

# Exploring the legal obligation to reduce personal greenhouse gas emissions through climate litigation rulings

By Masako Ichihara

**A**gainst the backdrop of an accelerating climate crisis, legal frameworks are maturing globally. Due to litigation, they already establish legal obligations for states and private corporations to implement appropriate reduction regulations and measures for their greenhouse gas emissions. In contrast, no globally agreed framework legally obligating individuals to reduce emissions has yet emerged. This paper attempts to establish a legal basis for individual emission reduction obligations in light of this situation. Using international human rights conventions as a foundation, it argues that certain reduction obligations for individuals might exist, based on their respective circumstances. This conclusion is significant as a theoretical premise for incorporating individuals as key actors in future climate change countermeasures.

**Keywords:** Personal legal obligation to reduce emissions; climate litigation; personal carbon footprint; human rights

## Introduction

To adequately address the worsening impacts of climate change and ensure humanity's sustainable survival and well-being, it has become an urgent imperative for humanity to drastically reduce global greenhouse gas (GHG) emissions based on the findings of climate science, such as the Intergovernmental Panel on Climate Change (IPCC), the world's most authoritative climate science body. Its reports (i.e. IPCC 2023) have obtained a central role in climate litigation (ICJ 2025: para. 156). This litigation is accelerating the maturation of legal frameworks – both domestic and international – that deem large-scale GHG emissions unlawful. Several global judicial bodies, such as the International Court of Justice (ICJ), the European Court of Human Rights (ECtHR) and the Inter-American Court of Human Rights, have affirmed that states and private entities bear obligations to reduce emissions in their relationships with citizens and have ordered compliance. The accumulation of such rulings has permeated the international recognition that climate change impacts can constitute human rights violations, reframing climate change – previously discussed primarily within the natural sciences – as a legal issue as well (UNGA 2022; Office of the United Nations High Commissioner for Human Rights 2021: 43-46). In July 2025, the ICJ issued an advisory opinion entitled *Obligation of States in Respect to Climate Change*. In this opinion, the ICJ (2025: para. 242) explicitly stated that states bear an obligation under international law to implement GHG emission reductions necessary to achieve the temperature goals set by the Paris Agreement. It further clarified that in the event of a breach, states bear an obligation to provide remedies, such as compensation for damages caused by the breach (ICJ 2025: paras. 446-455). Thus, while some issues remain, including effectiveness and legitimacy (Bodansky 2023: 191; Voigt 2025: XI-XII), a legal framework is gradually being established. Conversely, although individuals are also GHG emitters, no globally agreed-upon legal framework for assessing their emissions

exists, despite the large number of previous studies addressing this. Individual emissions take diverse forms, varying significantly based on economic living standards and lifestyle choices. Among these, some emissions reductions would not be detrimental to well-being (Baatz 2014: 10-17). As climate impacts intensify and the global carbon budget tightens, mandating reductions for at least these non-essential emissions is necessary (Hedberg 2018: 64). A carbon footprint refers to the total set of GHG emissions caused by an organisation or individual, or by a single event, service, or product (Climate Partner 2025). The Personal Carbon Footprint (PerCF) must not be confused with the Product Carbon Footprint. Both concepts are effective tools for measuring emissions, but only the former is discussed further here. Websites for calculating PerCFs are provided by multiple organisations (WWF 2025; Conservation International 2025; Umwelt Bundesamt 2025). Many countries have recommended individual emission reductions and climate-friendly lifestyles; however, these activities and outcomes remain so far voluntary initiatives for interested individuals. No country has legally mandated individuals to calculate their PerCF to date. Subsequently, reduction of individual GHG emissions is also not legally required.

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As a result, individual emission reductions remain solely within the bounds of personal initiative and feasibility, failing to reach a level that significantly impacts global emissions (Pellegrino 2018: 813).

The reasons for the lack of progress in establishing a legal framework for individual emission reductions are diverse (Fragnière 2016: 799). Key factors include the inevitability of GHG emissions in modern human life, and that these daily emissions are protected by social human rights such as the right to an adequate standard of living. Moreover, there is the well-known temporal and spatial separation between the causal act and the occurrence of the result, which makes it difficult for individuals to recognise the impact of their actions. Due to these barriers, the prevailing stances regarding individual emission reductions are:

- a) they constitute a purely moral obligation (and some people even contest it as such),
- b) they constitute a legal obligation (but its legal enforceability remains contested).

## Methodology: taking the Royal Dutch Shell case as a precedent

Given the above circumstances, this article attempts to establish a legal basis for individual emission reduction obligations. This aims to lay the groundwork for considering legal responses to individuals who fail to reduce their emissions.

Regarding methodology, it examines the precedent established by the Dutch court ruling in *Milieudefensie et al. versus Royal Dutch Shell pld.*, which clearly stated that Royal Dutch Shell (RDS), headquartered in the Netherlands, bears a legal obligation to reduce GHG emissions associated with its business activities. This ruling sets a precedent for legally clarifying emission reduction obligations for private entities rather than states. This paper reviews the first-instance and appellate court judgements in this case, attempts to transfer the legal arguments from a company to an individual, and derives individual emission reduction obligations. There are three key differences between an individual and a public entity such as RDS.

The first difference is the scale of emissions or, put differently, the degree of contribution to climate change. The scale of RDS's emissions, when combining all its branches scattered worldwide, accounts for a significant proportion of global total emissions. Its contribution to climate change, therefore, is by orders of magnitude higher than the share of the highest individual emitters on earth (Barros/Wilk 2021). Furthermore, measures taken by RDS to reduce emissions can sometimes result in reduced emissions by end-users, including citizens, for example, through the substitution of gasoline in vehicles with biofuels. In this regard, RDS generally could bear a greater obligation than ordinary citizens.

Above this minimum, the scope and degree of individual obligations to reduce emissions must be carefully considered, incorporating the reasons and circumstances for each specific emission.

The second point concerns the reason for emissions. A certain proportion of individual emissions is unavoidably generated by essential activities such as heating, cooling, and consumption-based lifestyles (Li/Chen 2021: 8). Mandating reductions in these emissions risks infringing on citizens' social rights, which are part of the second generation of human rights. At the same time, human rights are not without restriction; they may be subject to certain limitations based on public welfare and the human rights of others. A classic example is the provision in the fifth preambular paragraph to the International Covenant on Civil and Political Rights (ICCPR 1966), stating: "[r]ealizing that the individual, having duties to other individuals and to the community to which he belongs, is under a responsibility to strive for the promotion and observance of the rights recognized in the present Covenant." Therefore, there is a minimum emissions level below which no entity can go. Above this minimum, the scope and degree of individual obligations to reduce emissions must be carefully considered, incorporating the reasons and circumstances for each specific emission. In contrast, a company's emissions are usually divided into Scope 1, Scope 2 and Scope 3 emissions. Scope 1 constitutes direct emissions from RDS's own operations, such as burning natural gas on an offshore platform or flaring excess gas at RDS's oil fields. Scope 2 is the emissions from the energy RDS buys and consumes, for instance if its refineries use electricity from the grid. Finally, Scope 3 refers to emissions caused by RDS's products and activities outside its own operations, such as airlines burning RDS's jet fuel. Most RDS emissions stem from Scope 3 of the corporate activities. While these activities fall under the freedom of economic activity, the degree of restrictions that can be imposed from the perspective of public welfare may be broader than the scope of restrictions that can be imposed on individual human rights (Hayward 2007: 435). A typical example is the

restriction based on public welfare stipulated in Article 4 of the International Covenant on Economic, Social and Cultural Rights (ICESCR 1966), stating: "[t]he States Parties to the present Covenant recognize that [...] the State may subject such rights only to such limitations as are determined by law only in so far as this may be compatible with the nature of these rights and solely for the purpose of promoting the general welfare in a democratic society." This provision can be interpreted in accordance with the purpose of this article; it can be explained as follows: when a government gives people rights under this treaty, it can place limits on those rights only if a) the limits are set by law, b) the limits do not undermine the basic nature of the right, and c) the limits are genuinely needed to promote the general welfare of society in a democratic country.

The third point is the appropriateness of legal regulation. Means to encourage emission reductions are not limited to legal regulation. Diverse methods exist, including incentive-based approaches that provide benefits for voluntary reductions (Van de Ven/González-Eguino/Arto 2018: 857-863). The primary strength of legal regulation lies in its ability to forcibly ensure compliance, but it also has the weakness of potentially hindering actors' freedom to exercise their own creativity to devise solutions. Furthermore, legal restrictions on private individuals are generally imposed at the domestic legal level or below. Consequently, those subject to obligations may attempt to evade them by relocating to other countries, a strategy adopted by numerous companies (Mayer 2023: 168-169).

#### **Case overview: Milieudefensie et al. v. Royal Dutch Shell pld.**

In 2019, six environmental organisations based in the Netherlands, one environmental organisation based in South Africa, and 17,379 citizens filed a civil lawsuit against RDS demanding reductions in GHG emissions across the entire Shell Group. The lawsuit sought reductions not only in the group's direct emissions (Scope 1) but also in indirect emissions (Scopes 2 and 3). The plaintiffs made two claims. The first was a declaratory judgement that the Shell Group's massive CO<sub>2</sub> emissions constituted a tort against the plaintiffs and that the entire Shell Group had an obligation to reduce CO<sub>2</sub> emissions to levels consistent with the Paris Agreement (i.e. 45% by 2030 compared to 2019 levels, or at least by 25%). The second claim sought a judgement ordering the company to implement reductions equivalent to those in the first claim. The plaintiffs argued RDS had a duty under the unwritten law obligations stipulated in Article 162(2) of the Civil Code to formulate corporate policies to avoid dangerous climate change. They further contended that in interpreting this duty, the court could refer to international law and soft law, drawing on past precedents.

In 2021, the District Court of The Hague first ruled on the standing of the organisations (Civil Code: Art. 3:305), determining that the purposes stated in their articles of association must serve the interests of residents within the Netherlands (The Hague District Court 2021: para. 4.2.2). It denied the representativeness of the interests of the organisation based in South Africa and of future generations worldwide (para. 4.2.3). It also dismissed the claims of the 17,379 individual plaintiffs, finding their interests were represented by Milieudefensie (para. 4.2.7). Regarding the defendant's reduction obligations, the court interpreted the common law duty (Civil Code: Article 6:162(2)), referencing soft law such as international law and the UN Guiding Principles on Business and Human Rights (UNGPs). It considered RDS's influence

on business policy decisions within the Shell Group, the group's total CO<sub>2</sub> emissions, the severity of climate change impacts, the basis for RDS's legal obligations, and the scope and feasibility of the obligation (para. 4.4.2). Here, the court acknowledged that human rights provisions could not be directly applied to the defendant as a private company. However, it stated that human rights form the value foundation of society and thus constitute a regulatory framework applicable to the relationship between the plaintiff and the defendant. It cited Article 2 and Article 8 of the European Convention on Human Rights, along with Article 6 and Article 17 of the ICCPR, which contain provisions substantively equivalent to these (para. 4.4.9). It further cited the UNGPs as the basis for companies' obligation to respect these human rights. The court held that companies, as separate and independent entities from the state, also bear an obligation to respect human rights, and that this obligation encompasses not only passive duties but also positive obligations to act (para. 4.4.15).

Regarding the feasibility and nature of the defendant's obligations, the court examined each Scope separately. For Scope 1, it imposed an obligation to achieve reduction results, noting that RDS is in control of their emissions, among other factors (para. 4.4.23). Conversely, for Scopes 2 and 3, considering that RDS's control is indirect and emissions originate from entities outside the Shell Group, the court limited the obligation to a best-efforts duty (para. 4.4.24).

Based on the above rulings, the court ultimately granted the plaintiff's primary claim (45% reduction by 2030) under the second request (mandatory judgement) and dismissed all other claims. Regarding the first request (declaratory judgement), while RDS bears a reduction obligation going forward, the court ruled that RDS's CO<sub>2</sub> emissions resulting from its business activities are not illegal at this stage (para. 4.5.8).

In July 2022, RDS appealed the first-instance judgement, challenging aspects such as the court's insufficient consideration of the climate change measures RDS is undertaking.

In November 2024, the appellate court largely upheld the lower court's ruling but diverged on the specific reduction targets the defendant must meet, stating the court could not determine them (The Hague Court of Appeal 2024: para. 7.73). The judgement confirmed the underlying facts regarding RDS's climate change measures in greater detail than the first instance, including its stated emission reduction targets, the fuel sources it handles (such as not selling coal), and the trends in emissions by scope and fuel source since 2016 (para. 3.21-3.54). It then addressed standing, specifically the homogeneity of the public interest represented by Milieudefensie, which the lower court had not addressed. It confirmed that the nature and extent of climate change impacts vary among individuals, and that views on climate change measures also differ. It held that legal protection to safeguard individuals from climate change impacts can only be effectively achieved through class action lawsuits (para. 6.4), and that these individual differences do not undermine the similarity of the public interest represented by Milieudefensie (para. 6.5). Furthermore, in recognising the human right to be protected from dangerous climate change impacts (para. 7.17), it referenced the *KlimaSeniorinnen* judgement of the ECtHR to reconfirm "climate change is one of the most pressing issues of our times". Furthermore, as in the first instance, it held that since the defendant is a private individual, fundamental human rights are applied indirectly through general private law (para. 7.18). Similar to the first instance, it referenced multiple soft law instruments and held that human rights

provisions are effective even in private legal relationships. Consequently, the obligations borne by private individuals depend on factors such as the threat of danger, the degree of risk creation, and the capacity to address the danger (para. 7.24). Regarding RDS, the court recognised an obligation to reduce emissions, based on its status as a major CO<sub>2</sub> emitter possessing the capacity to reduce emissions (para. 7.17). The judgement then confirmed the EU Climate Change Act, stating that its reduction target (55% below 1990 levels by 2030) must be achieved not only by states but also by companies (para. 7.56). It held that, given the diversity of corporate sectors and sizes, the law and related legislation do not impose absolute reduction obligations on companies. Consequently, the 45% reduction mandated for RDS in the first-instance judgement was not automatically derived (para. 7.57).

Furthermore, while acknowledging that RDS's planned new investments in oil and natural gas operations run counter to the requirement to reduce supply to fossil fuel markets, the court determined they did not violate the social standard of care (para. 7.61). Next, regarding reduction obligations by scope, the judgement found no breach of legal duty by RDS for Scopes 1 and 2. This was based on reasons including RDS having largely achieved its own stated reduction targets, concluding that an imminent risk of future target failure had not been proven (para. 7.65). Regarding Scope 3, the court further held that the 45% reduction target mandated by the lower court could not be imposed on RDS. This was based on the greater diversity of reduction methods and approaches applicable to Scope 3 emissions, and the fact that RDS neither mines nor supplies coal, a relatively high-emission fuel (para. 7.75).

It further stated that while the reduction target itself is reasonable, it does not necessarily translate directly into a specific reduction obligation for a particular company (para. 7.106).

Subsequently, Milieudefensie appealed to the Supreme Court in February 2025. The Supreme Court held a hearing on May 22, 2026 (Milieudefensie 2026). The court's ruling is eagerly awaited.

### Legal basis for individual emission reduction obligations

This section attempts to derive individual emission reduction obligations from the two judgements discussed above, while bearing in mind arguments about differences between companies and single individuals. The judgements address various issues, but the main points are the legal basis for emission reduction obligations, the applicability and extent of human rights provisions between private parties, and the feasibility and manner of fulfilling those obligations.

First, regarding the legal basis for the obligation to reduce emissions, the rulings identify the legal basis for the RDS reduction obligation in soft law, such as international law and the UNGPs. In this regard, the fifth paragraph of the preamble to the ICCPR can serve as international law potentially underpinning individual emission reduction obligations. Specifically, it is considered possible to interpret "duties to other individuals and to the community" (ICCPR 1966) as including a duty for individuals to reduce their emissions to maintain a stable climate, both currently and in the future. Also, Tremmel et al. (2024: 16), citing Shue (2017: 593), point out that two ethical principles, "do no harm" and "clean up your own mess", serve as guidelines in this regard. Specifically, individuals who emit GHGs in a manner that could harm others bear an obligation to reduce those emissions, in the sense that they are responsible for remedying the harm caused by those emissions. However, as already noted, a minimum must be

exempted. Examples of above-minimum emissions include leisure air travel, private car use, or energy consumption not essential for daily life. For these, it may be possible to establish a legal basis for an emissions obligation, as such emissions harm the stable climate of the present and future, thereby causing adverse effects on society.

Second, regarding the applicability and scope of human rights provisions to private individuals, human rights are fundamentally concepts governing the relationship between the state and the individual (Esen 2025). Therefore, they cannot be directly applied to relationships between private individuals. However, if we examine the ultimate basis for an individual's obligation to reduce emissions, it could be said to stem abstractly from the human rights of each individual: the right to live under a stable climate. Yet, in substance, it is more accurately grounded in the collective whole – all humanity or the global environment. If so, the legal relationship at issue here is not between private parties, but rather an asymmetrical relationship between the individual and the public interest. If we reframe this in terms of the relationship between the state and the individual, as human rights fundamentally presuppose, we can schematise it as a relationship where individuals, alongside the state, bear the obligation to realise and maintain the public interest of a stable climate – an indispensable foundation for human survival (Stockholm Resilience Centre 2025). If so, it is conceivable that individuals' legal obligations can be grounded in the realisation of the public interest. However, individuals rarely engage in actions like RDS's, which carry the risk of creating opportunities for others to emit by selling fossil fuel products. Therefore, it is reasonable to consider that the scope of the obligation should be limited to the passive reduction of one's own emissions, without extending to active obligations such as reducing emissions by other entities.

Regarding the applicability of human rights provisions, this constitutes a legal obligation borne by individuals to preserve and maintain the public interest of a stable global climate enabling sustainable human life now and in the future.

Moving to the third point – the feasibility and nature of fulfilling obligations – the scope concept used in the judgement for emissions classification originally targets corporations and may not be appropriate for direct application to individual emissions. Still, analogical consideration may be possible: direct emissions (Scope 1) could be the CO<sub>2</sub> that every person exhales; Scope 2 emissions could be those calculated using CO<sub>2</sub> calculators (Umwelt Bundesamt 2026), and Scope 3 emissions could be those generated by individuals' entertaining actions relative to other individuals.

To summarise the above, the legal basis for individual emission reduction obligations would be as follows. First, the foundational provisions include international law, such as the fifth paragraph of the ICCPR preamble. Regarding the applicability of human rights provisions, this constitutes a legal obligation borne by individuals to preserve and maintain the public interest of a stable global climate enabling sustainable human life now and in the future. As this differs substantively from scenarios involving corporations that mainly stem from their economic activities aimed at generating profit, human rights provisions are applicable. Concerning enforceability, individuals are exempted from reduction actions for emissions inevitably generated in the course of pursuing livelihoods that enable the enjoyment of social rights (at the

minimum level). On the other hand, for emissions beyond this level, there is a legal obligation to achieve reduction results.

### Discussion: remaining challenges

Even if the legal basis for individual emission obligations is established as described above, this alone does not guarantee progress in climate change countermeasures. Further steps are needed: ensuring the fulfilment of these obligations and, beyond the scope of legal obligations, creating incentives for individuals to voluntarily reduce emissions. This section examines these two aspects.

First, to ensure compliance with obligations, a prerequisite is establishing criteria for determining compliance and ensuring public oversight of this determination. Here, the PerCF can serve as an effective metric. Legally requiring individuals to measure this and report it periodically to the competent authority would be an effective means. Carbon budget theory (Global Carbon Project 2025) involves calculating an individual's lifetime budget based on their socioeconomic circumstances.

Next, to motivate individuals to voluntarily reduce emissions, it would be effective for them to recognise the importance of a stable climate for future generations as a personal concern. One method, Future Design (Saijo 2025: 29), involves envisioning a future society free from current diverse constraints and obligations by adopting the perspective of future generations, then considering what actions are needed now to realise that vision. Its effectiveness has been confirmed through numerous practical applications. The following two examples may be illustrative. The first case is the Future Design workshop on the future of water supply policy in Yahaba Town, Iwate Prefecture, located in Japan's Tohoku region. The group of citizens who approached the discussion from the perspective of future generations, unlike a group that remained focused on the current generation, expressed support for owing cost to maintain social infrastructure in order to avoid shifting the burden of maintaining ageing water infrastructure onto future generations (Masters/Ramakrishnan 2024: 8-9). Furthermore, in a stakeholder-participatory workshop in Kyoto aimed at formulating climate adaptation strategies for the agricultural sector, participants suggested that policies should not simply endorse a focus on greenhouse cultivation for the sole purpose of climate change adaptation, but should instead prioritise policies that emphasise the sense of fulfilment farmers themselves derive from engaging with city council members (Ichihara et al. 2026).

### Conclusion

This article attempted to establish a legal basis for imposing emission reduction obligations on individuals, analysing the first-instance and appellate court rulings in the climate lawsuit *Milieu-defensie et al. v. Royal Dutch Shell pld.*, which legally mandated emission reductions for private companies. As a result, based on international law, including the fifth preambular paragraph of the ICCPR, it established an individual's legal obligation to reduce emissions as a duty to preserve and maintain the public interest in a stable global climate environment – an Earth environment enabling sustainable human life now and in the future.

The legal foundation derived in this article remains at a preliminary stage and requires thorough verification and theoretical scrutiny in both practical and academic settings. Nevertheless, given the current global situation, in which legal frameworks imposing individual reduction obligations are needed yet no such framework has achieved significant consensus, the explanation of the legal foundation proposed in this paper is of considerable significance.

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