change has a neutral meaning and is unable to convey the message of the need for a radical turn in our lifestyles and in the politics of all governments in the world to stop or at least to slow down the increase of the Earth's temperature to avoid the dramatic consequences of global heating. See D. Carrington, *Why the Guardian is changing the language it uses about the environment*, *The Guardian*, 17 may 2019, at www.theguardian.com/environment/2019/may/17/why-the-guardian-is-changing-the-language-it-uses-about-the-environment.

collapse of ecosystems, increasing ocean acidification and the frequency and severity of natural disasters[2].

Organisations, activists and individuals claim policies aimed at readdressing the disproportionate impact of environmental degradation and climate crisis on vulnerable citizens and communities. They also employ litigation as part of a strategy finalised to raise public awareness on a specific matter or to promote the rights of the most affected groups of persons. Litigation is elaborated to obtain the judicial recognition of environmental or climate harms as well as to hold governments accountable for inadequate policies with the goal of making changes in society.

This monographic section, which is part of the "Environmental Sustainability in Europe: A Socio-Legal Perspective" project[3], focuses on environmental and climate matters with special attention on the role of science played in the arguments of plaintiffs and in the reasoning of judges. The purposes are mainly to deepen this aspect and to highlight the existing links among human rights discourse, international law on environmental and climate change issues and the weight given to scientific evidence in the judicial arena. The sequence of essay presentations follows an epistemological path aimed at providing readers with an overview of these concerns starting with the most recent environmental controversies at EU level and continuing with some problematic features represented by climate change litigation.

The "law and science" debate on environmental issues has been traditionally focused on the precautionary principle, which provides guidance in situations where there is scientific uncertainty. Along this path, Sara De Vido opens the monographic section with an essay centered on the European Union (*Science, precautionary principle and the law in two recent judgments of the Court of Justice of the European Union on glyphosate and hunting management*). Her research is aimed at demonstrating that the precautionary principle is a political rather than a scientific principle which informs the activity of public authorities. In addition, she argues that the European courts might examine this principle through the lens of the reasonableness of the measures adopted by competent authorities.

The issues posed by climate change litigation are dealt with from a theoretical legal framework before analysing recent lawsuits already decided or still pending in front of domestic courts or the European Courts of Justice.

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[2] See United Nations, *The Sustainable Development Goals Report 2019*, New York, 2019, 3, at unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf. Climate change deniers, who are trying to minimise the human impact on global heating, go on putting pressure on political leaders to influence their approach to climate regulation as well as to finance information campaigns in support of misleading arguments to undermine scientists and deny the seriousness of global heating. The Royal Society has provided for a brief guide to counter some arguments that try to deny global warming: The Royal Society, *Climate Change Controversies. A Simple Guide*, London, 2008, at royalsociety.org/-/media/Royal_Society_Content/policy/publications/2007/8031.pdf.

[3] The "Environmental Sustainability in Europe: A Socio-Legal Perspective" project is co-funded by the European Union through the Actions Jean Monnet Modules and is coordinated by prof. Serena Baldin of the University of Trieste (Italy).

The essay written by Michele Carducci (*La ricerca dei caratteri differenziali della "giustizia climatica"*) is devoted to the search for the differential characters of climate justice, proposing a reconstruction of the different conceptions of justice connected to the environment, climate change and ecology. His aim is to compare these conceptions with the empirical experiences and doctrinal classifications of climate change litigation strategies. According to the Author, the scenario appears unclear in identifying the specificities of the legal issues connected to the anthropogenic phenomenon of climate change. In this vein, he circumscribes climate change litigation to the lawsuits founded on the «*istanza di giustizia*» ("motion of justice"), in which the courts are to decide the conduct of States or corporations with respect to climate obligations assumed under the Paris Agreement and other international treaties. Further fruitful considerations regard the differences between environmental law and climate law as well as Art. 3 of the 1992 UN Framework Convention of Climate Change (UNFCCC) that includes the precautionary principle. In this specific context, Art. 3 is to be considered a self-executing and deontological provision since it indicates the method and the objectives to be pursued in the climate sector. Method and objectives are science-based, related and oriented, that is to say founded on the «*riserva di scienza*» and on the «*rinvio alla scienza*». The former concept means "reservation to science" and makes reference to the so-called attribution science, the science that investigates the links between climate change and extreme weather events. It means that scientific facts are conceived as a legal "source" for the decision-maker, both for the qualification of the phenomena (whose definitions are exclusively reserved to science) and for their causal explanation (in this case one generally speaks of attribution science). The latter concept means "incorporation by reference" and, more specifically, the incorporation by reference to science by the UNFCCC.

The third essay is authored by Maria Francesca Cavalcanti and Matthijs Jan Terstegge (*The Urgenda case: The Dutch path towards a new climate constitutionalism*). They focus on the *Urgenda* case rendered by the Supreme Court of the Netherlands in December 2019, which definitely marks the final end on a judicial saga started in 2013 before the Court of first instance. This decision is welcomed since it may represent the beginning of a remarkable path in the reduction of greenhouse gas emissions in Europe. The Supreme Court used scientific data, fundamental human rights deriving from the European Convention on Human Rights, and the "common ground" method applied by the European Court of Human Rights in order to establish a minimum threshold to which the State is legally bound. The Authors argue that the Supreme Court took this climate change litigation as a pivotal case to promote climate justice and a new climate constitutionalism, accentuating the legal and scientific aspects of the approach to the contrast to global warming instead of the political ones.

Reminding States of their responsibility and duty of care towards citizens and future generations with respect to climate regulation, the *Urgenda* case may have a significant influence on other climate cases around Europe and the whole world. Nonetheless, while this is a paradigmatic example of a transformative

adjudication in pursuit of justice and has become a symbol of the turn of rights in climate change litigation, the same may not be said of other foreign cases. However, they are indicative of the wave of lawsuits currently pending in some jurisdictions or that are going to be launched[4].

One of these claims concerns the so-called *The People v. Arctic Oil* case, a judicial controversy brought forward by two non-governmental organisations against the Government of Norway. As stressed by Vito De Lucia and Ingrid Solstad Andreassen in their essay (*Climate Litigation in Norway. A Preliminary Assessment*), this case is the first attempt to stop oil extraction activities in the Barents Sea through litigation. The lawsuit has been pending in the Norwegian courts since 2016 and has received huge attention even in the international community for having challenged the licensing decision awarding 10 oil drilling permits in the Arctic. The plaintiffs' argument has been built primarily on knowledge derived from the IPCC's Fourth and Fifth Assessment Reports as well as from the Norwegian Environment Agency and the Norwegian Polar Institute, which both advised against several of the awarded blocks from the licensing decision. In January 2020, the Court of Appeal acknowledged the right to a healthy environment for current and future generations, stating that this right also includes the duty to take into account the full emissions from the burning of Norwegian oil, wherever that takes place. Nonetheless, the Court found that the threshold for invalidating the oil drilling licences was not breached. Currently, the case is pending in front of the Supreme Court. Its decision is expected to be unique for two reasons. Firstly, it is the first time that the Supreme Court of Norway will interpret the meaning and scope of Article 112 Const. on the right to a healthy environment. Its reasoning might be crucial not only for the case at hand but also because it might serve as a legal precedent. Secondly, this case represents the first lawsuit where the provisions of the Paris Agreement have been invoked as a legal basis to stop activities that may harm the environment. We will have to wait a few more months to know the final words on this case.

Unlike the Netherlands and Norway, the EU judicial system does not facilitate the direct access to courts on part of natural and legal persons. For lack of standing, a recent lawsuit launched against EU institutions was dismissed by the General Court in 2019 and currently is pending in appeal before the Court of Justice. Awaiting the decision on the *Carvalho* case, the essay authored by Serena Baldin (*Towards the judicial recognition of the right to live in a stable climate system in the European legal space? Preliminary remarks*) aims at contributing to the literature on climate change litigation focusing on this claim that is part of a new generation of climate change lawsuits, which adopts rights-based arguments and calls for climate justice. To appreciate the consequences of human-driven climate change at the judicial level, the law and science relationship is dealt with illustrating the relevance of the science of climate change attribution. The Author concludes with

[4] For example in France, Germany, Belgium, Ireland. At the time of writing, the *Giudizio Universale* (Last Judgement) lawsuit is going to be launched against the Italian government. See giudiziouniversale.eu/2020/02/28/le-climate-litigation-nel-mondo/.

some reflections on the effective enforcement of climate change law in the European legal sphere and on the right to live in a stable climate system, arguing its distinctiveness from the right to a healthy environment.

It is especially apparent in this epoch that environmental and climate change issues cannot be eluded any longer. The aim of this monographic section is not to provide answers to the multiple concerns that have emerged over the years regarding these matters, but surely to enrich the debate. Its final purpose is to stimulate further legal research, in order to develop theories and promote comparative analyses able to monitor the "state of the health" of our Planet and to enforce its protection. «The clock for taking decisive actions on climate change is ticking»[5] and therefore legal scholars and judges cannot just sit by and watch passively while the Earth's ecosystem is collapsing.

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[5] United Nations, *op. cit.*, 3.