In recent years, The Netherlands has become the leading site of climate change litigation. Contrary to expectations (including my own!), its district, appellate, and supreme courts decided in favor of Urgenda, an upstart environmental organization, ordering the government to more aggressively reduce greenhouse gas emissions. Now the same district court has gone further, again in favor of environmental groups but now against Royal Dutch Shell ("Shell"), the world's largest non-state-owned fossil fuel company. What's most remarkable is that the decision calls for a 45% reduction of carbon dioxide (CO_2) emissions–of not only its own but also those of its customers–within less than a decade. However, given the unprecedentedruling's questionable logic, I doubt that it stand on appeal.

In the face of disappointing legislation and regulation, activists have increasingly turned to courts in the last fifteen years. In the US, for instance, *Massachusetts v. Environmental Protection Agency* (2007) forced the EPA to regulate greenhouse gas emissions. These lawsuits face three key barriers. First, who can stand as a plaintiff? Most climate-change harms will be in the future and in often-distant low-latitude countries. *Massachusetts* pointed to the loss of coastal land from sea-level rise, while the *Urgenda* judgments ultimately concluded that there is a serious risk that climate change will cause the human rights of people in the Netherlands to not be met. Second, who can be a defendant? Everyone produces greenhouse gases. *Massachusetts* and *Urgenda* successfully argued that national regulators have particular responsibilities to take more action. Third is causation. Given that even the largest emitter constitutes only a minority of global emissions (e.g. China's emissions are about 30%) and that CO_2, the most important greenhouse gas, accumulates in the atmosphere, the defendant's emissions are not determinative. *But for* the defendant's actions, the plaintiffs would have still been harmed, albeit a bit later. This is where the courts have been the most creative, more or less waving away such concerns.

In the new *Milieudefensie et al* case, six environmental organizations were given standing and argued that Shell, which is headquartered in The Netherlands, has acted unlawfully toward them and must reduce all its CO_2 emissions: those directly emitted, from its supplies, and from its downstream end-users. That final "Scope 3" source is by far the greatest: 1.4 gigatons CO_2 equivalent in 2020, about that of Japan. The plaintiffs' basis of claimed harm was similar to that of *Urgenda*, that of risks to human rights to life and respect for private and family life of people in The Netherlands, as found in the European Convention for the Protection of Human Rights and Fundamental Freedoms. Under Dutch tort law, the standard of care is that "acting in conflict with what is generally accepted according to unwritten law is unlawful." But what is the specific unwritten duty of care in this novel situation?

The district court turned to several sources of guidance. Shell's website says, "We are committed to respecting human rights. Our human rights policy is informed by the UN Guiding Principles on Business and Human Rights," a set of nonbinding principles endorsed by the UN Human Rights Council. Shell also explicitly recognizes that CO_2 emissions must be reduced in order to prevent dangerous climate change. (In fact, Shell has the most ambitious emissions abatement plan of all fossil fuel companies, for whatever that is worth.) The court concludes that Shell must thus do its part and act consistently with the Paris Agreement's goals of keeping global warming well below 2° and to pursue efforts to limit it to 1.5°C. To determine what this requires, the court turns to the 2018 Special Report on 1.5°C warming of the Intergovernmental Panel on Climate Change (IPCC). This reports that a net 45% reduction in 2030, relative to 2010, would be consistent with a 50% chance of

keeping warming within 1.5°C and an 85% chance for 2°C. This is therefore what Shell must do (oddly enough relative to 2019) in order to act in line with its own "policy, policy intentions and ambitions."

Although I advocate rapid emissions abatement and recognize litigation's potential to further widely-held objectives, this ruling strikes me as grounded on weak legal reasoning. Despite the court's insistence that private legal persons (including corporations) are not directly bound by international law and that nonbinding quasi-legal instruments do not create obligations, even for states, it uses binding and nonbinding international agreements, and even scientific reports, to fashion a legally-bidning standard of care. Furthermore, the Dutch court is regulating the impacts that arise from the *global* use a Dutch company's products. Obviously Shell's oil and gas is eventually burned, but the vast majority of this occurs outside of the Netherlands. For these reasons, I believe that the decision will be mostly overturned by the appeals or supreme court. (The fact that Shell's stock price slightly increased on the day of the ruling suggests that investors share this view.) Specifically, I predict that their rulings will apply to no more than Shell's direct emissions, and those of its suppliers and end-users only in the Netherlands.

Furthermore, some of the court's argumentation is weak and arbitrary. It dismisses the likely substitution by consumers to other providers of oil and gas. And it offers no particular reason for choosing the 50% of 1.5°C and 85% of 2°C benchmark. As Benoit Mayer notes, a 25% cut would be consistent with a 66% chance of staying with 2°C global warming.

In fact, *Milieudefensie et al* could cause two important perverse incentives. First, most decarbonization scenarios envision the share of fossil fuel energy from natural gas (which Shell sells and has the least CO_2 per unit energy) to increase as that of coal (which Shell does not sell has the most CO_2) declines. This difference is substantial, as Mayer says:

> the International Energy Agency (IEA)'s projection for a pathway consistent with a 50 percent chance of limiting global warming to 1.5°C assumes 53 percent reduction in coal consumption between 2010 and 2030, but only 20 percent reduction and 11 percent increase, respectively, in oil and gas consumption. [link added]

Not only does this mean that the emissions from gas will likely decline more slowly that the world's total emissions, but this ruling will make oil and gas relatively more expensive, slowing this shift away from coal.

Second, decisions such as this, which aggressively interpret international treaties, nonbinding agreements, and firm's statements reduce states' incentives to ratify treaties and endorse nonbinding agreements. Likewise, firms will be less likely to locate in countries that have made such commitments and to commit themselves to maintaining human rights and reducing emissions. Obviously such treaties, nonbinding agreements, and statements mean little if they are not enforced, but over-interpreting them can be counter productive. If there is a Laffer Curve of interpretation, then *Milieudefensie et al* may move the Netherlands beyond the peak.

As a final note, while the plaintiffs called for Shell to reduce its emissions, the court made a point of ordering cuts to *net* emissions, thus allowing carbon dioxide removal (CDR):

> The SR15 report also states the following:
>
> "All pathways that limit global warming to 1.5°C with limited or no overshoot project the use of carbon dioxide removal (CDR) on the order of 100–1000 GtCO2 over the 21st century. CDR would be used to compensate for residual emissions and, in most cases, achieve net negative emissions to return global warming to 1.5°C following a peak (high confidence)…
>
> The IPCC warns against the risks that may be associated with reduction pathways that are based on large-scale negative emissions. However, the IPCC does not mention the feasibility of such reduction pathways. It must therefore be assumed that – although scenarios that assume large-scale negative emissions could perhaps be questioned – it is generally accepted that there must be room for scenarios with negative emissions.

I believe that this is the first time that a court has endorsed CDR.

For more commentary, see André Nollkaemper of the University of Amsterdam, Harro van Asselt et al of the University of Eastern Finland, and Benoit Mayer of the Chinese University of Hong Kong.