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CLIMATE CHANGE LITIGATION AND TORT LAW. REGULATION THROUGH LITIGATION?

Abstract: Protecting our climate is a legal obligation. While the judiciary is called to a new role in the global governance of climate change, legal scholars have wondered whether tort law is the appropriate form for regulating climate risks. More specifically, in the aftermath of the historical ruling of the Urgenda case, and while tort law cases are currently pending against energy and oil & gas giant corporations for their contribution to climate change (e.g., against Shell in The Netherlands and against Total in France), this article offers a view of the current state of affairs in this domain and critically discusses some of the “legal conundrums” that characterize the interplays between tort law and climate change in courts.

SUMMARY: 1. Introduction. Climate Change Litigation as a Global Trend. – 2. The “Judicial Governance” of Climate Change and the Role of Courts. – 3. “Regulating Through Litigating”. Tort Law Between Private and Public. – 4. The “Anti-tort” Structure of Climate Change. – 5. “Injury to All is Injury to None”? Duty of Care and Negligence in Climate Litigation. – 6. Causing Climate Harm. A Tort Law Perspective. – 7. Conclusions.

1. — *Introduction. Climate Change Litigation as a Global Trend.*

Climate change is a legal issue. It is not only a matter of policy and powers, but also of law and justice. Climate change certainly *is* a political problem, but not an exclusively one: reducing emission is currently understood as a positive and enforceable legal duty and not just a political or moral obligation. As a consequence, climate change and climate harm is increasingly the object of court litigation. Over the past five years, many lawsuits across

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the world explicitly refer to climate change, in the sense that not only it is expressly mentioned in the proceedings, but in the stronger sense that the main arguments of litigation are framed in terms of avoiding global heating or mitigating its effects *as a legal obligation*. So, courts globally have increasingly become exposed to climate-related reasoning and facts and called to assess complex scientific risks. From the United States to India, from Europe (both at a national level – The Netherlands, Belgium, France, Austria, Germany, Ireland – and at supranational scale) to Australia and New Zealand, from Latin America (Brazil, Colombia, Ecuador) to Philippines and Africa, individuals, groups of people, investors, activists, associations and non-governmental and non-profit organizations seek remedies of various forms in courts against greenhouse emitting corporations and governments for causing, or contributing to cause, the global rise in temperature, or for failing to adequately address climate change with a proper, stricter legislation (so-called climate change litigation)⁽¹⁾. Climate change litigation is, in short a powerful way (probably the most powerful) to hold all the responsible actors *accountable*.

As a matter of fact, the expression “climate change litigation” is a shortcut term for identifying a broad array of different cases. By and large, climate change lawsuits can be either private law or public law-based, they can raise issues of private (tort) law, criminal law or administrative law, or even constitutional or human rights law; they can simply enforce statutory law or call for a judicial review, or require substantive changes in the existing legislation, and so on.

In an attempt to rationalize this complex body of cases of climate

⁽¹⁾ For a comprehensive survey of the climate change lawsuits existing in the world, see the database of the Grantham Research Institute on Climate and the Environment, of the London School of Economics (and, in particular, the report by J. SETZER, R. BYRNES, *Global Trends in Climate Change Legislation and Litigation*, available online at lse.ac.uk) and the one of the Sabin Center for Climate Change Law, at Columbia University (available online). See also J. SETZER, L. VANHALA, *Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance*, in *WIREs Climate Change*, 2019, available at onlinelibrary.wiley.com; J. SETZER, M. BANGALORE, *Regulating Climate Change in the Courts*, in A. AVERCHENKOVA, S. FANKHAUSER, N. NACHMANY, *Trends in Climate Change Litigation*, London, 2017, p. 175.

change litigation, legal scholars have distinguished between “routine cases” and “strategic cases”, both equally important (but different) as to their outcomes, objectives and effects⁽²⁾.

The first ones are less visible and have narrower, and more focused, objects. Here climate change is more of a *peripheral* reference than a crucial motive. Usually those cases are brought to court by individuals against private actors, often under private law, and thus seeking monetary compensation or injunctive reliefs for loss and damages (framed in terms of climate change). They do not possess openly an activist intent, but they are rather initiated in the pursuit of parties’ private (financial) self-interests⁽³⁾. They do not aim to change, but rather to enforce current legislations. Therefore, routine cases aim to have a limited impact *per se* even though, in the long run, they might represent a *de facto* regulatory device in defining standards and establishing thresholds of responsibility⁽⁴⁾.

“Strategic” (or “tactical”) cases, on the contrary, adopt a “visionary approach”. Those cases do not aim to be successful in the first place; their purpose is to foster debate, or to purport a different and radical interpretation of the existing legal materials. Their scope is to extend their effect well beyond the courtroom and to influence larger state policy and public decisions more generally. They are brought in the main (but not only) against governments and public bodies, and the majority of them are public law cases. It could be said that those cases are a larger part of a political manifesto: to force national governments and corporations to take stronger action at legislative level and to adopt more stringent climate rules in corporate governance.

⁽²⁾ For this key distinction, that has become classic in the relevant legal literature, see K. BOWER, *The Unsexy Future of Climate Change*, in *Journal of Environmental Law*, 2018, p. 483; G. GANGULY, J. SETZER, V. HEYVAERT, *If at First You Don’t Succeed: Suing Corporations for Climate Change*, in *Oxford Journal Legal Studies*, 2018, pp. 841-843; J. SETZER, R. BYRNES, *Global Trends in Climate Change Litigation, 2019 Policy Report*, cit. (online).

⁽³⁾ K. BOWER, *The Unsexy Future of Climate Change Litigation*, in *Journal of Environmental Law*, 2018, pp. 483-485.

⁽⁴⁾ K. BOWER, *The Unsexy Future of Climate Change Litigation*, loc. cit.; J.B. RUHL, *Climate Change Adaptation and the Structural Transformation of Environmental Law*, in 40 *Env. L.*, 2010, p. 363.

Two “strategic” cases, in particular, have inspired a wave of similar legal initiatives and sparked endless academic debate. These two cases are worth being reported here as despite their global resonance they have not gained, in the Italian legal academia, the attention they deserve.

The first one is the recent decision rendered in the internationally-known case “*Urgenda*”. In the final and binding judgment released on the 20th of December 2019 (*State of The Netherlands v. Urgenda Foundation*) the Dutch Supreme Court confirmed the historical ruling of the Hague District Court (24 June 2015⁽⁵⁾) and then the judgment of the Court of Appeal (9 October 2018⁽⁶⁾) according to which the State was found to have committed a general tort against its citizens (and specifically, a «unlawful endangerment» or, otherwise stated, a «hazardous negligence» which is contrary to the general «duty of care» the State owes to its people⁽⁷⁾) because its political plans to reduce greenhouse gas emission were not considered sufficient (more specifically, the Court considered negligent the goal to reduce gas emission at a lower percentage of 25 per cent, compared to the levels of 1990)⁽⁸⁾. In simpler words, The Netherlands, by retaining a legislation that was deemed being too “soft” on climate matters, was damaging its population and their right to life⁽⁹⁾. The court based its decision arguing in the light of general

⁽⁵⁾ *Urgenda Foundation v. The State of the Netherlands*, Case No. C/09/456689 / HA ZA 13-1396, 24 June 2015.

⁽⁶⁾ *The State of the Netherlands (Ministry of Infrastructure and the Environment) v. Urgenda Foundation*, C/09/456689 / HA ZA 13-1396, 9 Oct. 2018. B. MAYER, *The State of the Netherlands v. Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018)* in 8, *Transnational Environmental Law*, 2019, 167. In Italian, see V. JACOMETTI, *La sentenza Urgenda del 2018: prospettive di sviluppo del contenzioso climatico*, in *Riv. giur. ambiente*, 2019, p. 121.

⁽⁷⁾ See *Urgenda Foundation v. The State of the Netherlands*, cit., §§ 4.46 and 4.55.

⁽⁸⁾ J. VAN ZEBEN, *Establishing a Governmental Duty of Care for Climate Change Mitigation: Will Urgenda Turn the Tide?* in 4(2) *Transnational Environmental Law*, 2015, p. 339; P. MINNEROP, *Integrating the ‘Duty of Dare’ Under the European Convention on Human Rights and the Science and Law of Climate Change: The Decision of The Hague Court of Appeal in the Urgenda Case*, in *Journal of Energy & Natural Resources Law*, 2019, p. 149.

⁽⁹⁾ K. DE GRAAF, J. JANS, *The Urgenda Decision: Netherlands Liable for Role in Causing Dangerous Global Climate Change*, in 27, *Journal of Environmental Law*, 2015, p. 517.

soft law and non-binding principles, international agreements and treaties (such as the United Nation Convention on Climate Change) as well as on the European Convention on Human Rights (and specifically on art. 2, that protects the right to life, and on art. 8, that protects the right to family life)⁽¹⁰⁾. All these sources were taken together not to establish the existence of State's obligations but rather to determine the content of the duty of care that the State owes to its inhabitants.

The second one, similar in the motives but different as to the outcome, is the case *Juliana vs. United States* (colloquially known as “the kid’s case”). In that lawsuit, begun in 2015, Kelsey Juliana, a young climate activist of 22 years old from the State of Oregon, together with other young activists and non-profit organizations sued the United States federal government (as well as the President of the United States and several federal agencies) for failing to stabilize greenhouse gas emissions and thus to protect the right to life of its citizens. More specifically, according to the plaintiffs, by doing so the Federal Government has breached its duty of care towards its people, endangering their «life, liberty and property» that they cannot be deprived of without a due process. In this case the key question was: is legally conceivable an enforceable, justiciable fundamental right to a «stable climate», that is to a «climate system capable of sustaining human life»? Notwithstanding, initially, the Oregon District Judge Ann Aiken had shown enthusiasm for this cause – denying an early initial request for dismissal⁽¹¹⁾ – unfortunately the case has

⁽¹⁰⁾ I. LEIJTEN, *Human Rights vs. Insufficient Climate Action: The Urgenda Case*, in *The Netherlands Quarterly of Human Rights*, 2019, p. 112. See also J. PEEL, H.M. OSOFSKY, *A Rights Turn in Climate Change Litigation?*, in 7, *Transnational Environmental Law*, 2018, p. 37. More generally, on the role of soft law principles in climate change governance, see J. PICKERING, et al., *Global Climate Governance Between Hard and Soft Law: Can the Paris Agreement's 'Crème Brûlée' Approach Enhance Ecological Reflexivity?*, in 31, *Journal of Env. Law*, 2019, p. 1.

⁽¹¹⁾ M.C. BLUMM, M.C. WOOD, “No Ordinary Lawsuit”: *Climate Change, Due Process and the Public Trust Doctrine*, in *American University Law Rev.*, 2017, p. 1. For an important precedent – although different under many respects – see the case *Massachusetts v. Environmental Protection Agency (EPA)*, 549 US 497 (2007). For comments on this last case, see B.C. MANK, *Standing and Future Generations: Does Massachusetts v. EPA Open Standing for Generations to Come?*, 34 *Columb. J. Env. Law*, 2009, p. 1; E. FISHER, *Climate Change Litigation, Obsession and Expertise: Reflecting on the Scholarly Response to Massachusetts v. EPA*, in 35 *Law Pol.*, 2013, p. 236.

been recently dismissed (17 January 2020). In a split decision, the Ninth Circuit Court of Appeal has rejected the case on the basis of a lack of standing of plaintiffs, and thus for a procedural reason.

Similarly, in the case *Carvalho and Others v Parliament and Council* (known as “The People’s Climate Case”) a group of ten families coming from different parts of the world brought before the General Court of the Court of Justice of the European Union the Council of the European Union and the European Parliament for the alleged unlawfulness of many parts of European legislation and for its tortious liability for climate change since its normative apparatus fails to protect plaintiff’s fundamental rights. Although on the 22nd of May 2018 the case has been dismissed and declared non-admissible for a lack of *«individual concern»*, this case exemplifies a growing trend⁽¹²⁾.

In all these cases, private law arguments were spent. People sought – whether successfully or not – to sue their own states on the grounds that they failed to protect their personal rights, their property, their constitutional interests and goods. The vocabulary employed comes from classical tort law doctrines: negligence, duty of care, harm, wrong, cause, etc. The States – so the arguments go – are acting *negligently*. Regardless of international binding agreements, States, by having a too much tolerant legislation on climate matters, are operating in disrespect of their *duty of care* and so they are *harming wrongfully* those they should, instead, protect. States’ weak, indulgent approach is contributing to *causing* climate change, and so on. Now, this same tort law language is increasingly used to held polluting companies and corporations accountable for their “climate harm” (see *infra*).

What should be stressed is that these cases and future developments are symptomatic of a “judicial turn” in the complex net of climate gover-

⁽¹²⁾ Case T-330/18. See L. KRÄMER, *The Environment Before the European Court of Justice*, in C. VOIGT (ed.), *International Judicial Practice on the Environment. Questions of Legitimacy*, Cambridge, 2019, p. 25; ID., *Climate Change, Human Rights and Access to Justice*, in *Journal European Env. & Planning Law*, 2019, p. 21. See also C.V. GIABARDO, *Towards a “Judicial Governance” of Climate Change? Climate Change Litigation, State Responsibility and the Role of Courts in the Global Regime*, in B. POZZI, V. JACOMETTI (eds.), *Environmental Loss and Damage in a Comparative Law Perspective: Attribution, Liability, Compensation and Restoration*, Cambridge, 2020 (forthcoming).

nance. This raises larger political questions as to the capacity and opportunity of courts to trigger the climate change revolution and the transition to a low-carbon economy.

2. — *The “Judicial Governance” of Climate Change and the Role of Courts.*

Political theorists know very well that in any given context power as a whole is always a *fixed* quantity. The amount of power always remains *the same*: what changes is who exercises it. When an institution falls back, another one moves forwards; when an institution leaves an empty space of power, another one inevitably fills it up. And – as history clearly shows – when political power fails to meet its objectives (and renounces therefore to employ its authority in a certain area), judicial power will take its place. Power does not tolerate emptiness.

The same is happening in the climate change governance. Courts are simply filling the voids left by politics. We are assisting therefore to the birth and evolution of a “judicial governance” of climate change⁽¹³⁾.

This “judicial governance” has many positive sides. It is based upon bottom-up, de-centralized initiatives, and so has the capacity to directly empower stakeholders. It is a form of having their voices heard⁽¹⁴⁾. Socially, it favors the engagement and international mobilization of people, it gives rise to social movements and to a more powerful involvement of the social body in environmental matters⁽¹⁵⁾. In addition, even when the case is un-

⁽¹³⁾ I developed this point more at length in C.V. GIABARDO, *Towards a “Judicial Governance” of Climate Change? Climate Change Litigation, State Responsibility and the Role of Courts in the Global Regime*, cit.

⁽¹⁴⁾ See the very influential book written by R. COX (who is the lawyer at the forefront of many existing climate legal cases) *Revolution Justified. Why Only the Law Can Save Us*, Planet Prosperity Foundation, 2012.

⁽¹⁵⁾ A.M. MARSHALL, S. STERETT, *Legal Mobilization and Climate Change: The Role of Law in Wicked Problems*, in 9, *Oñati Socio-legal Series*, 2019, p. 267, available at opo.iisj.net. More generally, see L. VANHALA, *Legal Opportunity Structures and the Paradox of Legal Mobilization by the Environmental Movement in the UK*, in 46, *Law & Society Review*, 2012, p. 523.

successful, climate change judicial cases – by gaining media attention and coverage – contribute to the sensibilization of public discourses and to the construction of an environmental conscious narrative that displays at many levels of society⁽¹⁶⁾.

From a political theory standpoint, one could ask if courts are proper venues to decide climate change-related issues. This is a powerful argument not only because the assessment of such issues requires the use of technical and expert scientific knowledge – that judges might not be provided with – but also because adjudicating climate-related issues often entails the balancing of delicate policy questions that might best tackled in political arenas⁽¹⁷⁾. The problem is that if climate questions are considered political, then they are non-justiciable in courts, and vice versa. The “separation of power” doctrine is often raised by public defendants in such lawsuits and was central (although ineffective) in the Dutch government’s defense in the *Urgenda* case⁽¹⁸⁾. Has a court the legitimacy and competence to order a State to implement a different legislation?⁽¹⁹⁾

However, the judicial governance of climate change should not be surprising. Indeed, it is quite easy to explain. We are living in an era marked by political inertia and ineffectiveness of political action. Therefore, people resort to courts not only to seek a redress to their own harm but also to

⁽¹⁶⁾ G. NOSEK, *Climate Change Litigation and Narrative: How to Use Litigation to Tell Compelling Climate Stories*, in 42, *William & Mary Environmental Law & Policy Rev.*, 2018, p. 733; G. GANGULY, J. SETZER, V. HEYVAERT, *If at First You Don’t Succeed*, cit.

⁽¹⁷⁾ S.M. LATOURETTE, *Note, Global Climate Change: A Political Question?*, in 40 *Rutgers L. J.*, 2008, p. 219; J.R. MAY, *Climate Change, Constitutional Consignment, and the Political Question Doctrine*, 85 *Denv. Univ. L. Rev.*, 2008, p. 919; A. THORPE, *Tort-Based Climate Change Litigation and the Political Question Doctrine*, in 24 *J. Land Use & Env. Law*, 2008, p. 79; E.C. BORISSOV, *Global Warming: A Questionable Use of the Political Question Doctrine*, in 41 *Ind. L. Rev.*, 2008, p. 415.

⁽¹⁸⁾ L. BERGKAMP, *A Dutch Court’s “Revolutionary” Climate Policy Judgment: The Perversion of Judicial Power, the State’s Duties of Care, and Science*, in 12 *Journal for European Environmental & Planning Law*, 2015, p. 241.

⁽¹⁹⁾ B.W. WEGENER, *Urgenda – World Rescue by Court Order? The “Climate Justice” – Movement Tests the Limits of Legal Protection*, in *Journal for European Environmental & Planning Law*, 2019, p. 125.

obtain effective legal developments and the oversight of political decisions. That politics seem to be either unwilling or unable to tackle climate change effectively is hardly deniable. It is true that in 2015 the international community gathered together and signed the Paris Agreement, where the world leaders committed themselves to limit global warming to “well below” 2 Celsius degrees, and preferably to 1.5 [art. 2 (a)] to prevent an irreversible climate catastrophe (even if the Trump administration withdrew from it)⁽²⁰⁾. But it is equally true that the Paris Agreement – by imposing heavy duties and commitments to signing states – opens, rather than restricts, new and further spaces for litigation, as citizens and stakeholders will have stronger reasons to hold governments accountable. Domestic policies and measures enacted nationally to give legal effects to the commitments will be likely submitted to judicial scrutiny⁽²¹⁾. Judges and courts, therefore, are expected to play an even larger and more intense role in the near future in the global governance of climate change.

The harsh reality is that addressing in full climate change entails passing and implementing painful measures that will hardly meet people’s desires and expectations. De-carbonizing the economy calls for the overturning of the current economic model of production (which implies enormous costs) and a massive de-growth process that has to occur simultaneously at a global and at a local and then individual scale. Politically, this means that the implementation of climate change reducing policies will likely have a negative impact upon the immediate interests of the “productive forces” of society – not only companies and enterprises but also workers and consumers – and

⁽²⁰⁾ D. BODANSKY, *The Paris Climate Change Agreement: A New Hope?* in *American Journal of International Law*, 2016, p. 100; L. RAJAMANI, *Ambition and Differentiation in the 2015 Paris Agreement: Interpretative Possibilities and Underlying Politics*, in 65 *Int’l Comp. Law Quarterly*, 2016, p. 493. For climate change litigation in the age of the Trump’s “de-regulation” age, see D.P. ADLER, *U.S. Climate Change Litigation in the Era of Trump: Year One*, working paper of the Sabin Center For Climate Change Law, Columbia University Law School, available online at columbiaclimatelaw.com.

⁽²¹⁾ L. WEGENER, *Can the Paris Agreement Help Climate Change Litigation and Vice Versa?*, in *Transnational Env. Law*, 2020, p. 1; Lord R. CARMWATH, *Climate Change Adjudication after Paris: A Reflection*, in 28 *Journal of Environmental Studies*, 2016, p. 5.

then on the dynamics of the elections. As we have seen, recently, in France, the government's decision to raise the price of carbon fossil fuels, and ultimately the price of gasoline for cars, has been stopped by huge protests led by the Yellow Vests movement⁽²²⁾.

3. — “Regulating Through Litigating”. *Tort Law Between Private and Public.*

Before getting back to climate change litigation, let me briefly consider theoretically the scopes and functions of tort law and the role it plays from a public point of view⁽²³⁾.

As it is known, tort law is that part of private law whose rules aim *in the first place* to compensate the victim of an injury (tort) for his losses. More specifically, tort law performs two functions: (a) redressing a past wrong and repairing a past harm (that is backward-looking) and (b) preventing the same wrongful conduct from happening again, through the establishing of precedents by courts (forward-looking). So, the threat of liability – as declared by a court – could well have a “risk regulation” function, as it deters future wrongful conducts and minimizes and distributes the costs of accidents. Tort law has therefore a double souls: on the one side it provides a compensation; on the other one, it deters (supposedly) wrongful behaviors⁽²⁴⁾.

At times, this deterrence effect has been strongly emphasized over the function of compensation. «*Tort law* – as it has been famously said – *is public*

⁽²²⁾ As remembered by L. BURGERS, *Should Judges Make Climate Change Law?* in *Transnational Environmental Law*, 2020, pp. 1-5.

⁽²³⁾ For a thorough current discussion, see D. PAPAYANNIS, *El derecho privado como cuestión pública*, Universidad del Externado de Colombia, 2016; See also ID., *Derecho de daños, principio morales y justicia social*, Madrid-Barcelona, 2013.

⁽²⁴⁾ G.T. SCHWARZ, *Mixed Theories of Tort Law: Affirming Both Deterrence and Corrective Justice*, in 75 *Texas Law Rev.*, 1997, p. 1801; S. HEDLEY, *Looking Outward or Looking Inward? Obligations Scholarship in the Early 21st Century*, in A. ROBERTSON, H. WU TANG (eds.), *The Goals of Private Law*, Hart, 2009. See also, for a recent panoramic view, J. MURPHY, *The Heterogeneity of Tort Law*, in 39, *Oxford Journal of Legal Studies*, 2019, p. 455.

law in disguise⁽²⁵⁾. But in what sense? Generally, private law theorists coming from the *Law & Economics* tradition are inclined to see tort law rules in instrumental terms, that is serving, more or less explicitly, a risk control and a risk governance function, which are clearly public goals⁽²⁶⁾. Tort law, by imposing penalties, creates incentives and disincentives. In this way it guides the behaviors of various social actors – consumers, risk-producing entities, companies, governments, and so on – and thus shapes the structure of society people live in. So, tort law can be designed in various different ways as to obtain the desired social policy goals. This mainly occurs through the activity of judges, and thus through adjudication: this is why the phenomenon is known, conceptually, as “regulation through litigation”⁽²⁷⁾. Of course, the intensity and practical relevance of litigation as a form of regulation varies

⁽²⁵⁾ L. GREEN, *Tort Law Public Law in Disguise*, in 38, *Texas L. Rev.*, 1959, p. 1.

⁽²⁶⁾ D.A. KYSAR, *The Public Life of Private Law: Tort Law as a Risk Regulation Mechanism*, in 9, *European Journal of Risk Regulation*, 2018, p. 48; M. DYSON (ed.), *Regulating Risk through Private Law*, Cambridge, 2018; P. CANE, *Tort Law as Regulation*, in 31 *Common Law World Review*, 2002, p. 305; ID., *Rights in Private Law*, in D. NOLAN, A. ROBERTSON (eds.), *Rights and Private Law*, Hart, 2011. See also S. SHAVELL, *Liability for Harm versus Regulation of Safety*, in 13 *Journal of Legal Studies*, 1984, p. 357. For early discussion of tort law in regulating environmental law, see also ID., *Using Tort Law to Enforce Environmental Regulation*, in 41, *Wasburn LJ*, 2002, p. 427; A. ABELKOP, *Tort Law as an Environmental Policy Instrument*, in *Oregon Law Rev.*, 2014, p. 381. From a more theoretical viewpoint, see J.C.P. GOLDBERG, B. ZIPURSKY, *Torts as Wrongs*, in 88, *Texas Law Rev.*, 2010, p. 917; G. CALABRESI, *Some Thoughts on Risk Distribution and the Law of Torts*, in 70(4) *Yale Law Journal*, 1961, p. 499; ID., *The Costs of Accidents. A Legal and Economic Analysis*, Yale University Press, 1970. In the Italian legal doctrine, see G. ALPA, *Ingegneria sociale e amministrazione del danno. Quindici anni di dottrina della responsabilità civile*, in *Giur. it.*, 1985, IV, c. 193; S. RODOTÀ, *Modelli e funzioni della responsabilità civile*, in *Riv. crit. dir. priv.*, 1984, p. 596.

⁽²⁷⁾ A.P. MORRIS, B. YANDLE, A. DORCHAK, *Regulation by Litigation*, Yale, 2008; T.O. MCGARITY, *Regulation and Litigation: Complementary Tool for Environmental Protection*, in 30 *Columbia J. Env. Law*, 2005, p. 371; P. LUFF, *The Political Economy of Court-Based Regulation*, in U. MATTEI, J.D. HASKELL (eds.), *Research Handbook on Political Economy and Law* (Edward Elgar, Cheltenham 2015), p. 192. However, remarking the difference between regulation and litigation (that is between *ex post* vs. *ex ante* remedies, between rule vs. standards, between courts vs. agency, and between private vs. public enforcement) see R.A. POSNER, *Regulation (Agency) Versus Litigation: An Analytical Framework*, in D.P. KESSLER, *Regulation vs. Litigation: Perspectives from Economics and Law*, University of Chicago Press, 2009, p. 11.

from jurisdiction to jurisdiction, and it is expressly recognized as a typical feature of the American legal tradition⁽²⁸⁾.

In reality, there is an important current stream of private law theorists who conceive rigorously tort law as a purely autonomous practice. According to them, the functions of private law should not be thought of by reference to external goals (such as promoting social justice, maximizing welfare and social utility, minimizing the cost of injury, and the like) but rather “internally”: tort law rules just protect personal rights and obligations according to the (Aristotelian – Kantian) idea of “corrective justice”, by which wrongdoers must return injurer to a “pre-tort” position, and nothing more⁽²⁹⁾.

However, taking position in this debate is not the purpose of my analysis. Therefore, a simpler and more practical stance will be adopted here. Indeed, regardless what the functions of tort law should be, it is hardly contestable that judicial tort law decisions have a *de facto* regulatory effect on the behaviors of non-litigants parties. The general, normative commands of tort law are made actual and concrete through litigation. This is to say that, through the resolution of a particular and specific case, courts at the same time also declare, elucidate and clarify the norms of behavior *vis a vis* the community. Courts in deciding tort law cases before them interpret both procedural requirements (jurisdictional standings, burden of proof, etc.) and define substantial standards. They analyse and articulate key concepts as foreseeability,

⁽²⁸⁾ A. KAGAN, *Adversarial Legalism*, Harvard UP, 2019 (or. ed., 2001), Ch. 6 (*Civil Justice*), at 118 («The United States more often relies on privately initiated civil litigation and judges to resolve commercial disputes, implement public policy, and enforce regulatory statutes and civil rights laws»), and Ch. 7 (*The Tort Law System*), at 147.

⁽²⁹⁾ The most famous exponent of this “purist” view is, perhaps, Ernest J. WEINRIB, *The Idea of Private Law*, Cambridge UP, 1995; ID., *Corrective Justice*, Oxford UP, 2012; ID., *Understanding Tort Law*, 23 *Va. U. Law Rev.*, 1989, p. 485; ID., *Towards a Moral Theory of Negligence Law*, in *Law and Philosophy*, 1983, p. 37; ID., *The Special Morality of Tort Law*, in 34 *McGill Law Journal*, 1989, p. 403. See also R. A. Epstein, *A Theory of Strict Liability*, 2 *Journal of Legal Studies*, 1973, p. 151; J.L. Coleman, *The Structure of Tort Law*, in 97 *Yale LJ*, 1988, p. 1233; ID., *Doing Away with Tort Law*, 41 *Loyola Los Angeles Law Rev.*, 2008, p. 1149; S.R. PERRY, *The Moral Foundations of Tort Law*, in 77 *Iowa Law Rev.*, 1992, p. 449. For a general, helpful discussion of these problems, see J. GARDNER, *What is Tort Law For? The Place of Corrective Justice*, in *Law and Philosophy*, 2011, p. 1; and W. LUCY, *Philosophy of Private Law*, Oxford, 2007 (Tort Law).

reasonableness, the limits of the duty of care, the content of harm, in various different situations. These functions of “problem articulation” and “norm declaration” are extremely important in framing further legal and political discussions⁽³⁰⁾. Therefore, by relying on private choices (i.e., the choice individuals make whether to sue or not), courts clearly perform a public activity, i.e. that of generating and implementing norms that will govern future cases, and thus future actions. Private litigation has a public dimension⁽³¹⁾. Seen in this light, tort law litigation is a form a private ordering⁽³²⁾ and it can well be considered, under specific circumstances, an alternative form of social control (alternative to administrative statutes, for example).

On another note – as it has already been pointed out – courts sometimes also perform this regulatory function *indirectly*, i.e. even when a case is unsuccessful, by raising social awareness and public attention around a certain social issue. This effect is “indirect” as it is not tort law *per se*, but rather the public resonance of the litigation that plays the regulatory role⁽³³⁾. Indeed, adjudication principles establish that parties are entitled to a court response even if the case is not legally meritorious. If a certain case is accepted and discussed by a court, and simply out of this fact, then it means that a certain harm is, at least, a legitimate subject of public attention. The “Tobacco litigation” (in the United States) or the many lawsuits related to asbestos (in the UK and in Europe) clearly prove this fact: not only they have led enterprises to modify their corporate behaviors as to avoid being sued, but they also have triggered a wave of legislative modifications. As Professor Douglas Kysar notes, tobacco industry as a whole has faced more than three hundred

⁽³⁰⁾ B. EWING, D.A. KYSAR, *Prods and Pleas: Limited Government in an Era of Unlimited Harm*, in *Yale Law Journal*, 2011, p. 350.

⁽³¹⁾ S HEDLEY, *Courts as Public Authorities, Private Law as an Instrument of Government*, in K. BARKER, D. JENSEN (eds.), *Private Law. Key Encounters with Public Law*, Cambridge, 2013, p. 89. See also, for the emphasis of the “public dimension” of private law, C.V. GIABARDO, *Private Law in the Age of the Vanishing Trial*, in K. BARKER, K. FAIRWEATHER, R. GRANTHAM (eds.), *Private Law in the 21st Century*, Oxford (Hart), 2017, p. 547, but spec. p. 559.

⁽³²⁾ J.C.P. GOLDBERG, B.C. ZIPURSKY, *Accidents of the Great Society* in *64 Modern Law Rev.*, 2005, p. 364.

⁽³³⁾ A. BLOOM, *The Radiating Effects of Torts*, in *62 DePaul Law Rev.*, 2013, p. 229.

lawsuits over a period of forty years, on the dangerousness of cigarettes, without losing a single case or settling. Then, in a case, the Attorney General of Minnesota required tobacco companies to disclose all their documents, and millions of pages of documents were produced. Those documents went publicly available, became the basis of articles, policy reports, media coverage, and so on, and shaped the current negative perception of smoking, which in turn led to stringent smoking regulations around the world⁽³⁴⁾.

4. — *The “Anti-Tort” Structure of Climate Change.*

Now, let us get back to climate change. Can a plaintiff (be it an individual or a group of people, an NGO, or even a state) sue a defendant (such as, say, a major carbon producer) seeking monetary recovery or injunctive orders (e.g., an order to stop, or to further reduce, polluting activities, or to reconvert its business choices) on the basis that it is contributing to the global emission of greenhouse gas, that will result in the rise of global temperatures (or others climate adverse phenomena)? Would such a claim be justiciable? Could a major enterprise be held liable⁽³⁵⁾? And if so, on what grounds?

These questions are not imaginative. Consider the following cases. A State sues for public nuisance some big automotive companies, lamenting that, due to their emission in the air of greenhouse gases, coastal sea levels are rising (and so are public expenses linked to flood control infrastructures) and care costs for the population living within its borders are growing⁽³⁶⁾. A

⁽³⁴⁾ D.A. KYSAR, *The Public Life of Private Law*, cit., p. 9. See also A. KAGAN, *Adversarial Legalism*, cit., p. 148.

⁽³⁵⁾ J. BRUNNÉE, et al., *Climate Change Liability: Transnational Law and Practice*, Cambridge UP, 2012, p. 29.

⁽³⁶⁾ *People of the State of California v. General Motors Corp. No C06_05755* (ND Cal, 17 September 2007). See R.S. ABATE, *Automobile Emissions and Climate Change Impacts: Employing Public Nuisance Doctrine as Part of a “Global Warming Solution” in California*, in 40 *Conn. Law Rev.*, 2008, p. 591.

tiny village in a remote area of Alaska sues a group of big oil & gas companies (that are distant thousands of kilometers) for their contributions to climate change, which is causing the melting of the levels of permafrost in which the village rests upon, and asks the court that the companies will pay for the extremely high costs of relocating to a safer place⁽³⁷⁾.

All these are instances of tort-based climate change litigation, a phenomenon that poses a huge arrays of problems and intricate legal conundrums⁽³⁸⁾. Indeed, conceptually speaking, tort law and climate change seem to have very little in common. They somehow are *at odds*. While climate change affects humanity as a whole, private law is about private relations. While climate change is public, in the sense that the need of its mitigation transcends private interests, tort law is about two or more individuals who act in the pursuit of their own interests. Professor Douglas Kysar of Yale Law School, in a path-breaking article dedicated to the interplays between tort law and climate change (titled “*What Climate Change Can Do for Tort Law*”) identifies many factors of tort law doctrine that cannot be easily conceptualized as to fit climate change goals and that, therefore, are quite ineffective for deterring climate harms. Those factors can be reduced (a) to the impressive scale of the subjects both causing the harm and suffering the losses, (b) to the ubiquity and diffusion of climate harm (that can happen everywhere and at every time), and (c) to the probabilistic correlation between the wrongful behavior and the harm⁽³⁹⁾. For these reasons, as he writes, climate change possesses an “anti-tort” structure⁽⁴⁰⁾.

His idea is that the conceptual simplicity of tort law is unsuitable to address all the scale and complexities of climate change. Basically, current tort law still revolves around the idea of a harm caused by a person to another, and that this situation requires to be addressed. Tort law is therefore deep-

⁽³⁷⁾ *Native Village of Kivalina v. ExxonMobil Corp.*, 696 F.3d 849 (9th Cir. 2012).

⁽³⁸⁾ D. GROSSMAN, *Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, in 28 *Columbia J. Env. Law*, 2003, p. 1.

⁽³⁹⁾ D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, in 41, *Env. Law*, 2011, p. 1.

⁽⁴⁰⁾ D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 8.

ly marked by classical liberal ideas both in terms of individualism and in term of a “mechanistic” image of causation⁽⁴¹⁾. The liberal structure of tort law is still essentially dyadic: “A” wrongfully and directly causes a harm to “B”, where A and B are two subjects, atomistic, who must have a particular connection: they somehow *de facto* belong to the same community, context, place and time⁽⁴²⁾. Theirs is, at best, an occasional life encounter. Their connection should not be *too remote*. A and B are simply people who came into contact, and the first caused a damage to the second.

In contrast, in climate change there are plenty of wrongdoers (i.e., green gas houses emitters) and at the same time plenty of damaged, potentially all the humanity in its entirety. From a purely scientific perspective, everyone is responsible towards everyone, no matter how distant *in place* (this is the “transnationalism” of climate change: a heavily polluting corporation may well be responsible, in part, for damages happened on the opposite side of the world⁽⁴³⁾) and *in time* (climate harm could reveal itself decades, or even centuries, after the conduct). The emission of greenhouse gases does not impact directly a specific property or people; the gases disperse into the atmosphere and contribute to the rise in temperature on earth, which, in turn, causes a net of complex and unforeseeable weather events, such as heat waves, hurricanes, sea level rise, loss of biodiversity, disease spreading, and the like, and that are likely to damage properties, infrastructures, economy, and human health, and whose general effects might become visible even century after the emission⁽⁴⁴⁾. So, what kind of *harm* should be protected?

⁽⁴¹⁾ D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 6.

⁽⁴²⁾ B.C. ZIPURSKY, *Foreseeability in Breach, Duty, and Proximate Cause*, in 44 *Wake Forest Law Rev.*, 2009, p. 1247.

⁽⁴³⁾ *Native Village of Kivalina*, cit.; see also D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 27. Generally, see M. BYERS, F. KELSEY, A. GAGE, *The Internationalization of Climate Damages Litigation*, in 7 *Washington Journal of Environmental Law & Policy*, 2017, p. 264; J. PEEL, J. LIN, *Transnational Climate Litigation: The Contribution of the Global South*, in 113 *American Journal of International Law*, 2019, p. 679.

⁽⁴⁴⁾ R.K. CRAIG, *Adapting to Climate Change: The Potential Role of State Common-Law Public Trust Doctrines*, in 34 *Vermont Law Rev.*, 2010, p. 809.

5. — “*Injury to All is Injury to None*”? Reflections on Negligence and Duty of Care in Climate Change.

Simply put, what tort law does is to require people to behave reasonably (i.e., not negligently) as to avoid probable and foreseeable negative consequences. This embodies the “moral” core of the duty of care, which represents what we owe to each other as members of society⁽⁴⁵⁾. In order to conceive a *climate tort*, we should therefore argue that we all owe to each other a “climate duty of care”, in the sense that we should not act negligently in causing a climate harm⁽⁴⁶⁾. In order for this to be possible we should imagine an existent and enforceable, constitutional, or human, personal right (to which everyone of us is entitled) to a climate system «capable of sustaining human life»⁽⁴⁷⁾, with the consequence that any behavior that causes an harm to that right calls for a compensation. But even in this scenario, how can this “climate negligence” be conceptualized? In other words, how can this duty be breached? Or, if we want to translate the very same problem in Italian terms (i.e., adopting the terminology of the art. 2043 of the Italian Civil Code) what constitutes, in climate change, an unjust harm (*danno ingiusto*)?

Scientifically, data are available. If we adopt this perspective, the content of our duty of care in climate change and its breaching is thus just a matter of calculus. It suffices to take the total amount of greenhouse gases that can be emitted in a given period of time to have a reasonable probability to stay at 2 degree Celsius above the current temperatures and divide it equally among the world population⁽⁴⁸⁾. What we will obtain is an individual annual

⁽⁴⁵⁾ For discussion in the American legal context, see D.A. ESPER, G.C. KEATING, *Abusing “Duty”*, in 79 *South. Cal. Law Rev.*, 2006, p. 265; J.C.P. GOLDBERG, *The Life of the Law*, in 51 *Stanford Law Rev.*, 1999, p. 1419. For the theoretical framework, see D. PAPAYANNIS, *La práctica del alterum non laedere*, in 41, *Isonomía*, 2014, p. 19.

⁽⁴⁶⁾ For interesting discussions, see D. HUNTER, J. SALZMAN, *Negligence in the Air: The Duty of Care in Climate Change Litigation*, 155 *U. Penn. Law Rev.*, 2007, p. 1741.

⁽⁴⁷⁾ To use the words employed by the defendants in the case *Juliana vs United States* (see *supra*).

⁽⁴⁸⁾ D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 10.

budget, a per-person emission allowance above which our behaviors might be considered unlawful. The consequences are paradoxical. Even taking a flight or driving a car instead of walking for short distances scientifically causes a damage, with the consequence that the very basic freedoms of liberal societies will be impaired. Simply, that means that the vast majority of the world population (billions of people) is currently breaching climate change duties of care, including probably the plaintiff himself, who is contributing to cause the damage he is asking the damages for⁽⁴⁹⁾. This would render the feasibility of this rigorous doctrine impossible to pursue. If our behaviors technically cause injury to all, then they causes injury to none⁽⁵⁰⁾.

6. — *Who is Causing Climate Harm? A Tort Law Perspective.*

These reflections lead to consider the causation of climate harm, that is possibly the most significant challenge climate change litigation plaintiffs have to face before a court. In climate change tort law causation is always, at best, conceptualized in probabilistic terms⁽⁵¹⁾. Indeed, the main problem about the connection between any individual climate-related harm and a particular defendant's emission is the extraordinary number of greenhouse gas emitters. Even if the human, anthropogenic contribution to a single, specific adverse atmospheric or climatic event (say, a hurricane) would not

⁽⁴⁹⁾ With great clarity, D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 11 («To put the guidelines in perspective, consider the following activities, each of which in the United States would consume approximately one ton from an individual's annual emissions budget: driving a standard passenger vehicle for ten weeks, consuming household energy in an average single family home for four weeks, or flying roundtrip from New York City to San Francisco. Obviously, then, much of the world's population is currently in violation of the duty of ordinary climate care, at least when that duty is defined according to our best scientific estimates of the aggregate global emissions level»).

⁽⁵⁰⁾ B.C. MANK, *Standing and Global Warming: Is Injury to All Injury to None?*, in 35 *Env. Law*, 2005, p. 1. For early discussion, E.M. PENALVER, *Acts of God or Toxic Torts? Applying Tort Principles to the Problem of Climate Change*, in 38, *Natural Resources Journal*, 1998, p. 563.

⁽⁵¹⁾ For the theoretical analysis of probabilistic causation in tort law, see D. PAPAYANNIS, *Probabilistic Causation in Efficiency-Based Liability Judgments*, in 20, *Legal Theory*, 2014, p. 210.

be contested, the causations are so diffuse that it is almost impossible to disaggregate them in any helpful ways. Theoretically, emissions are simply too small to cause any differences⁽⁵²⁾. That makes it almost impossible to quantify one's contributions. It is the combination that counts. In climate change tort law litigation, then, the classical "but-for" test for establishing causation is highly ineffective. If without my behavior the adverse event would have occurred *anyway*, then I am not liable for it (this is the "consequentialist alibi", as Kysar puts it⁽⁵³⁾).

Perhaps, a way to overcome these problems is the possibility to sue directly states and nations for permitting greenhouse emission activities, and thus for failing to adequately protect the environment, under the tort law doctrine. They are sued not for causing climate harm directly, but for failing to adopt a stricter legislation of greenhouse gas emitters. But even in this scenario is unlikely that climate change as a whole would not have occurred without the contribution of a single state – even if we are dealing with a large emitter, such as the United States, or China. This was precisely one of the arguments the State of The Netherlands spent in the case *Urgenda* (see *supra*). The Netherlands claimed that the state was only a minor contribution to climate change in the world economy and its responsibility was limited to a small share of global emissions. The Court responded not only that The Netherlands is subjected to its own obligations regardless to what other states do, but also that each state should be held responsible for their share. But we should also be aware that the *Urgenda* decision is an exception in the climate change litigation, and that generally courts have proved rather conservative in declaring the causation link.

An intelligent way to overcome these problems is the suggestion to apply not the "but for" test but rather the "market share" liability doctrine to allocate damages⁽⁵⁴⁾. According to this doctrine, courts will be able to

⁽⁵²⁾ D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 35.

⁽⁵³⁾ D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, loc. cit.

⁽⁵⁴⁾ D.J. GRIMM, *Global Warming and Market Share Liability: A Proposed Model for Allocating Tort Damage Among CO2 Producers*, in 32 *Columbia J. Env. Law*, 2007, p. 209; K.B. MAAG, *Note, Climate Change Litigation: Drawing Lines to Avoid Strict, Joint, and Several Liability*, 98, *Georgetown*

quantify the proportional contribution to climate change according to the defendant's portion of market, rather than to its direct or probabilistic causal responsibility. So, plaintiffs could seek remedy by carefully selecting the defendants among the highest-emitting companies of the world, whose single emissions constitute a substantial factor in causing global warming. Scientifically, it is indeed proven that a relatively small group of extra-large emitters (so-called "Carbon Majors") is responsible alone for the two third of the anthropogenic carbon emissions. So, theoretically speaking, it would be perfectly possible to conceive a successful action brought against this group as a whole, or against some of its most powerful members⁽⁵⁵⁾.

This is the path that seems to be actually undertaken.

In the recent case *Llinhya against RWE* (Germany's largest electricity producer), a Peruvian farmer sued for damage the German company as its contribution to climate change is allegedly causing the melting of a mountain glacier in Perù that threatens the inhabitants security of the inhabitants. The plaintiff claimed that as RWE is (scientifically) responsible for the 0,47 per cent of all global emissions of greenhouses gases, and carbon dioxide in particular, it should pay the correspondent amount of money⁽⁵⁶⁾. Even though the German court dismissed the action, the reasoning remains appealing.

The same line of thought underlines the case recently brought to the public attention by *Milieudefensie*, an environmental NGO based in The Netherlands. *Milieudefensie*, together with more than seventeen thousand co-plaintiff and other six organizations, has sued Shell – one the biggest oil companies in the world and the biggest in The Netherlands – for its share of responsibility in causing climate change⁽⁵⁷⁾. The letter initially sent to Shell states that its business model poses a threat to the global environment and makes it more difficult to meet the objectives of the Paris Agreement. As

Law Journal, 2009, p. 185; D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 37.

⁽⁵⁵⁾ S. HSU, *A Realistic Evaluation of Climate Change Litigation Through the Lens of a Hypothetical Lawsuit*, in *U Colorado Law Rev.*, 2008, p. 13.

⁽⁵⁶⁾ A. NOLLKAEMPER, L. BURGERS, *A New Classic in Climate Change Litigation: The Dutch Supreme Court in the Urgenda Case*, available online at ejiltalk.org.

⁽⁵⁷⁾ Climatecasechart.com.

Shell is responsible alone of the 1 per cent of the global emissions of greenhouse gases, it has a legally enforceable “social” duty of care of taking urgent climate actions (e.g., by stopping to invest billions of dollars in oil and gas and other highly polluting fossil fuels). Therefore, the plaintiffs ask the court to issue an injunctive order towards Shell requiring it to immediately reduce its emissions to at least 45 per cent by 2030 – which will likely entail a complete overturning of Shell’s business model and societal structure.

Also, this year, in 2020, a proceeding before the Nanterre District Court in France is being initiated by the NGO *Notre Affaire à Tous*, together with other non-profit organizations and even local authorities (in and out the borders of France, such as La Possession, on Réunion island, in the Indian Ocean, and the town of Sevran, in the north of Paris) against the oil and gas giant French company Total, to force it to undertake climate action as to align itself with the Paris Agreement’s goals and to mitigate the risks associated with climate change⁽⁵⁸⁾. The court case has already been supported by more than 2 million people in an online petition.

Are courts legitimized to do this? Has the judiciary got the power to impose a redefinition of companies’ targets and priorities arguing on the basis of climate harm? Are court equipped to take decisions on crucial companies, operating a cost/benefit analysis? In a world marked by the imminent climate catastrophe, these developments represent a serious attempt that merits our attention as legal scholars.

7. — *Conclusion.*

Climate change has a *legally disruptive* effect⁽⁵⁹⁾. As, perhaps, the greatest threat humanity is called to face so far and the most complex ones in many respects (scientifically, socially, politically, economically), climate change has

⁽⁵⁸⁾ See, for a brief description, *climatecasechart.com*.

⁽⁵⁹⁾ E. FISHER, E. SCOTFORD, E. BARRITT, *The Legally Disruptive Nature of Climate Change*, in *Modern Law Review*, 2017, p. 173.

a destabilizing effect on traditional legal doctrines and on the concepts of the law⁽⁶⁰⁾. This is due to the difficulty – and probably the inutility – of “squeezing” climate change challenges into traditional “legal boxes”. No legal domain will be exempt from this transformation: human rights law, competition law, tax law, corporate and insurance law, international law, and the prevailing notions of our legal mind, such as the separation of powers, the boundaries between private and public law, etc., all need to be re-thought as to fit the new climate situation.

In that scenario, tort law makes no exception. The imagination of an enforceable right to a stable climate, a right that earth temperatures *should not rise* due to human causes, the creation of a corresponding duty to “take care” of our climate, as a part of the larger duty of care we owe to each other as members of human society, and the configuration of causation in probabilistic terms, and so on, are just instances of the wider transformation tort law is undergoing to meet the expectations and new exigencies of people. As Douglas Kysar put it bluntly, «*tort law will be forced to adapt or perish, much like life itself in a warming world*»⁽⁶¹⁾.

⁽⁶⁰⁾ R.H. WEAVER, D.A. KYSAR, *Courting Disaster. Climate Change and the Adjudication of Catastrophe*, in *Notre Dame Law Rev.*, 2017, pp. 295-296.

⁽⁶¹⁾ D.A. KYSAR, *What Climate Change Can Do for Tort Law?*, cit., p. 7.