CASE T-330/18 - resubmitted

ARMANDO FERRÃO CARVALHO and others

Applicants

AND

THE EUROPEAN PARLIAMENT
THE COUNCIL

Defendants

APPLICATION FOR ANNULMENT
PURSUANT TO ARTICLE 263 TFEU

AND

APPLICATION / CLAIM FOR NON-CONTRACTUAL LIABILITY PURSUANT TO ARTICLES 268 AND 340 TFEU

AND

APPLICATION FOR MEASURES OF INQUIRY
PURSUANT TO ARTICLES 88 AND 91 OF
THE RULES OF PROCEDURE OF THE GENERAL COURT

Names and addresses of Applicants:

1. Armando Ferrao Carvalho, [redacted]
2. Diogo Carvalho, (as above)
3. Ildebrando Conceição and family, [redacted]
4. Alfredo Sendim, [redacted]
5. Joaquim Caxeiro and family, [redacted]

6. Renaud Feschet, [redacted]
7. Guylaine Feschet, as above
8. Gabriel Feschet, as above
9. Maurice Feschet, as above
10. Genevieve Gassin, as above

11. Roba Waku Guya, [redacted]
12. Fadhe Hussein Tache, as above
13. Sado Guyo, as above
14. Issa Guyo, as above
15. Jibril Guyo, as above
16. Adanoor Guyo, as above
17. Mohammed Guyo, as above

18. Petru Vlad, [redacted]
19. Ana Tricu, as above
20. Petru Arin Vlad, as above,
21. Maria Ioana Vlda, as above
22. Andrei Nicolae Vlad, as above

23. Giorgio Davide Elter, [redacted]
24. Sara Burland, as above
25. Soulail Elter, as above
26. Alice Elter, as above
27. Rosa Elter, as above
28. Maria Elter, as above

29. Maike Recktenwald, [redacted]
30. Michael Recktenwald, as above
31. Lueke Recktenwald, as above

32. Petero Qaloibau, [redacted]
33. Melania Cironiceva, as above
34. Katarina Dimoto, as above
35. Petero Qaloibau Jnr, as above
36. ElisabetaTokalau, as above

37. Sáminuorra, Association of young Sami, represented by the chair, Ms. Sanna Vannar, Box 57, 962 22 Jokkmokk, Sweden

The Applicants are represented by Dr. Gerd Winter, Professor of Public Law, University of Bremen; Dr. Roda Verheyen, Rechtsanwältin, of Rechtsanwälte Günther, Hamburg; and Hugo Leith, Barrister, of Brick Court Chambers, London.

The Applicants consent to be served by e-Curia.

Address for service: [redacted]

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A. INTRODUCTION AND SUMMARY

1. This case is brought by children and their parents, working in agriculture and tourism in the EU and abroad who are and will increasingly be adversely affected in their livelihoods and their physical well-being by climate change effects such as droughts, flooding, heat waves, sea level rise and the change of seasons. They are supported and joined by an association of indigenous Saami youth, whose families are equally affected.

2. The applicants bring two related applications concerning the responsibility of the Union for emissions of greenhouse gases ('**GHGs**'), contributing to dangerous climate change. They contend that the Union has failed and continues to fail to meet its urgent responsibilities to limit the emission of GHGs, in breach of its binding obligations. This breach currently manifests in three recent legal acts of the European Parliament and the Council, which cover different sectors of the economy. These comprise:

   - Directive 2018/410 amending the so called Emissions Trading Directive (the "**ETS Directive**");[1]

[1] Directive (EU) 2018/410 of the European Parliament and the of the Council of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814, OJ L 76/3.

- Regulation 2018/842 (the "**Effort Sharing Regulation (ESR)**" or "CAR Regulation")[2], and
- Regulation 2018/841 (the "**LULUCF Regulation**")[3];

– collectively, the "**GHG Emissions Acts**".

3. The applicants' case is that the Union is obliged under higher rank legal norms to avoid harm caused by climate change and associated infringements of fundamental human rights. Given that climate change is already causing damage and that further emissions will add to its dangers, any target set for the reduction of emissions must be based on an assessment of capability, in light of the EU's legal obligations and the grave threat posed by climate change. The GHG Emissions Acts fail to meet this standard and the target set for reducing GHG emissions is grossly inadequate:

   a. The GHG Emissions Acts collectively set a target that, if followed, would lead to GHG emissions from the EU decreasing over the period 2021-2030, such that by 2030 emissions would be 40% lower than their level in 1990; i.e, allowing as much as 60% of the 1990 level of emissions for the EU as a whole.

   b. These emissions will accumulate in the atmosphere and contribute to causing serious damage to the life conditions of the applicants and the public at large. This damage infringes higher rank norms and will be a breach of the law unless the Union can establish a well-founded justification.

   c. No such justification is available here. The EU has set the 40% reduction target without seeking to inquire into the feasibility of requiring more, so as to avoid the harm prohibited by higher rank law, and so as to fulfil the commitments made most recently in the 2015 Paris Agreement[4] to limit any temperature increase to a specified level.

   d. Moreover, had the Defendants and the Commission made proper inquiries into capability, the overwhelming official, scientific, engineering and economic evidence shows that the Union can feasibly and economically go considerably further than a 40% reduction. While it is not for the Applicants to define the precise figure, the evidence shows that the Union's discretion would be limited such that, at the least, a reduction in a range of 50-60% below 1990 levels would be required by 2030.

4. The applicants accordingly seek the annulment of the emissions targets (which in aggregate comprise an overall reduction of 40%) in the GHG Emissions Acts.

5. Further, the Union's past and continuing failure to adopt sufficient measures to reduce emissions as required by higher rank law has caused, is continuing to cause, and will cause the applicants damage, engaging the non-contractual liability of the Union. The applicants accordingly seek an

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[2] Regulation of the European Parliament and of the Council on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013, OJ L 156/26.

[3] Regulation of the European Parliament and of the Council on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) 525/2013 and Decision 529/2013/EU, OJ L 156/1.

[4] See Council Decision (EU) 2016/1841 of 5 October 2016 on the conclusion, on behalf of the European Union, of the Paris Agreement, OJ 2016, L 282/1.

injunction requiring the Union to set deeper emissions reduction targets at the level required by law.

6. As set out below and in the supporting Annexes to this application, the applicants adduce a significant volume of evidence supporting their case, including as to the effects of climate change both generally and in their specific circumstances, and the feasibility of adopting deeper emissions reductions. This evidence is drawn from official documents, and scientific and economic studies, mostly from the universally accepted Intergovernmental Panel on Climate Change, IPCC. It is submitted that, in so doing, the applicants have established their case. Given the need to limit the length of this pleading, much detail has been omitted and reasoning presented at a high level. The applicants stand ready to supply the court with further factual, technical and other evidence should the Court consider it to be of assistance.

7. In the event that the Court has any concerns whatsoever about the standard or depth of evidence supplied, the applicants also invite the Court to consider whether it is appropriate in this case (and indeed necessary pursuant to the principle of effective judicial protection) to commission an expert's report pursuant to Article 88(1) and 91(e) of the General Court's Rules of Procedure. In particular, in the event that the Court has any concerns as to, for example:

   a. the damage caused by climate change to the applicants or otherwise;

   b. the total budget of emissions available for use by the Union within its legal responsibilities, or

   c. the measures that the Union could feasibly adopt to reduce GHG emissions;

   – the applicants submit that it should consider the commission of an expert report or reports. To this extent the applicants hereby make a contingent Application for Measures of Inquiry.

8. Aside from this contingent application, the applicants seek the following final relief from this Honourable Court:

   a. Declare the contested three GHG Emission Acts void insofar as they allow the emission between 2021 and 2030 of a quantity of greenhouse gases corresponding to 80% of the 1990 emissions in 2021, decreasing to 60% of the 1990 emissions in 2030.

   b. Annul the GHG Emission Acts insofar as they provide for a reduction by 2030 of greenhouse gas emissions by 40% compared to 1990 levels.

   c. Order that the contested provisions shall remain in force for such limited period as the Court determines appropriate, until they are replaced with emissions target levels compliant with the norms of higher rank law.

   d. Order the Defendants to adopt measures under the three GHG Emissions Acts such as to reduce the level of emissions of greenhouse gases covered by those Acts by at least between 50% and 60% of 1990 levels by 2030.

B. THE PARTIES

9. The applicants include individuals in families from countries across the EU and the world. They include adults of working age, retired persons, and younger people and children. As developed below, climate change has in some cases already curtailed the applicants' activities and

livelihoods; as time goes on it will continue to do so. Events caused by climate change have already exposed some of the applicants to physical harm; the risks to physical well-being will increase as climate change worsens. These matters are addressed further in relation to the particular applicants in Section D below, by reference to detailed Annexes provided for each family and for Sáminuorra (the Saami youth organisation).

C. FACTUAL CONTEXT: CLIMATE CHANGE AND ITS EFFECTS

10. There is a universal scientific consensus as to the direct causal link between the emission of GHGs, increases in average temperatures, and changes in our climate.

11. The volume of the learned scientific research is enormous. The plaintiffs restrict themselves in this pleading to a very high level summary of findings as to causes (GHG emissions) and effects (impacts) of climate change made in the two most recent synthesis reports of the universally accepted Intergovernmental Panel on Climate Change (the '**IPCC**'):[5] the 4th Assessment Report 2007[6] and 5th Assessment Report 2014[7]. It is assumed that the defendants do not challenge these findings and facts.

12. The basic physical dynamic is as follows:

    a. GHG concentrations in the atmosphere have increased over the industrial period and concentrations of Carbon Dioxide (CO2) and Methane (CH4) are projected to continue to increase, with anthropogenic emissions of GHGs mainly resulting from fossil fuels and cement and from other land uses.

    b. GHGs can be (and to some extent are) removed from the atmosphere by 'sinks' such as forests and oceans, but their absorption potential is rapidly declining.

    c. A denser concentration of GHGs in the atmosphere hinders the reflection of solar radiation into space, thus contributing to the warming of the atmosphere, leading to a multitude of impacts. These include temperature increase, sea level rise, loss of snow and ice cover, changes in precipitation as well as the increased likelihood and severity of extreme weather events such as storms, floods, droughts and heat waves, thus detected and attributed to climate change.[8]

13. The IPCC has summarized the risks of temperature increases:[9]

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[5] The IPCC is the world's leading international body for the assessment of climate change, established under the United Nations Environment Programme and the World Meteorological Organisation in 1988. It reviews the range of research on climate change and periodically publishes reports. Thousands of scientists around the world contribute to the IPCC. The EU as well as its institutions such as the EEA have endorsed the IPCC's findings throughout its history. It submitted its first Assessment Report in 1990. The most recent is the 5th Assessment Report (2013/2014). It is organised in Working Groups (WG), roughly as follows: WG I: Science, WG II. Impacts, WG III. Mitigation. The Synthesis Reports contain compact summaries of the findings.

[6] IPCC Climate Change 2007 - Synthesis Report **[Annex 1, pp. 1 ff.]**.

[7] IPCC Climate Change 2014 - Synthesis Report **[Annex 2, pp. 113 ff.]** [excerpt, full report in [Annex 65].

[8] See IPCC Climate Change 2014 - Synthesis Report **[Annex 2, p. 176 ff.]** and further methodology of "detection and attribution" i.e. the link between emissions and impacts Chapter 10 of the 5th Assessment Report **[Annex 19.2, pp. 1672 ff].**

[9] IPCC (2014) 5th Assessment Report Working Group (WGII), **[Annex 3, p. 183]**

a. Risk of death, injury, ill-health, or disrupted livelihoods in low-lying coastal zones and small island developing states and other small islands, due to storm surges, coastal flooding, and sea level rise.

b. Risk of severe ill-health and disrupted livelihoods for large urban populations due to inland flooding in some regions.

c. Systemic risks due to extreme weather events leading to breakdown of infrastructure networks and critical services such as electricity, water supply, and health and emergency services.

d. Risk of mortality and morbidity during periods of extreme heat, particularly for vulnerable urban populations and those working outdoors in urban or rural areas.

e. Risk of food insecurity and the breakdown of food systems linked to warming, drought, flooding, and precipitation variability and extremes, particularly for poorer populations in urban and rural settings.

f. Risk of loss of rural livelihoods and income due to insufficient access to drinking and irrigation water and reduced agricultural productivity, particularly for farmers and pastoralists with minimal capital in semi-arid regions.

g. Risk of loss of marine and coastal ecosystems, biodiversity, and the ecosystem goods, functions, and services they provide for coastal livelihoods, especially for fishing communities in the tropics and the Arctic.

h. Risk of loss of terrestrial and inland water ecosystems, biodiversity, and the ecosystem goods, functions, and services they provide for livelihoods.

14. Evidence of the current and projected **impacts** of climate change is also drawn from a report by the European Environment Agency (EEA) of 2017 which assessed and modelled the impacts of climate change in the main regions of Europe.[10] This updates and draws on the science summarised in the IPCC in its 5th Assessment Report of 2014, Working Group II. This research models specific impacts, e.g. the North Sea coast is at severe risk of storm surges due to sea level rise, that rising temperatures negatively affect agriculture in southern Europe and Africa, and that snow cover changes in Arctic regions has negative effects on the reindeer husbandry used by the Sámi. Further research by the World Bank explains that heat waves already cause damage to human health and professions that depend on moderate temperature such as agriculture and tourism,[11] and the negative impacts of climate change on children is described vividly in a UNICEF report.[12]

15. For more details, the application draws the attention of the court to the Annexes on the specific situation of the applicants **[Annexes 15-24]**, which contains forensic details of current climate change as well as projections of climate change, and its impact.

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[10] See EEA (2017) Report No 1/2017: Climate change, impacts and vulnerability in Europe 2016. An indicator-based report, Luxembourg (Publications Office of the European Union) [**Annex 4**, p. 291 ff]. This study will be referred to in multiple places, including in the specific plaintiff **[Annexes 15-24].**

[11] The World Bank (2014) (ed.) Turn Down the Heat. Confronting the New Climate Normal [**Annex 5, pp.715 ff.].**

[12] United Nations Children's Panel (2015) Unless we act now. The impact of climate change on children, UNICEF [**Annex 6, pp. 1035 ff.**]

16. The IPCC's projections of climate change and its impacts are based on four scenarios with Representative GHG Concentration Pathways ('RCPs'), ranging from a temperature increase in 2100 of over 4°C (RCP 8.5) to 2°C (RCP 2.6).[13] More recent research makes it very clear that a temperature increase of "only" 1.5°C will prevent enormous damage that are otherwise to be expected.[14]

17. The weight of scientific research also indicates that the damage caused by increased temperatures will reach 'tipping points'[15], where major and irreversible changes to the Earth system are triggered, such as the destabilisation of the West Antarctic Ice Sheet,[16] the complete destruction of coral reef[17] and a severe change in the Gulf Stream system.[18]

18. Through its participation in international agreements and in its legislative acts the EU has accepted the essential connection between emission of GHG, increases in temperature, and dangerous climate change effects, and taken responsibility for its own contributions.

19. The share of the EU in global GHG emissions in 2016 was 9%.[19] In comparison, the share of the EU population in the global population amounted to 13.5 % in 1960 and 6.9 % in 2015. It is forecast to be 5.1 % in 2060,[20] and to continue to fall.

20. The annual GHG emissions of the EU were 5.654 Gt in 1990 and have gradually declined to 4.317 Gt in 2015.[21] EU emissions in 2015 thus were at 76% of (or 24% lower than) those emitted in 1990.

D. FACTUAL CONTEXT: CLIMATE CHANGE EFFECTS ON THE APPLICANTS

21. The dangerous consequences of climate change pose a threat to each applicant's livelihood and living conditions, in different ways in each case, while stemming from a common source.

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[13] IPCC Synthesis Report 2014, **[Annex 2 p. 186]**, Box 2.2, p. 57.

[14] See Schleussner, C.-F. et.a. (2016) Differential climate impacts for policy-relevant limits to global warming: the case of 1.5 °C and 2 °C,Earth Syst. Dynam., 7, 327-351, 2016 **[Annex 7, pp. 1119 ff.]**. This study is referenced in the plaintiff **[Annexes 15-24]**. The issue is assessed in an upcoming IPCC report which will later be submitted.

[15] Schellnhuber, H. J. e.a. (2016) Why the right climate target was agreed in Paris. Nature Climate Change 6, 649-653 (2016) **[Annex 8, pp- 1144]**.

[16] Feldmann, J. & Levermann, A. (2015) Collapse of the West Antarctic Ice Sheet after local destabilization of the Amundsen Basin. Proc.Natl.Acad.Sci USA 112, 14191-6 **[Annex 9, pp. 1150 ff.]**. This study will be referenced in the plaintiff **[Annexes 15-24]**.

[17] Frieler, K. e.a. (2013) Limiting global warming to 2 degrees C is unlikely to save most coral reefs. Nature Climate Change 3, 165-170 **[Annex 10, pp. 1156 ff.]**

[18] Rahmstorf, S. e.a. (2015) Exceptional twentieth-century slowdown in Atlantic Ocean overturning circulation. Nature Climate Change 5, 475-480 **[Annex 11,162 ff.]**

[19] PBL (2017) Trends in global CO2 and total greenhouse gas emissions, PBL Netherlands Environmental Assessment Agency, PBL 5 **[Annex 12, pp. 1169 ff.]**

[20] Eurostat File Share of World Population **[Annex 13, pp. 1238f.]**

[21] See figure in EEA (2017) Report No 6/2017: Annual European Union greenhouse gas inventory 1990–2015 and inventory report 2017. Submission to the UNFCCC Secretariat, p. iii. See **[Annex 14, p. 1240]**

22. The applicants argue that their specific rights are being violated or at risk of violation due to anthropogenic climate change and its impacts. Scientifically, this statement necessitates what is called "detection and attribution" of the "human climate signal". The IPCC has defined this concept since its 3rd Assessment Report (2001).It essentially allows climate scientists to link an observed phenomenon to man-made greenhouse gas emissions and the resulting increased radiative forcing. There are distinct chapters on this in the 5th AR (Chapter 10, see [**Annex 19.2**][22]) which the plaintiffs rely on, as well as distinct studies on several impacts in different regions. If an impact is attributed to climate change, simply put, it would not occur in the same way without the human climate signal, i.e. anthropogenic emissions.

23. The circumstances of each group of applicants, and the official and scientific literature on the effects of climate change relating to them, are set out in detailed Annexes (referenced below). A summary of the key points is provided in this pleading.

24. The **Carvalho** family[23] own a section of forest in central Portugal [redacted] where they carry on forestry work. As Mr Carvalho has observed, the trend in recent years in this region has been for a general temperature increase, more frequent heatwaves and droughts. This culminated in catastrophic fires in October 2017, which burnt all the forest areas owned by the Carvalho family. These fires started some 60km from the Carvalho land, but reached [redacted] in 12 hours. 6 homes in the village were destroyed. As well as burning all the trees on the Carvalho's property, destroying many of them and causing financial loss, a shed and agricultural machinery were also damaged (at a cost of around €15,000).

25. A government inquiry into the disaster found that, "these types of fires (megafires) are reportable to climate change and expected to repeat in a near future", and warned that, "the scenarios for climate change show these fires might happen more frequently in the future".The observed data on temperature and rainfall shows a clear recent trend of higher temperatures and lower rainfall runoff in Portugal, both of which contribute to the likelihood and intensity of extreme forest fires. The IPCC projections show this trend to continue and predict an even higher fire risk. The intensity of the concrete fire was increased by higher wind speeds attributable to tropical storm Ophelia. The risk of tropical storms in the Autumn is also projected to increase as a consequence of climate change. The Carvalho family therefore presents a compelling case of serious harm attributable to climate change.

26. The **Conceicao** family[24] engages in beekeeping in [redacted] in central Portugal, and have done so for decades. They own some 350 hives located on land they own or lease. Over the decades, the yield of honey from each hive averaged 20kg. In the last five years, extreme weather and events such as a severe drought in 2017 have coincided with a significant reduction in yields. In 2017, production reduced by more than half to an average of 8 kg per hive resulting in a loss of around €8,000 / year; the family has also been compelled to feed hives artificially at an annual cost of €2,450 for the last six years. The additional costs, lower revenues, and additional work involved in tending to and feeding beehives, has driven the business to the verge of being unviable.

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[22] [**Annex 19.2**] is found at pp. 1680 ff.

[23] See the information provided on the Carvalho family in [**Annex 15 pp. 1242-1251**].

[24] See the information provided on the Conceicao family in [**Annex 16 pp. 1379-1388**].

27. The loss of production is attributable to higher temperatures and more extreme heat events, which affect both the bees and the flowers on which they feed. This, as with the decline in precipitation over the last decades, is attributable to climate change

28. The plaintiff Alfredo **Sendim** owns and the **Caixeiro** family[25] depend on a 500ha farm in southern Portugal, which is entrusted to a cooperative and on which members of the Caixeiro family work. The cooperative has 35 partners (one of them Mr Caixeiro); the productive activities comprise livestock and pasture, fruit orchards and fields, olives, herbs, grain, cork oaks and horticulture.

29. Increases in temperature and reductions in precipitation attributable to climate change have affected the productivity of the land and thus the cooperative and are certain to continue doing so. IPCC analysis finds that increases in temperature of between 2-4°C (depending on the season) will occur by the middle of this century, and rainfall levels are predicted to fall further by 10% on average annually, and by 40% in the summer months, during this century. The productive capacity of the farm is materially affected, with higher mortality in the crops and trees grown, and increased costs for irrigation and livestock rearing. Already, in 2017, the severe drought caused the farm to make an annual loss of €50,000. The farm would also require significant costly investment to adapt to climate change, in the order of €660,000, in addition to some €1 million already invested by the Sendim family.

30. The **Feschet** family[26] live and work on a farm of 35ha [redacted] in southern France. The family of three generations mainly grows lavender, which provides 70% of the farm's income.

31. Climate change has already put the lavender farming at real risk and higher temperatures and lower rainfall have led to falling yields and revenues over the last two decades. Observation data as well as climate models show an increase in temperatures and a decline in rainfall and runoff for southern France, and project the same into the future, as a result of climate change.

32. These changes in the climate have a severe effect on lavender farming. In 1971, lavender plants would last and could be cultivated for, on average, 23 years. Today, on average, the same variety of plant must be uprooted after only 4 years, due to the effects of warmer temperatures and less soil moisture. This imposes a heavy financial burden (in the order of €3,330 on each occasion) on the farm and the family, and the need to replant the lavender reduces the harvest yields in the first and second years.

33. Extreme weather events have also led to losses of plants: in 2005, three years of drought followed by heavy precipitation led to the loss of 27 ha of plants; the 2017 crop was affected by 5½ months without rain, leading to heavy losses of younger plants. The capacity to irrigate the farm is very limited, and substantial investment would be needed, if possible at all. These adverse climactic conditions – and the need to uproot and replace plants more frequently – have led the family to place less of the farm under cultivation, from 33ha in 2008, to between 10 and 14ha in 2014-2016. Yields per hectare are now also materially lower than a decade ago; analysis shows that harvests have declined from an average of 1000-1300 kg/hectare of sellable flowers, to a yield of 770 kg/hectare since 2009.

34. The **Guyo** family[27] lives in a village in northern Kenya, where they carry on cattle- and goat-herding. The family includes 5 children aged between 1 and 11 years old.

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[25] See the information provided on the Sendin and Caixeiro family in [**Annex 17 pp. 1473-1485**].

[26] Detailed information on the Feschet family is set out in [**Annex 18 pp.1535-1544**].

[27] Detailed information on the Guyo family is set out in [**Annex 19 pp.1665-1671**].

35. In recent years, exceptionally high temperatures have been experienced, as well as drought, beyond the normal range of variation, attributable to climate change. Climate change models project temperatures in Kenya – of average temperatures, and of the levels reached during hot spells – to increase by significant amounts. Higher temperatures, lower rainfall, and drought conditions of recent years directly threaten the survival of the livestock herded by the Guyo family. Of greater concern is the effect of heat wave conditions on the children in the family. When temperatures rise above around 33°C,the children are unable to walk to or attend school, or work during the day. High temperatures continue at night, preventing the children from sleeping. The higher temperatures also cause heat rashes and dizzy spells among the children. The children are thus already affected in their right to a decent education.

36. The **Vlad** family[28] carry out farming in the Carpathian mountains in Romania, comprising livestock, herding and cultivation of fruit and vegetables. The produce yielded from the farm has been affected in recent years by the higher temperatures, reduced water availability, and more frequent extreme weather events that the Vlad family have observed, and which are attributable to climate change. For example, the dairy cattle raised by the family produce 20-30% less milk during periods of higher temperatures (above 35 °C) which are more frequent, and higher temperatures and lower precipitation reduce the quality and amount of grass available for grazing animals, forcing the family to pay for access to other grazing land and to purchase hay and maize for use as feed.

37. The **Elter** family[29] live in the village of Cogne in the Italian Alps. The family farms 4ha of fields in the mountains at an elevation of 1800m, cultivating plants, fruits and herbs indigenous to that region, and transforming much of their produce into preserves, marmalades and liqueurs, which they sell. The family also owns and runs a Bed & Breakfast.

38. These activities are have been and will continue to be adversely affected by higher temperatures and ecosystem changes caused by climate change. Higher temperatures are observed both in the mean and extreme, and are attributable to climate change. In Cogne, higher temperatures, and warmer temperatures at earlier points in the seasonal cycle adversely affect the blooming and germination patterns for a range of plants and herbs that grow at higher altitudes. Higher temperatures in recent years have led to a loss in production yields, leading to a reduction in revenue of 20-30%.

39. The revenues of the bed and breakfast business are dependent on visitors to Cogne, attracted by ice climbing. Ice climbing is in turn highly sensitive to warmer temperatures in winter months, as these bear on the safety of the climbing activity. The Elter family, having lived in the area all their lives, have observed the retreat of snow and ice, and glacial melting. It is very likely that continued increases in temperature, even if only relatively small, will threaten the livelihood earned from the bed and breakfast.

40. The **Recktenwald** family[30] live on the German North Sea island [redacted]. The family own and run a restaurant and hotel, which together sustain two families and have about 50 employees (some seasonal). The buildings housing the restaurant are located on a dune, at about 20 metres' elevation above sea level. The hotel is at a lower elevation, behind the dune. Both buildings are at risk from continuous sea level rise and storm surges, and the associated erosion of the protective dunes. The beach between the sea and the dunes must now be periodically re-

[28] Detailed information on the Vlad family is set out in [**Annex 20 pp. 1851-1858**].

[29] See the information provided on the Elter family in [**Annex 21, pp. 1963-1974**].

[30] See the information provided on the Recktenwald family in [**Annex 22, pp.2029-2037**].

filled mechanically with sand every 2-3 years as opposed to much longer intervals 20 years ago. Moreover, the island drinking water source and thus the Recktenwald family's water supply is endangered if a storm surge were to inundate the Eastern lower part of the island, where the spring is located.

41. Observations show a local sea level rise of 3.6mm – 4.2mm per year. The regional government has recognised that climate change is leading to a risk of storm surges and sea level increases, and is taking steps to adapt to this risk while recognising that it cannot provide a long term solution. Scientific analysis projects substantial sea level rises caused by climate change, of between 33cm-75cm for this region by 2050. There is thus a substantial risk that the family's property would be inundated when the dunes fail their protective function, and their livelihood destroyed and well-being put at risk, and that this risk is higher with higher levels of emissions.

42. The **Qaloibau** family[31] live in the village [redacted] in Fiji, owning a house right by the shore. The family live through subsistence farming and fishing, and the head of the family is an eco-tourism guide. The Qaloibau family have observed a range of climate change impacts over the past decade. Coral bleaching caused by higher water temperatures has become more frequent and devastating to the coral reefs. This has in turn affected the availability of habitat for fish, leading to depletion of fish stocks relied on by the community. It has also had a major negative effect on tourism, which is a key source of livelihood.

43. Some crops (such as kava, grown as a cash crop) now grow poorly due to higher temperatures and drier soil conditions. A canteen and a fishing boat owned by the family have already been destroyed during Cyclone Thomas in 2010. A further cyclone in 2016 (Cyclone Winston) again affected their livelihood. Most alarmingly, the Fijian government anticipates that the village [redacted] is so vulnerable to inundation through rising sea levels and storm surges as to designate it for 'potential relocation'.

44. Since the 1990s, the observed sea level rise for the region has been 6mm each year, which is double the increase observed globally (3mm per year). A high emissions scenario would result in present-day 50 year extreme high water levels occurring on average every second year by mid-century, so within the lifetime of most of the family, and a 1m sea level rise by the end of the century. The younger members of the Qaloibau family would by that stage have lost their home. The risks of a sea level rise would be greatly aggravated by the much higher risk of severe cyclones that would also result from higher temperatures.

45. **Sáminuorra**[32] is a charitable association of young Saami people, organized under Swedish law. Its members are between 6 and 30 years of age. The Saami people are indigenous people living in the northern part of Sweden, Finland, Norway, and the Kola Peninsula in Russia.

46. Reindeer husbandry is important culturally, socially and economically for the Saami people; it provides employment and a source of food. The families of the members of Sáminuorra are engaged in reindeer husbandry, making climate change an issue of direct concern for all of them.

47. The health and size of reindeer herds is critical to the Saami people. Slight increases in temperature in the winter months in particular, however, have already had serious effects on the survival of reindeer. Reindeer depend on *lichen*, growing under the winter snow. However, milder winters (or periods of milder temperatures followed by freezing) cause the melting and

[31] Detailed information on the circumstances of the Qaloibau family is set out in **[Annex 23, pp. 2417-2424]**.

[32] Detailed information on Sáminuorra is provided in **[Annex 24 pp. 2572-2583]**.

then re-refreezing of snow, trapping the lichen under ice; rain on snow also has this effect. The reindeer are therefore unable to feed. This phenomenon occurs over large areas, so reindeer cannot easily replace the food source by moving; movement in any event consumes considerable energy, weakening the herd.

48. Official data confirms the observations of Saami people that winters have become milder, with more problematic feeding situations for the reindeer. Almost all winters since 1989 were warmer than the 20th century average and the mean temperature in Sweden was 1°C higher in 1991-2007 than over the period 1961-1990. Projections show that this warming will continue; with temperatures projected to rise in Scandinavia by between 3° and 5°C during this century - but if radical emission reductions are achieved, by only 0.8°C.

49. The loss of food threatens the survival of reindeer herds and the Saami are forced to seek to provide alternative food sources (feed pellets and hay) to the reindeer. This imposes an increasing financial cost on the Saami and the families of the members of Sáminuorra and is not a sustainable or sufficient means of sustaining herds.

E. THE UNION ACTS COMPLAINED OF

a. The Three GHG Emissions Acts

50. The three GHG Emissions Acts address three different categories of GHG emission sources:[33]

- sources from power generation, heavy industry and aviation; these are subjected to the directive concerning the emissions trading system ('**ETS**');
- sources outside the ETS , such as from buildings, transportation, agriculture, etc.; they are subjected to the effort sharing regulation ('**ESR**');
- sources and sinks from land use, land use change and forestry('**LULUCF**'); these are subjected to the LULUCF Regulation.

51. Across the three systems, reduction targets were set by the European Council at its meeting of 23/24 October 2014. The targets provide that the total amount of climate emissions should be reduced by at least 40% of the 1990 level by 2030. The specific targets for the three source categories were set in relation to 2005. A reduction target of 43% was set for sources in the ETS sector, with a 30% reduction in the non-ETS sectors.[34] The target for the LULUCF sector was left open but later on set at zero counting up emissions and removals.

b. The Emissions Trading System (ETS)

52. The ETS applies to GHG emissions from certain heavy or chemical industries. In addition, it applies, with some qualifications, to emissions from aviation (dealt with separately, at (c) below).The legal regulation of the ETS has developed over three periods in which undertakings were permitted to carry on regulated activities only so long as they held sufficient carbon 'allowances' to do so. In an initial period (2005-2007) the EU ETS was established as a carbon

[33]All three GHG Emissions Acts cover the following greenhouse gases: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF6).

[34] European Council (2014) Conclusions of 23/24October 2014, EUCO 169/14 – **[Annex 25, pp. 2682 ff.]**

market, although the number of allowances provided in the market turned out to be excessive and the price of the allowances fell to zero. In the second period (2008-2012), the number of allowances was reduced, but the economic crisis depressed economic activity and hence also demand for allowances, the price of which continued to be very low. The third, current period (2013-2020) is one of significant reform, with annual reductions being made in permitted emissions, of 1.74% per annum, and allowances are increasingly auctioned rather than allocated for free. This reduction is applied to a baseline set in 2013, determined as the average of yearly emissions of the second allocation period (2008 to 2012).[35]

53. For the fourth allocation period (years 2021 to 2030), the reduction factor is to be increased to 2.2% annually. Article 9 was amended to include a new short paragraph 2 providing that, "starting in 2021 the linear factor shall be 2.2%".[36]

54. Without explicit regulatory command recital (2) calculates the yearly gradual reduction to reach, in relation to the yearly total volume of 2005[37], a reduction of the yearly emissions of 43%,which implies a level of 57% of the 2005 volume by 2030.

55. This target, for the fourth allocation period, is the subject of this application. As explained below, the implied reduction target of 43 % in 2030 relative to 2005 is far too low, or, in other words, the targeted allowable emission quantity of 57% for 2030 relative to 2005 is far too high, in light of the binding rules of higher rank law.

c. Emissions outside ETS: the Effort Sharing Regulation (ESR) System

56. As regards the emissions from sources outside the ETS, no reduction targets were set by EU law for the 1st and 2nd allocation periods. For the 3rd allocation period (2013-2020) a Decision of the European Parliament and of the Council – the so-called 'Effort Sharing' decision –introduced reduction quotas for each Member State.[38] The decision did not explicitly lay down a summary target for the EU overall but according to the Commission's explanation the aggregate of the individual targets provided an overall reduction of 10% by 2020 as against 2005 levels.[39]

57. That decision was replaced by the ETS Regulation covering the 4th allocation period from 2021 to 2030. According to its second preambular recital the emissions reduction in the ESR sector shall amount to 30% compared to 2005 by 2030, which is consistent with the 40%/1990 target for all sectors.

58. The Regulation applies to GHG emissions from energy, industrial processes and product use, agriculture and waste,excluding emissions covered by the EU ETS and emissions and removals

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[35] See Art. 9 Directive 2003/87 as amended.

[36] Directive (EU) 2018/410.

[37] The year 2005 is the first year of the first allocation period and is therefore chosen as the base year. For a comment see L. Krämer (2010) Klimaschutzrecht der Europäischen Union, Schweizerische Zeitschrift für internationales und europäisches Recht, p. 311-337: „It is highly arbitrary to exchange the base year of 1990 by the year 2005: in this way, preference is given to those countries which, between 1990 and 2005, have not fulfilled their obligations under Decision 2002/358: Spain, for example, was required to increase its emissions by not more than 15% by 2012, Portugal by 27% and Ireland by 13%. In fact, Spain increased emissions by 53 percent by 2005, Portugal by 50 percent and Ireland by 27 percent".

[38] Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020, OJ L 140, 5.6.2009, p. 136–148.

[39] See European Commission (2015) EU ETS Handbook, p. 12 – Annex omitted.

covered by the LULUCF Regulation.[40] The emissions from the ESR sources account for almost 60% of the total EU emissions.[41]

The Regulation sets reduction targets overall and for each Member State. Pursuant to Article 4 of the Regulation, Member States are required to reduce emissions according to a linear trajectory of 2021 emissions running from the average of the 2016 to 2018 emissions to each Member State's limit set for 2030. In other words, the Member States are allocated yearly emission quantities, from 2021 to 2030, that correspond to the emissions permitted by that linear trajectory. These reductions are also subject to measures affording Member States flexibility in compliance.

59. As will be substantiated below the overall quantity of emissions permitted / allocated by the ESR is far too high in light of the requirements of higher rank law.

d. Emissions and removals from LULUCF

60. The EU accounts for GHG emissions and sinks from land use, land-use change and forestry activities (LULUCF). As with the ETS and ESR, LULUCF emissions were subject to a 'learning phase'.[42] For the time period 2021-2030, the LULUCF Regulation revises the accounting system and makes it operative by dealing with it alongside the ETS and non-ETS sources covered by the ESR.

61. The recitals to the initial legislation on LULUCF emissions (Decision 529/2013/EU) recognized the potential of the sector to contribute to climate change mitigation through carbon sequestration:

"(7) The LULUCF sector can contribute to climate change mitigation in several ways in particular by reducing emissions, and maintaining and enhancing sinks and carbon stocks. In order for measures aiming in particular at increasing carbon sequestration to be effective, the long-term stability and adaptability of carbon pools is essential.

"(8) The LULUCF accounting rules should reflect efforts made in the agriculture and forestry sectors to enhance the contribution of changes made to the use of land resources to reducing emissions.[...]"

62. Art 4 of the LULUCF Regulation 2018/842, however, now substitutes a reduction commitment for no net emissions from the sector:

"For the periods from 2021 to 2025 and from 2026 to 2030, taking into account the flexibilities provided for in Articles 12 and 13, each Member State shall ensure that emissions do not exceed removals, calculated as the sum of total emissions and total removals on its territory in all of the land accounting categories referred to in Article 2 combined, as accounted in accordance with this Regulation."

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[40]Article 1 (1) Regulation (EU) 2018/842.

[41]See European Commission, information website on the ESR Regulation https://ec.europa.eu/clima/policies/effort/proposal_en. - Annex omitted.

[42]Decision No 529/2013/EU of the European Parliament and of the Council of 21 May 2013 on accounting rules on greenhouse gas emissions and removals resulting from activities relating to land use, land-use change and forestry and on information concerning actions relating to those activities, OJ L 165 (2013) p. 80-97, Article 1.

63. In other words this article propagates a no net emission target for the territory of each Member State, known as the no-debit rule.[43]

64. The no-debit commitment only applies to those emissions and removals the Member State has to account for under the LULUCF Regulation.[44] These are emissions and removals from the following land-use categories: afforested land, deforested land, managed cropland, managed grassland and managed forest land.[45]

65. Somewhat deviating from the no-debit rule, net emission reductions of up to 280 million tonnes of GHGs (across the EU) may be transferred to the non-ETS sector and thus reduce the burden of a Member State within that system.[46] More precisely this transfer of net emission reductions allows Member States to protect their agriculture from the demands of additional emissions reductions.[47]

66. As will be developed below, the 'no-debit' principle in the LULUCF Regulation is insufficiently ambitious and therefore incompatible with higher rank law. In summary, the LULUCF sector should rather serve as sink for GHGs and thus produce net reductions of GHG emissions.

F. ADMISSIBILITY OF THE APPLICATIONS

67. The Applications meet the requirements for admissibility, as follows.

F1. Admissibility of the application for annulment

68. The applicants are each directly and individually concerned by the acts under challenge as required by Art. 263 TFEU, fourth paragraph.

a. Direct concern

69. According to settled case law for an applicant to be directly concerned by an EU measure:

> "first, that measure must directly affect the legal situation of that individual and, secondly, there must be no discretion left to the addressees of that measure who are responsible for its implementation, that implementation being purely automatic and resulting from European Union rules alone without the application of other intermediate rules."[48]

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[43] Commission Proposal for a Regulation of the European Parliament and of the Council on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 [...], COM (2016) 479 final p. 6 – **[Annex 26, pp. 2698 ff.]**.

[44] Article 4 LULUCF Regulation 2018/841.

[45] Article 2 (1) LULUCF Regulation 2018/841. Member States may, according to Article 10 with Article 2 (1) No 9 LULUCF Regulation, exclude from their accounts for afforested land and managed forest land emissions resulting from natural disturbances, such as emissions due to wildfires, insect and disease infestations or extreme weather events.

[46] Article 7 together with Annex III Regulation (EU) 2018/842.

[47] European Commission (2016) SWD (2016) 249 Final (Staff Working Document) Impact Assessment accompanying the Proposal for a regulation of the European Parliament and of the Council on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry into the 2030 climate and energy framework and amending Regulation No 525/2013 of the European Parliament and the Council on a mechanism for monitoring and reporting greenhouse gas emissions and other information relevant to climate change, sec. 4.2 and 6. **[Annex 27 pp. 2735 ff. ff.]**

[48] GC order of 6 September 2011, Case T-18/10 (Inuit Tapiriit Kanatami), ECLI:EU:T:2011:419, para 71.

70. **Discretion:** The three GHG Emissions Acts all fix targets for emissions reductions while leaving open the way in which they are enforced by the Member States.

71. However, the present action does not allege insufficiency of the individual measures for achieving the prescribed reduction targets. Rather, the applicants' challenge is to the reduction targets themselves, which are prescribed by the acts under challenge.

72. Similarly, in setting emissions targets, the GHG Emissions Acts are also instruments by which, in practice, quantities of emissions are allocated to Member States; in total, 60% of the emissions of 1990 are allocated. The ETS Directive, for example, refers explicitly to the allocation of emissions: recital 6, Article 9. Similarly, the ESR refers to quantities allocated to the Member States, that are then subjected to reduction requirements: Article 1. The LULUCF Regulation in effect allocates a quantity of further emission allowances to Member States by reference to the volume of GHG emissions that are removed.

73. As with the reductions targets, the applicants challenge the volume of the allocated emissions permitted and facilitated by these legal acts. The manner in which these emissions are then in turn allocated by Member States to undertakings is immaterial to this challenge.

74. **Directly affects the legal situation:** The basis for the application is that the GHG Emission Acts, by imposing an insufficient reduction in emissions and thereby allocating and authorising an excessive volume of emissions, infringe the applicants' fundamental rights. Further, the three GHG Emission Acts are a material cause of harm to the applicants' legally protected interests.

75. The factual basis on which this claim is established on the merits is addressed elsewhere in this application. It is submitted that, for this element of the threshold admissibility requirement, the requirement for a direct effect on the legal situation is established.

76. Moreover, it is submitted that the breach of fundamental rights complained of is more readily characterised as having a direct effect on an applicant's legal situation where an applicant can show a *potential* breach of rights, by reference to reasonable and convincing evidence establishing that a breach is likely. The basis for this submission is the instructive reasoning of the European Court of Human Rights, in the *Senator Lines* case (citations omitted):[49]

> "In this connection, the Court reiterates that Article 34 requires that an individual applicant may claim actually to have been affected by the violation he alleges. In a number of cases, the Court has accepted that an applicant may be a potential victim..... However, for an applicant to be able to claim to be a victim in such a situation, he must produce reasonable and convincing evidence of the likelihood that a violation affecting him personally will occur; mere suspicion or conjecture is insufficient."

77. The materials adduced by the applicants in this case – addressed elsewhere in this pleading and summarised below –meet this standard of reasonable and convincing evidence of a likelihood of a violation of individual rights.

78. Some jurisprudence suggests that where an applicant complains of an effect on a legal situation in the future, it is necessary to demonstrate that the prejudice to the applicant is already certain.[50] To the extent that this is necessary, the applicants have adduced sufficient evidence to meet this

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[49] ECtHR Grand Chamber decision of 10 March 2004, Case no. 56672/00 (Senator Lines GmbH), no. 56672/00, sub D.

[50] CFI decision of 17 September 1992, Case T-138/89 (NBV v Commission) ECLI:EU:T:1992:95, para 33.

standard. Harm in the future is indeed certain if increased GHG emissions accumulate in the atmosphere and contribute to further increase in the temperature and subsequent damage.

b. Individual concern

79. The requirement for the applicants to be "individually concerned" pursuant to Art. 263 TFEU, as properly interpreted, is met in this case. The applicants have two submissions in this respect.

80. First, according to the standard set out in the *Plaumann* case for showing "individual concern", the applicants meet that standard. The *Plaumann* formula reads:

> "Persons other than those to whom a decision is addressed may only claim to be individually concerned if that decision affects them by reason of certain attributes which are peculiar to them or by reason of circumstances in which they are differentiated from all other persons and by virtue of these factors distinguishes them individually just as in the case of the person addressed."[51]

81. Each applicant complains of a breach of fundamental individual rights. While all persons may in principle each enjoy the same right (such as the right to life, or the right to an occupation) the effects of climate change (to which the EU Emissions Acts under challenge contribute) and hence the infringement of rights is distinctive and different for each individual. A farmer who is affected by drought is in a different position from a farmer whose land is flooded and salinated by sea water. Even within the group of farmers affected by drought, each suffers the consequences differently. As set out below, each applicant is affected by climate change (and the breach of legal obligations) idiosyncratically and is therefore distinguished from all other persons.

82. Second, in the alternative, it is submitted that the *Plaumann* formula is inapposite and should not be followed in this case, for the reasons set out below. Rather, the standing requirements of Article 263 TFEU are established if it is shown that the act under challenge does affect the applicant in an individual capacity, even if other persons may also be affected, especially where the harm caused is serious. The applicants clearly meet this alternative standard.

83. The basis for the applicants' submission that the *Plaumann* formula should not be applied is as follows.

84. First, the *Plaumann* formula is not itself based in the text of Article 263 TFEU; it is a judicial gloss originally applied to the differently worded predecessor treaty provision. The earlier version referred to "decisions" as the object of an action, the later to "acts" which also includes legislative acts. Legislative acts of their nature may affect the public generally in a way that decisions do not; it is not at all clear why a test devised to control admissibility for challenging an act that is addressed to a discrete set of persons should be correct in challenging an act that may affect (and is meant to affect) a much larger group. In particular, legislative acts do not have addressees other than the general public. The *Plaumann* formula refers, however, to applicants being distinguished in the same way as an addressee. This is obviously inapposite. A legislative act may raise individual concerns, but the application of the admissibility criterion must reflect the general character of legislative acts.

85. Second, the *Plaumann* formula has perverse results: the more widespread the damaging effects of a measure, the more restrictive the access to courts will be. This leads to an obvious gap in

[51] ECJ decision of 15 July 1963, Case 25/62 (Plaumann v Commission), ECLI:EU:C:1963:17, p. 107.

judicial protection. A concrete illustration of the perversity in outcomes is provided by the order of President of the General Court in *Danielsson v Commission*, where an order to suppress the third French Atomic bomb test was sought, and refused on account of the *Plaumann* test.[52]

86. The result of this approach has often been criticized as a scandalous refusal of legal protection, because it leads to the intolerable paradox that the more serious the harm and thus the higher the number of affected persons is, the less legal protection is available.[53]

87. The present case is a further clear illustration: climate change threatens (albeit in different ways) enormous numbers of people, everywhere, and the EU's obligations to respond to that threat require broad action across the economy and society of the EU as a whole. Standing should therefore be afforded to persons who are affected.[54]

88. Third, it is instructive that standing has in practice been more readily granted in cases alleging economic loss in the procurement, competition and State aid contexts, where a Union act is said to disadvantage a competitor operating in the same market. Such a competitor may be directly and materially affected by the Union act, but each other competitor in the market would be also. The Court has nevertheless been willing to afford standing.[55]

89. Fourth, the applicants draw support for their submission from jurisprudence acknowledging an infringement of fundamental rights as a basis for individual concern.[56]The General Court in *Jégo-Qéré* addressed the point most lucidly, following the opinion by Advocate-General Jacobs in *Unión de Pequenos Agricultores*:

> "In the light of the foregoing, and in order to ensure effective judicial protection for individuals, a natural or legal person is to be regarded as individually concerned by a Community measure of general application that concerns him directly if the measure in question affects his legal position, in a manner which is both definite and immediate, by restricting his rights or by imposing obligations on him. The number and position of other persons who are likewise affected by the measure, or who may be so, are of no relevance in that regard."[57]

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[52]CFI order of 22.12.1995, Case T-219/95 (Danielsson v Commission) ECLI:EU:T:1995:219, para.71.

[53] J. H. Jans, H.H.B. Vedder (2012) European Environmental Law, Groningen (Europa Law Publishing) 4th ed., p. 241 - Annex omitted.

[54]Such understanding would also concur up with the related jurisprudence of the US Supreme Court. See the concurrent opinion of Justice Kennedy in *Lujan vs Defenders of Wildlife*, 504 U.S. (1992) at 581, cited in *Mass vs EPA*, U.S. 549 U.S. (207), at 14: "While it does not matter how many persons have been injured by the challenged action, the party bringing suit must show that the action injures him in a concrete and personal way. This requirement is not just an empty formality. It preserves the vitality ofthe adversarial process by assuring both that the par-ties before the court have an actual, as opposed to pro-fessed, stake in the outcome, and that the legal questions presented . . . will be resolved, not in the rarified atmosphere of a debating society, but in a concrete factual context conducive to a realistic appreciation of the consequences of judicial action." 504 U. S., at 581 (internal quotation marks omitted).

[55]See analysis of cases by J. H. Jans, H.H.B. Vedder (2012) European Environmental Law, 4th ed. 2012, p. 239. Annex omitted.

[56] See further W. Cremer (2016) in Callies/Ruffert, AEUV 5th ed., Article 263 para. 45 suggesting a combined reading of ECJ Case C- 309/89 (Codorniu) ECLI:EU:C:1994:197, para. 21 together with ECJ Case C-10/95 (Asocarne) ECLI:EU:C:1995:406, para. 43 – Annex omitted due to language. Calliess/Ruffert is the leading legal commentary on the EU Treaties in Germany.

[57] CFI Case decision of 25 July 2002, Case T-177/01 (Jégo-Quéré) ECLI:EU:T:2002:112, para. 51.

90. Although the ECJ rejected this approach[58], it is the preferable interpretation of Art. 263 TFEU.

91. Fifth, the stringency of the *Plaumann* approach is not sustainable in light of the CJEU's insistence that all questions of EU law – including those arising under the Charter – are reserved to its jurisdiction. The CJEU's opinion in this respect means that plaintiffs cannot look for remedies against the impairment by EU measures of their fundamental rights before the European Court of Human Rights (ECtHR). The CJEU has observed:

> "In so far as Article 53 of the ECHR essentially reserves the power of the Contracting Parties to lay down higher standards of protection of fundamental rights than those guaranteed by the ECHR, that provision should be coordinated with Article 53 of the Charter, as interpreted by the Court of Justice, so that the power granted to Member States by Article 53 of the ECHR is limited — with respect to the rights recognized by the Charter that correspond to those guaranteed by the ECHR — to that which is necessary to ensure that the level of protection provided for by the Charter and the primacy, unity and effectiveness of EU law are not compromised."[59]

92. If the CJEU is to be the sole arbiter of the reconciliation of EU measures and fundamental rights, it must follow that an individual whose fundamental rights are at stake necessarily has a right of access to the EU judicature. In consequence, it should be held that a person is "individually concerned" where the person is "affected in a fundamental right".

93. Sixth, the narrow *Plaumann* reading of "individual concern" also raises an inconsistency with actions for damage. As Advocate General Jacobs has observed, "the Court of First Instance already has jurisdiction to review the legality of general measures in claims for damages [...] at the suit of an unlimited class of individuals."[60]

94. The General Court judgment in *FIAMM* provides an example. FIAMM, an Italian accumulator manufacturer, claimed that the EU had infringed WTO law thereby provoking US countermeasures imposing customs on accumulator imports. FIAMM requested compensation. Although the application was denied in substance it was found admissible without the Court as well as the ECJ on appeal even mentioning the question of standing.[61]This is notable because many other manufacturers of accumulators may also have been affected by the US customs.

95. Seventh, relaxation of the narrow *Plaumann* standard in this case would bring about a situation more in line with the standing requirements of the Aarhus Convention, Article 9(3).

96. Finally, the *Plaumann* test – when applied in the context of rights under the Charter – is inconsistent with the guarantee for effective remedies of rights conferred by Article 47 of the Charter. While Article 47 of the Charter "is not intended to change the system of judicial review laid down by the Treaties, and particularly the rules relating to the admissibility of direct actions"[62], the conditions of admissibility must nevertheless "be interpreted in the light of the fundamental right to effective judicial protection". The CJEU has also held that there must be "a

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[58] Cf ECJ decision of 25 July 2002, Case C-50/00 P (Unión de Pequenos Agricultores) ECLI:EU:C:2002:462 , para. 37; ECJ Case decision of 1 April 2004, C-263/02 P (Jégo-Quéré) para. 33.

[59] ECJ Opinion 2/13 of 18.12.2014, Case C-2/13 (Adhésion de l'Union à la CEDH) ECLI:EU:2014:2425 para. 189.

[60] Opinion GA Jacobs of 21 March 2002, Case C-50/00 (Union de Pequeños Agricultores), ECLI:EU:C:2002:197 para. 72.

[61] CFI decision of 14 December 2005, Case T-69/00 (FIAMM), ECLI:EU:T:2005:449; ECJ Cases C-120/06 P and C-121/06 P (FIAMM)ECLI:EU:C:2008:476, paras. 120-124.

[62] ECJ decision of 3.10.2013, Case C-583/11 P, ECLI:EU:C:2013:625 (Inuit Tapiriit Kanatami) para. 97.

complete system of legal remedies and procedures designed to ensure judicial review of the legality of European Union acts".[63]The CJEU considers that this complete system is provided on the premise that there is coordination of remedies before national and EU courts[64], including through the availability of preliminary reference.[65] As the CJEU has held, this all depends on the availability of appropriate remedies in national law:

"The position would be otherwise only if the structure of the domestic legal system concerned were such that there was no remedy making it possible, even indirectly, to ensure respect for the rights which individuals derive from European Union law ...[66]

97. Such a gap in legal protection is clear in the present case. This action is not directed against emission reduction measures of either Member States or EU institutions but rather against the fundamental legal basis for climate action; more precisely the allocation by the GHG Emissions Acts of an excessive and unlawful quantity of emissions. That allocation is dictated by the GHG Emissions Acts themselves, and requires no implementing measures other than the further allocation of emission allowances by Member States to actors.

98. If an action were nevertheless brought before a national court in respect of implementing measures, the court may propose to submit a reference to the CJEU of the preliminary question as to whether the reductions target in the three GHG Emissions Acts infringes higher rank law. However, the CJEU would have to reject such a reference as inadmissible because the challenged legal acts do not at all affect the question of whether the national government must go further, and make deeper cuts. That question must be answered by national law, not EU law.

99. Even assuming a national court would make an order to take additional measures, its practical utility is negligible compared with the effectiveness of an order covering the entire EU. Moreover, the effect of one Member State making further reductions may simply be to re-allocate any additional saved emissions to other Member States. These problems could only be addressed by simultaneous proceedings being brought in all 28 Member States, which is onerous, impractical and inefficient.

c. Individual concern of the Sáminuorra

100. Concerning the Sáminuorra association CJEU case law is pertinent insofar as it grants an association locus standi if the individuals forming it or at least part of them have standing themselves. In *Polyelectrolyte Producers Group GETE (PPG) and SNF SASs v ECHA* the GC held that "an association responsible for defending the collective interests of its members, was, as a rule, entitled to bring an action for annulment only if the undertakings that it represented or some of these undertakings themselves had locus standi".[67]

101. All of the members of the Sáminuorra are individually concerned and therefore would have individual standing. This is vividly demonstrated for one family in **[Annex 24].**

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[63] ECJ decision of 3.10.2013, Case C-583/11 P,ECLI:EU:C:2013:625 (Inuit Tapiriit Kanatami) para. 92.

[64] ECJ decision of 3.10.2013, Case C-583/11 P, ECLI:EU:C:2013:625 (Inuit Tapiriit Kanatami) para. 93.

[65] ECJ decision of 3.10.2013, Case C-583/11 P, ECLI:EU:C:2013:625 (Inuit Tapiriit Kanatami) para. 102.

[66] ECJ decision of 3.10.2013, Case C-583/11 P ECLI:EU:C:2013:625 (Inuit Tapiriit Kanatami) para. 104.

[67] GC judgment of 25.09.2015, Case T-268/10 RENV (Polyelectrolyte Producers Group GETE (PPG) and SNF SASs v ECHA para. 32.

d. The Applicants' locus standi

102. Each of the applicants meets the requirements for showing a direct and individual concern. This is submitted on the basis of the causal connection between GHG emissions from the EU, and climate change (see Section C. above), and the specific evidence of damage to the Applicants caused by climate change (summarised in section D. above, and developed in the supporting Annexes for each family of applicants).The EU's failure to adopt deeper reductions in GHG emissions also entails an infringement of each applicant's fundamental legal rights (see Section H2, below).

103. It is submitted that, on the basis of the pleaded substantive claim of infringement of rights – supported by cogent evidence – the applicants will meet the standard for admissibility. In other words, if the substance of the applicants' claims is well-founded, a direct and individual concern in the GHG Emissions Acts will have been shown:

a. An infringement of fundamental rights manifestly directly affects the legal position of each applicant. The infringement of rights entails an intrusion into the sphere that is protected by such rights.

b. An infringement of fundamental rights also constitutes an 'individual concern' for each applicant. As set out above (section F1(b)), the applicants' alternative case is that an individual concern ought to be established where a person's fundamental rights are affected. Even applying the conventional *Plaumann* standard, however, each applicant is affected in a different way by the breach of rights:

(a) Each applicant enjoys, on an individual and subjective basis, fundamental legal rights that protect his or her unique personal interests, circumstances and activities;

(b) Any infringement of fundamental rights will therefore, by definition, affect each applicant in a distinct and idiosyncratic manner. For example:

1) Climate change may affect farmers by increasing temperatures and reducing rainfall, as is the case for the Sendim, Feschet and Vlad families (discussed in Section D above). Each family is affected by this subjectively, and differently. Each family has a different and unique land-holding; the livelihood each earns is different; the personal circumstances of each applicant are different.

2) Likewise, sea level rises induced by climate change may affect many people living in coastal areas. These effects will differ in each case given differences in proximity to the coast, timing of a rise, and the circumstances of the individuals. The Recktenwald and Qaloibau families, for instance, are both threatened with a sea level rise but in a manner that is obviously different, given the differences in their respective situations.

F2. Admissibility of claims under Article 340 TFEU

a. Locus standi

104. Claims based on Article 340 TFEU need only to show that the plaintiff has suffered damage caused by EU action. Causation of loss is addressed in detail below; on the basis of the facts there alleged, it is submitted that the claims are admissible.

b. Timing

105. The Claimants seek redress based on the non-contractual liability of the Union for conduct that has caused and continues to cause the same damage, and which will cause damage in the future. The requirement for proceedings to be commenced within 5 years of damage being sustained is therefore satisfied.

G. STRUCTURE OF THE APPLICANTS' LEGAL CASE

106. The structure of the applicants' case on annulment is as follows:

a. The Union is bound by higher rank norms to avoid harm caused by climate change and to take steps to avoid violations of human rights;

b. By reason of those norms, the Union is obliged to adopt measures for the reduction of GHG emissions to the full extent of its technical and economic capacity;

c. The GHG Emissions Acts fall short of this obligation and should therefore be nullified.

107. The applicants moreover contend that the Union's non-contractual liability is engaged by its failure to adhere to the same higher rank norms, causing damage to them. The applicants accordingly seek relief in kind from the Court in the form of injunctive relief ordering the Union to adopt measures sufficient to comply with the higher rank norms.

H. THE UNION'S HIGHER RANK LEGAL OBLIGATIONS

108. The applicants submit that subjective (ie individual) rights and objective principles established by higher rank law are applicable in this case.

109. The applicable fundamental rights are laid down in EU Charter of Fundamental Rights (ChFR). The objective principles embrace those of international customary law, international treaty law and EU primary law, in particular the Treaty on the European Union and the Treaty on the Functioning of the European Union.

H1. Duties on the EU arising from fundamental rights

110. The EU is obliged to ensure respect for fundamental rights protected by the Charter.

111. It is undeniable that climate change poses a serious threat to the enjoyment of several fundamental rights, namely the right to life (Article 2 of the Charter), the right to physical integrity

(Article 3), the rights of children(Article 24), the right to engage in a work and to pursue a freely chosen or accepted occupation (Article 15), the right to conduct a business (Article 16), the right to property (Article 17) and the right to equal treatment (Articles 20, 21). As set out below, this engages the legal duties of the EU.

a. Construction of Duties

112. A legal duty may be construed "negatively" as one of avoidance of interference with rights, or "positively" as one of protection of rights against interference of private actors.

113. Duties, when construed in "negative" terms are engaged here. The three GHG Emissions Acts empower the Commission to allocate emission allowances to the Member States, which then distribute them to individual actors. The language of allocation is widely used in the text of the three Acts, as set out above. The allocation by the EU is the first step in a chain that finally encroaches on the pertinent fundamental right. The fundamental rights invoked by the applicants therefore require the EU to refrain from allocating the quantity of emission allowances permitted by the GHG Emissions Acts.

114. In "positive" terms, fundamental rights require the EU to adopt positive steps to reduce emissions even if these are attributed to private actors. The Court of Justice imposed such positive obligations on the French State in the case of French farmers who obstructed the supply of agricultural products from other Member States, thereby infringing the freedoms of other persons:[68]

"The fact that a Member State abstains from taking action or, as the case may be, fails to adopt adequate measures to prevent obstacles to the free movement of goods that are created, in particular, by actions by private individuals on its territory aimed at products originating in other Member States is just as likely to obstruct intra-Community trade as is a positive act."

115. The CJEU when enforcing obligations may consider by analogy the pertinent jurisprudence of the ECtHR. The ECtHR deduced from Article 8 ECHR the contracting state's positive obligation to protect its citizens from harm by environmental pollution, whether this is caused by state action or private sector activities.[69]

116. Fundamental rights are not only endangered by the final ends of a causal chain such as an existing disease, parched crops, or a washed away house but also by the complex conditions by which the end points are influenced. The life and health of the individual is dependent on the preservation of an environment which allows human life to exist; agriculture depends on the availability of arable land and favourable weather; the safety of living in a building in a coastal zone depends on the sea level and its possible rise and complex climatic interactions, etc. If the legislation shapes those conditions so that they become unlikely to "sustain" life, work and property, it is inappropriate to inflict on the affected persons the burden to wait for the damage to take effect.

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[68]ECJ decision of 9 December 1997, Case C-265/95 (Commission v France),ECLI:EU:C:1997:595, para. 31. See likewise ECJ decision of 12 June 2003, Case C-112/00 (Schmidtberger), ECLI:EU:C:2003:333, para. 59, concerning the blocking by environmental activists of the Brenner motorway.

[69]ECtHR decision of 9.11.2010, Application no. 2345/06 (CASE OF DEÉS v. HUNGARY), para. 21; ECtHR decision of 27.01.2009, Application no. 67021/01 (CASE OF TĂTAR v. ROMANIA), para. 87.

117. Similarly, if the EU authorises (within a general framework of GHG regulation) excessive emissions, liable to cause harm, the EU bears responsibility given that this result was entirely predictable and well-known to the Union.

118. This submission is more broadly consistent with the EU's obligations under human rights protections as a matter of law. The ECtHR has held, in line with the precautionary principle, explicitly referred to in *Tatar v. Romania* that neither scientific uncertainty nor distant future occurrence of damages hinder the existence of a positive obligation.[70] Thus, an increased risk for the enjoyment of the right to respect for private and family life (Article 8) or the right to life (Article 2) engages the State's obligation to protect.[71]

b. Specific fundamental rights affected

119. Articles 2 (1) and 3 (1) ChFR provide rights to life and physical and mental integrity. As set out in the UNICEF **[Annex 6]** report and other sources (noted in Sections C and D above), climate change brings with it an increase in the incidence of flooding, heat waves, and drought, which expert assessment identifies as direct threats to life, physical and mental integrity, particularly on the part of children. As a matter of law, the EU is obliged to adopt positive measures that are legally sufficient to respond to, reduce and prevent these threats.

120. The rights of children (Article 24 ChFR) comprise both substantive (para (1)) and procedural (para (2)) protections. Both are applicable in the context of climate change and the EU's decisions over the regulation of emissions. As set out above (in the sources cited in Sections C and D), children (including several of the applicants) are especially vulnerable to physical and mental harm, and economic and material deprivation, as a consequence of climate change. It therefore follows that the EU has positive duties to ensure that sufficient steps are taken to provide children with protection from these threats, and to take account of the best interests of children as a primary consideration when deciding on the level of emissions reductions to make.

121. The right to pursue an occupation (Article 15 (1) ChFR) is, as set out in Sections C and D above, threatened by climate change and triggers positive duties of the EU to ensure the enjoyment of these rights. It includes that children shall be able to develop their skills within the business of their parents.

122. The property guarantee (Article 17 (1) ChFR) extends to the physical assets of an agricultural or tourism business, such as houses, barns, stables and machinery, as well as to the use of the soil for agricultural and other purposes. Encroachments on their continued existence and use will occur if those assets are endangered by the recognised impacts of climate change such as increased incidence of floods, catastrophic fires, degradation of the soil, loss of feed for livestock animals, et cetera. As with the other Charter rights analysed above, the EU bears positive obligations to ensure that sufficient protective measures are taken.

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[70] ECtHR decision of 10.01.2012, Application no. 30765/08 (CASE OF DI SARNO AND OTHERS v. ITALY), para. 108.

[71] ECtHR decision of 27.01.2009, Application no. 67021/01 (CASE OF TĂTAR v. ROMANIA), para. 107; ECtHR decision of 16.06.2005, Application no. 61603/00 (CASE OF STORCK v. GERMANY); ECtHR decision of 30.11.2004, Application no. 48939/99 (CASE OF ÖNERYILDIZ v. TURKEY).

c. Right to equal treatment

123. The right to equal treatment (Articles 20 ChFR) has been formulated by the CJEU to require that comparable situations must not be treated differently and that different situations must not be treated in the same way unless such treatment is objectively justified."[72] Article 21 lists those reasons which do not qualify for justification.

124. These protections embrace equality of treatment in two respects relevant in this case.

125. First, Article 21 of the Charter prohibits any discrimination based on age. This principle of equal treatment should clearly be applicable in respect of equality between children and young people, and older people, and requires broader intergenerational justice.

126. These principles squarely apply to the question of climate change and to the steps needed from governments to limit its effects. Indeed, unless drastic action is taken now, today's children will face environmental conditions in their future lives that are far worse than those enjoyed by present day adults.

127. Concerning future generations the principle of sustainable development enshrined in Article 3 (3) (1) TEU and Article 11 TFEU reiterates, in the classical definition of the 1987 Brundtland Report "Our Common Future", the duty to protect the interests of future generations. Future generations as a concern are highlighted in Article 3 (3) (2) TEU, and the preamble and Article 37 of the EU Charter of Fundamental Rights. They are also mentioned in constitutions of various Member States, such as in Article 7bis of the Belgian Constitution, Article 20a of the German Basic Law, the Preamble and Article 6 of the French Charter for the Environment, the Preamble of the Latvian Constitution, Article 11bis of the Luxemburg Constitution, the preamble of the Polish Constitution, Article 66 II of the Portuguese Constitution, Article 2 of the Swedish Instrument of Government, Article 38 of the Hungarian Constitution. It can be concluded from this growing concern for future generations that a common proposition to that effect has emerged as a fundamental principle of EU primary law.

128. By the same token, the 1992 FCCC[73] establishes in Article 3 (1) that "the Parties should protect the climate system for the benefit of present and future generations of humankind"; and the UN International Law Commission's 2017 Draft Guidelines on Protection of the Atmosphere note "that the interests of future generations of humankind in the long-term conservation of the atmosphere should be fully taken into account".

129. The second dimension of equality applicable here is equality between persons living in different geographical regions and different conditions of material wealth. It is submitted that when allocating emission rights the EU is not allowed to favour the more over the less developed and wealthy regions and peoples.

d. Subjects of fundamental rights

130. EU fundamental rights are in principle also granted to non-EU citizens and persons living outside the EU territory unless the text of a provision specifies otherwise.

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[72] ECJ decision of 3 May 2007, Case C-303/05 (Advocatenvoor de Wereld) ECLI:EU:C:2007:261, para. 56.

[73] UN Framework Convention on Climate Change of 1992. Adopted / ratified by the EU [EC] and all of its Member States.

131. No such exception applies to the basic rights invoked by the present action. EU environmental laws in general are formulated geographically neutral.[74]The same is true for the formulation of EU fundamental rights. If their reach shall be restricted this is specifically indicated, such as in Articles 16, 27, 34, 39 ChFR. This corresponds to a principle of "open statehood" enshrined in the constitutional law of Member States such as the German[75]:

"It is the prevailing opinion that the territorially open provisions of environmental laws must be interpreted to extend to cross-border effects of German installations. This is justified by the principle of "open statehood" (*offene Staatlichkeit*), which embraces international cooperation (Art. 24 Grundgesetz), international principles, the extraterritorial reach of Art. 20a Grundgesetz, and the fundamental rights of Arts. 2 (2) and 14 Grundgesetz."

132. The principle of open statehood concerning environmental protection rights is also guaranteed by Art. 3 (9) Aarhus Convention[76] which prohibits any discrimination as to citizenship and domicile.[77]

133. A parallel can be drawn with the application of EU competition law. If a foreign company's trade in the EU is affected by a cartel or misuse of a dominant position of a competitor or by a subsidy paid by a Member State to a competitor the foreign company is entitled to ask the Commission to intervene under Art. 101, 102 and 108 TFEU, respectively. In such cases the distortion of competition that occurs within the EU produces adverse effects in the state of residence of the company, such as reducing the quantity of products exported from the foreign country to the EU, causing loss of revenue and impairing the profitability of the firm where the company is registered, and putting employment in foreign factories at risk.

For instance, Advanced Micro Devices (AMD) which is seated in California applied to the Commission under Article 3 Regulation (EEC) No. 17/62 of the Council to intervene against Intel Corporation, situated in Delaware, alleging that Intel had misused its dominant market position concerning certain computer products. The Commission recognized AMD's participation in the proceedings and examined any competitive disadvantage occurring to AMD, without even pondering the fact that AMD was located outside the EU.[78] In doing this it implicitly recognized a right of persons residing outside the EU to fair competition.

134. Likewise, foreign companies seated outside the EU are entitled to challenge trade restrictions by EU product regulation.

For instance, Monsanto, a company existing under the laws of Delaware was admitted to challenge a Commission decision not to include Monsanto's pharmaceutical Sometribove in

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[74] See for instance Articles 6-8 Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment and Articles 7 and 8Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment. In *Umweltanwalt Kärnten* the ECJ ruled that an EIA must extend to cross-border projects and their effects, ECJ decision of 10 December 2009, Case C-205/08 ECLI:EU:C:2009:767, paras 51 and 54.

[75]E. Rehbinder, Ziele, Grundsätze, Strategien und Instrumente des Umweltschutzes, in: K. Hansmann, D. Sellner (eds) Grundzüge des Umweltrechts, Erich Schmidt Verlag, para. 192 (forthcoming). Translation from German to English by Counsel.

[76] Approved on behalf of the European Community by Council Decision 2005/370/EC of 17 February 2005 (OJ 2005 L 124, p. 1). The Convention is applicable Union law, see only: C-240/09 (Lesoochranárske zoskupenie), ECLI:EU:C:2011:125.

[77] Rehbinder, op.cit. para. 192.

[78] Commission Decision of 13 May 2009 relating to a proceeding under Article 82 of the EC Treaty and Article 54 of the EEA Agreement (COMP/C-3 /37.990 - Intel), D (2009)3256 final http://ec.europa.eu/competition/sectors/ICT/intel_provisional_decision.pdf,.

the list of acceptable veterinary medicinal products.[79] The Court did not specify what Monsanto's affected right is but it can be inferred that it was the basic freedom under Article 34 TFEU.

135. Considering therefore that persons living outside the EU can invoke rights of EU primary law arguing that their business is harmed by EU public action or its omission it is submitted that the plaintiffs in Kenya and Fiji are in a comparable situation. They are affected by the allocation by the EU of emission allowances. Just as in the competition and trade related cases the harm materializes outside the EU, and the EU is causing it through action or omission of protective regulation. It is true that the pertinent primary law rights are different: right to competition and freedom of trade on the one side, and fundamental rights to health, occupation and property on the other. But there is no good reason why large companies that suffer from restrictions to free international trade and competition should be better treated than actors in the small and medium scale farming and tourism business who suffer from the destruction of the natural conditions of their livelihoods.

H2. Objective obligations to prevent damage and equal treatment

136. This action claims that the three GHG Emissions Acts violate objective obligations to prevent damage and equal treatment. Such objective obligations are laid out in international customary and treaty law as well as in EU primary law.

a. The customary no-harm rule

137. The EU Member States, like all States, have an obligation to prevent significant harm to the population and environment of other States or of areas beyond their national jurisdiction. That duty is now well established in international customary law[80], confirmed by international jurisprudence as applicable *erga omnes* and regardless of geographical propinquity.

b. The warming limits of the Paris Agreement

138. Article 2(1) of the 2015 Paris Agreement defines the objective of the Agreement as holding the warming at "well below 2°C" combined with the pursuit of efforts to limit that warming to 1.5°C.

139. The wording "Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels ..." formulates a clear upper limit that must be regarded as binding hard law and an obligation of result, not only of conduct.

140. The threshold of "well below 2°C" should not be misunderstood to be an entitlement for states to fully exploit the space up to 2°C. It is a maximum limit that shall not be reached. Rather, States shall pursue "efforts to limit the temperature increase to 1.5°C".

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[79] CFI decision of 22 April 1999, Case T-112/97 (Monsanto v Commission) ECLI:EU:T:1999:83, paras 48-66.

[80] ICJ decision of 20 April 2010, Pulp Mills on the river Uruguay (ARGENTINA v. URUGUAY), accessible www.ilc-cij.org.

141. The Paris Agreement has not superseded the no-harm rule.[81] The no-harm rule remains as a free-standing customary international law obligation. It follows that it may impose obligations further than those reflected in the Paris Agreement.

c. Equitable share of the emissions budget derived from the Paris Agreement

142. As further developed in section J. below, the temperature limits imposed by the Paris Agreement allow for total (ie, global) allowable emissions budgets to be derived. The share of this global budget afforded to the EU are then to be calculated; the size of that budget depends on the criteria applied.

143. It is logical to conceive of the absorption capacity for GHG of the atmosphere as a scarce resource. It follows that, to calculate the emissions budgets, the principle of international law of equitable utilization of natural resources shared by two or more states[82] is applicable.

144. Similarly, Article 3(1) of the UNFCCC puts the parties' obligation to protect the climate system, "on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities". This is confirmed in Article 2 para. 2 Paris Agreement which reads:

"This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."

Reference to equity, development and best effort is also made in Article 4 (1).

145. The EU's obligations to make emissions reductions – and hence its share of any global emissions budget – are therefore to be construed by reference to: the EU's unequitable large share of global emissions, both historically and in the present day; and the EU's capacity, given its wealth and resources, to adopt more ambitious reductions in pursuit of the shared commitment.

d. EU Primary Law: Prevention of damage according to Article 191 TFEU

146. Article 191 TFEU requires the Union in its environmental and climate policy to adhere to a standard of a "high level of protection", prevention and precaution.

147. A high level of protection is hardly still to be reached given the already occurring damage, but the standard at least commands the Union to adopt effective and immediate measures to reduce the damaging effects of climate change to the greatest extent possible.

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[81]This was stressed by the governments of Cook Islands, Marshall Islands, Micronesia, Nauru, Niua, Philippines, Salomon Islands, and Tuvalu when they made declarations on signature or ratification stating that the Paris Agreement did not constitute a renunciation of any rights under international law concerning state responsibility for adverse effects of climate change or a derogation from the principles of general international law. See UN Treaty Collection, chapter XXVII 7 d (https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en#EndDec. Cf. R. Verheyen (2005) Climate Change Damage and International Law, Leiden (Martinus Nijhoff), pp. 142-145.**[Annex 28**, pp. 2874 ff.].

[82] See Principles 1 and 3 of the Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, adopted without vote by the UN General Assembly at its 107th plenary meeting of 18 November 1979. For the text see ILM 17 (1978), p. 1091 (1098) [**Annex 29**, pp. 2884 ff.] For the resolution see D. Rauschning et.al., Key Resolutions of the United Nations General Assembly, Cambridge (CUP) 1997, 10.00 Environment, No 34/186. (Annex omitted) The principle has been invoked by the ICJ's rulings in Gabcikovo-Nagimaros ((197) ICJ Reports 7, at 56) and Pulp Mills ((2010) ICJ Reports 18, at 177).

148. The principle of prevention firmly excludes that measures are postponed to later times, given the small remaining GHG budget, see below.

149. The principle of precaution maintains that the benefit of any doubt in descriptions and predictions must be afforded to the environment where adverse effects are examined and evaluated. If the likelihood of an adverse effect is based on unsettled scientific evidence, ranging, for instance, at 60% confidence, that should be sufficient as proof. Inversely, if the effectiveness of risk abatement measures is to be predicted a high degree of confidence in safety should be attained. Where – as is usual in climate sciences – different models are employed and doubts arise as to which one to choose, precaution suggests that the choice should be "conservative", meaning that the worse (but not necessarily the worst) case shall be assumed. The importance of these points is developed further below, section J. in the specific factual context.

I. WEIGHING OBLIGATIONS UP WITH OTHER CONCERNS – THE OBLIGATION TO ACT ACCORDING TO TECHNICAL AND ECONOMIC CAPABILITY

I1. Legal basis for balancing

150. The strict application of the subjective rights and objective obligations set out above may come at the expense of other public and private interests. The applicants submit that while it may be permissible for the Union legislature to weigh up the competing interests, it may only do so within strict limits. This methodology of weighing up within such limits is embedded in all of the higher rank rules pertinent in this application, including the EU fundamental rights, the international no-harm rule, and the Paris Agreement. It requires the EU to ensure that, where harm or an infringement of rights occurs, it has ensured that it has fully taken the steps that are feasible and of which it is capable, to minimize those consequences.

151. Concerning interferences with fundamental rights, according to Article 52(1) ChFR limitations on climate protection rights are permissible only if they pursue a general interest recognized by the Union, and only to the extent that limitations on or derogations from those rights are necessary. These qualifications apply both to rights prohibiting damage and rights of equal treatment.

152. In the context of this application, legitimate general interests may include the need to provide the population with essential goods, services and employment; this would justify emissions of GHG and some flexibility in the observance of the subjective rights and objective obligations discussed above. This justification only exists, however, where the means chosen are *necessary* to realise those objectives. This means that fundamental rights may only be encroached upon if emissions of GHG are reduced to the extent of what the EU is technically and economically capable of achieving.

153. The position is the same as regards the no-harm rule in international law The obligation to prevent damage is qualified as requiring due diligence. In *Pulp Mills* the International Court of Justice[83] has framed this standard as follows:

"A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the

[83] ICJ decision of 20 April 2010, Pulp Mills on the river Uruguay (ARGENTINA v. URUGUAY), p. 38.

environment of another State. This Court has established that this obligation "is now part of the corpus of international law relating to the environment [reference omitted]."

154. In its commentary to the Draft Articles on Prevention of Harm the ILC stated that "the required degree of care is proportional to the degree of hazard involved."[84] This means that in a case of a severe and even catastrophic hazard – which is alleged in the present application – the duty of care is particularly demanding. It requires as a minimum that states must take all measures of which they are technically and economically capable.[85]

This general principle in international law is specifically recognised in international climate change law. The Paris Agreement in Article 4 para. 3 provides that each party's nationally determined contribution will "reflect its highest possible ambition" and "its respective capabilities, in the light of different national circumstances". Adopting measures according to capability is supported by the principle of common but differentiated responsibility, expressly recognized in the UNFCCC, which should also be recognised as a general principle of law.

I2. The nature of legitimate other concerns

155. There are less and more weighty concerns against which obligations may be balanced. Less weighty is the current life style of the affluent societies of the EU, and in particular the better off among their populations who tend to emit relatively more than the poorer strata. If affluent lifestyles are compromised by emission reduction measures, this cannot count as justifying the deprivation of the applicants of their fundamental rights, nor the impairment of human health and the environment at large.

156. More weighty is the provision of the population with essential goods, services and employment. The applicants submit that as regards these legitimate interests, the Union would need to establish that a certain level of emissions was necessary for their realisation. It follows that the EU is obliged to take those measures which the Member States are capable of doing, consistent with those objectives.

I3. The nature of capability

157. Capability may be construed to have a socio-political dimension, meaning that states may point to the reluctance of their population to take action to respond to climate change. In this regard, according to the Special Eurobarometer survey 459 dated from September 2017 on attitudes towards fighting climate change,"92% of EU citizens see climate change as a serious problem" and 74% see it as a "very serious" problem.

158. The core of the criterion however is capacity in the technical and economic sense:

a. Technical capability refers to the best available techniques and practices.

b. Economic capability does not mean that all actors, public and private ones, must come out profitably, i.e. that the initial capital investment must be recovered by savings on costs and new revenue. It rather means that the costs caused by climate protection measures shall be bearable. This implies that old employment lost in one sector can be

[84] International Law Commission (2001) Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, Art. 3 para (18), available www.ilc.org

[85] R. Verheyen (2005) Climate Change Damage and International Law, Leiden (Martinus Nijhoff), p. 185.**[Annex 28, p.2882]**.

made good by new employment in other sectors, that the costs of climate change avoided by emission reduction measures should be counted as a benefit, that promotional subsidies from public budgets may intervene but should stay within a reasonable margin of public debt, etc.

159. Capability has further procedural and substantive components.

160. The procedural element demands that the responsible state (here the EU) is obliged to proactively search for solutions for which capability exists. The state may not only study capability in a reactive sense, meaning that it checks whether a predetermined or assumed target is feasible. It must undertake a search for the best feasible solutions, and any target must then be determined on that basis. It follows that the obligation to act according to capability is already breached if the activity of the state in assessing capability was reactive rather than proactive. As set out below in Section J4, the Commission (undertaking the analysis of impact for the GHG Emissions Acts) fell into precisely this error, leading it to overlook a mass of highly relevant evidence on capability.

161. The substantive component is that the end result reached must reflect the state of best knowledge, and draw the most reasonable conclusions. All relevant parameters must be factored in and evaluated according to their importance. Such analysis would concentrate on publications by experts or expert organizations.

J. THE INCOMPATIBILITY OF THE THREE GHG EMISSIONS ACTS WITH HIGHER RANK LAW

162. The Applicants' case is that the GHG emissions that would be allocated and permitted under the +60% target (or -40 %, respectively) enshrined in the three GHG Emissions Acts under challenge are incompatible with higher rank law, as follows:

a. First, any further emissions of GHG gases will contribute to the ongoing warming of the Earth system and to dangerous climate change. Permitting any further emissions will result in harm and will encroach on the enjoyment of the EU's duties to respect fundamental rights (see **Section J1**).

b. Second, moreover, the GHG Emissions Acts would permit the continued emission of dangerous GHGs at levels that materially exceed the maximum permissible levels of emissions that are implied by the Paris Agreement. Scientific analysis can estimate the maximum quantity of emissions that can be released globally into the atmosphere so as to result in a likelihood of temperature increases being kept within the defined levels to which the EU has committed itself. The EU cannot consume more than its *per capita* share of those global emissions, yet the GHG Emissions Acts will result in it doing so. The Paris Agreement therefore can provide no justification for the EU's policies; rather, those policies are in direct conflict with its requirements (**Section J2**).

c. Third, the infringement of norms entailed in the GHG Emissions Acts is unlawful, unless the Union establishes a well-founded justification. Any such justification would need to show that the Union had acted proportionately and had infringed theduties and rights only to the extent that was necessary. To make good such a justification, the EU would need to identify and adopt measures for emissions reduction to the extent of its technical and economic capability (**Section J3**)

d. Fourth, insofar as the EU legislature contends that its conduct in permitting the level of emissions it proposes in the GHG Emissions Acts is justified in the light of other, competing interests, the legislative record is to the contrary. The evidence shows that the EU's analysis of its 2030 targets impermissibly pursued an outdated objective of achieving an 80-95% reduction in emissions by 2050. That policy is contrary to law and in particular to the Paris Agreement. As the EU began its analysis from the wrong starting point, it failed to consider the feasibility of more ambitious reduction options. (**Section J4**).

163. As will be shown at Section J4, the technical and economical capacity of the EU clearly extends to making emissions reductions of 50-60%. It is submitted that the GHG Emissions Acts must therefore be declared void insofar as they will allow in 2030 the emission of more than 40%-50% of the 1990 levels of emissions (**Section J5**).

J1. Failure to prevent harm and to avoid infringements of rights

164. As summarized in Sections C and D, anthropogenic GHG emissions are already leading to an increase in temperatures and to dangerous changes in weather and climactic conditions. In some instances, these changes have already caused damage to the applicants. Serious damage to the applicants is the very likely consequence of continued GHG emissions, and climate change, as is harm to persons across the world, more generally.

165. Climate change caused by further GHG emissions violates objective legal standards as set out in Section H, notably the **no harm principle** in international law and Article 191 TFEU.

166. The EU also bears positive duties to prevent an infringement of fundamental rights. In practical terms, it also becomes responsible for emissions from its territory, by allocating emissions rights to Member States, which permits undertakings to emit GHGs, contributing to climate change.

167. The fundamental rights of each applicant are infringed in several respects.

168. The **physical well-being** of each applicant, and in particular of those applicants who are children, will be threatened as climate change worsens. This may be due to overall changes in climate conditions that increase the risks of, for example, crop failure, communicable diseases or the displacement of persons. It may also be due to more sudden and violent occurrences such as fires, storms, sea level rises and floods. The overwhelming scientific and official assessment (as described in Section C above) is that further negative changes in climate, and more rapidly occurring disasters, are the likely consequence of continued GHG emissions.

169. In some instances, these dangers to life and health have already manifested among the applicants. The forest fires in Portugal in 2017 obviously posed a real risk to the Carvalho family, had they not left their property before the fire encroached. The Guyo family in Kenya have also already experienced the effects of longer and more intense heat waves, particularly on their children, leading to heat rashes and dizzy spells. The severe cyclone in Fiji leading to the loss of the Qaloibau family's boat and shed was also capable of posing a serious threat to life and limb.

170. Continued GHG emissions attributable to the EU accordingly constitute an infringement of the rights to life and health contrary to Articles 2 and 3 of the Charter.

171. **Occupation:** Further GHG emissions pose a direct threat to the livelihoods of the applicants. In some instances, a loss of income has already been incurred: this is so for the Feschet, Vlad,

Carvalho, Conceicao, Sendim, Caixero, Guyo, and Elter families, as well as for members of the Sáminourra. Continued GHG emissions are thus an infringement of Article 15(1) of the Charter.

172. **Property:** Climate change will affect the use and enjoyment of property, and in some cases the continued existence of the property itself. Changes in the climate and extreme weather have already caused property damage in some instances, notably the destruction of the forest owned by the Carvalho family through fire. In other cases, climate change will directly affect the use of property, notably the land and other property worked by the Vlad, Conceicao, Sendim, Caixero, Guyo, and Elter families, and loss of animals owned and herded by members of the Sáminourra. The Recktenwald and Qaloibau families also faces the loss of their property through more severe flooding and storm surges.

173. The continued emission of GHGs therefore constitutes an infringement of the applicants' rights under Article 17(1) of the Charter.

174. **Children:** Each of these infringements is also, in turn, a failure to provide protection and care for children as necessary for their well-being, contrary to Article 24(1) of the Charter. As will be developed below, the EU in adopting emissions targets failed to give regard to the best interests of children as a primary consideration, contrary to Article 24(2).

175. **Equality:** Climate change causes damage that tends to be more severe for children and for future generations, in two respects. First, as referenced in Section C above and catalogued by UNICEF[86] and other bodies, children are more susceptible than adults to risks from the higher incidence of disease, malnutrition, fires, floods and displacement that may result from climate change. Second, climate change will progressively worsen over time, affecting children and the succeeding generations with increasing severity. A failure to abate climate change therefore violates equality of treatment based on age.

176. Climate change also tends to affect persons in less developed countries more severely than in developed countries. Less-developed countries have fewer resources with which to adapt to and mitigate the effects of climate change; the economic losses caused by climate change would also be more serious for persons in less developed countries, starting with fewer resources and lower living standards, than in richer countries.

177. In these two respects, the continued emission of GHGs leading to climate change is therefore contrary to the principles of equality of treatment reflected in Articles 20 and 21 of the Charter, and the principle of sustainable development reflected in Article 3 TEU, Article 11 TFEU, Article 37 ChFR, Article 3 UNFCCC, and fundamental principles of EU law as reflected in domestic constitutions (see above).

178. The harm that has already resulted and which will continue to be caused by further emissions of GHGs is *prima facie* an infringement of these higher rank law duties on the EU. It is obvious that the level of emissions reductions required under the GHG Emissions Acts would lead to an infringement, as they would allow emissions to continue, and even by 2030 would only reduce total emissions to 60% of their 1990 levels. Unless any sound legal justification can be established, the EU will be in breach of its obligations.

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[86] **[Annex 6, pp. 1035 ff.]**

J2. Violation of the duty not to exceed the EU's equitable share in the global budget derived from the Paris Agreement

179. As explained in section H2 above, the Paris Agreement does not set aside the stricter requirements of EU primary and international law, which would otherwise be breached by an increase in temperature of the level contemplated by the Paris Agreement (ie, of an increase of up to between 1.5°C and 'well below' 2°C).

180. The parties to the Paris Agreement have made commitments to take steps to avoid an increase in temperature beyond the levels it contemplates. Regardless of whether the Paris Agreement supersedes the existing framework of higher rank law (which it does not), the three GHG Emissions Acts violate the requirements of the Paris Agreement, as properly interpreted.

181. As set out in (a)-(d) following, the analysis (which can be characterised as **top own approach**) takes as its starting premise the IPCC's calculations in its 4th and 5th Assessment Reports of the global volume (or 'budget') of emissions that can be emitted so as to remain within the maximum temperature increase specified in the Paris Agreement. The analysis then takes that premise and draws conclusions that, it is submitted, follow logically:

- from the global emissions budget range, a budget range for the EU is calculated on a per capita population basis;
- calculations are then made as to the time over which that budget would be exhausted, depending on the amount of annual reductions in emissions; and
- calculations are then in turn made as to the rate at which emissions reductions would be required in order to keep the EU within its budget range (under various scenarios).

a. Deriving a global budget from the Paris Agreement

182. The following is a summary account of the available global budget. The precise calculations are attached, with references.[87]

183. The IPCC has set out a global budget for emissions, which calculates the level of emissions that could be maintained while keeping increases in temperature within defined limits (with varying levels of certainty). The budgets calculated by the IPCC consider a temperature increase of 1.5°C and 2.0°C (notwithstanding that the Paris Agreement calls for a maximum that is 'well below' 2.0°C). The calculations concentrate (as does the IPCC) on CO2 emissions, which represent 85% of all GHG emissions at present.

184. The IPCC's assessment is that, as of 2011, the global budget of emissions to align with a 66% chance of staying below a temperature increase of 2°C was 750 to 1400 GtCO2. A 50% chance of staying below a temperature increase of 1.5°C allowed a global budget of 550 to 600 GtCO2 (1 Gt = 1.000 Mio. t).

185. While the IPCC calculated a budget available (under different scenarios) as at 2011, that budget has obviously been partially spent in the years following, and will continue to be consumed up until 2021 when the GHG Emissions Acts take effect. Counting the historical emissions from 2011 to 2016 and assuming a similar trend until 2021 the global budget that would remain in 2021 for a 66% chance of keeping a temperature increase within 2°C is in a range from 342

[87] **[Annex 30, pp. 2894 f.].**

GtCO2 to 992 GtCO2, and for a 50% chance of holding the temperature increase below 1.5°C in a range from 142 to 192 $GtCO_2$.

186. The global budget can also be calculated by starting in 1992 (the year of the adoption of the UNFCCC, by which time anthropogenic climate change was clearly recognised and foreseeable, with the first IPCC Report already published in 1990), by adding the historical emissions from 1992 to 2010 which amount to 595 GtCO2 up to the budget calculated for 2011. This results in a global budget available in 1992 of 1345 to 1995 GtCO2 to align with a 66% chance of staying below a temperature increase of 2°C, and 1145 to 1195 GtCO2 for a 50% chance of staying below 1.5°C.

187. It should be stressed that the budgets calculated in this way only reflect probabilities of 66% or 50% that the temperature will be kept within 2°C and 1.5° C, respectively. In view of the no harm rule, the precautionary principle and the requirement of a high level of protection, the degree of risk of the temperature rising beyond these levels are (by legal standards) too high. The budgets that these calculations have produced should therefore be regarded as overly generous: either allowing too many emissions, or alternatively as the absolute maximum that can be tolerated.

b. Sharing the global budget among states

188. The EU is not entitled to emit more than its justified share of the emissions budget calculated according to the Paris Agreement temperature targets.

189. As set out in section H principles of sharing the collective budget are contained in various international instruments, notably the Paris Agreement. They include equity, the right to development, common but differentiated responsibility, and respective capacities.

190. It is submitted that the guiding legal principle is equity, and more precisely equality of treatment, as reflected in Articles 20 and 21 ChFR. That principle dictates that the EU can use no more than its share of emissions, in accordance with its proportionate share of the world's population. It would supersede any other international law principle that would *prima facie* allow unequal treatment of, for instance, persons living in developing countries.[88]

191. The global budget can be calculated based on two different base years: 1992 was the year of the Rio Conference leading to the UNFCCC, presaging global awareness of the climate problem; 2021 is a further reference point, as it is the starting year of the challenged three GHG Emissions Acts.

c. Determining the EU budget

192. Applying the per capita criterion, the EU share of the global budget is calculated using the population ratio of the EU as projected for 2020,which will be 6.55% of the global population.[89] The per capita criterion results in different remaining budgets depending on the year from which

[88]For the hierarchy of EU fundamental rights and international law see ECJ decision of 3 September 2008, Joined Cases C-402/05 P and C-415/05 P (Kadi, Al Barakaat), ECLI:EU:C:2008:461, para. 285.

[89] The factoring in of a future relative diminution of the EU population would further reduce the EU budget.

they are counted. The earlier the starting date (1992 vs. 2021), the more of the EU's share will already have been spent.[90]

193. The following is a summary account of the EU budget. The precise calculations are attached, with references.[91]

194. Taking 1992 as the starting point, the budgets that would remain in 2021 are between negative 18.5 GtCO2, to positive 24.1 GtCO2 to align with a 66% chance of staying below 2°C throughout the century. If the target is to have a 50% chance of remaining below 1.5°C, the budget by 2021 (using 1992 as the baseline) will already be exhausted.

195. If 2021 is taken as the baseline, the budgets remaining are between 22.4 GtCO2 to 65.0 GtCO2 to align with a 66% chance of staying below 2°C, and between 9.3 GtCO2 and 12.6 GtCO2 for a 50% chance of staying below 1.5°C.

196. These budgets can be illustrated in table form as follows:

Range of CO2 emissions in Gt available to the EU according to a per capita allocation of the global emissions budget		
Baseline year for assessing the budget available in 2021	1992	2021
1.5°C (50% likelihood)	-31.6 to -28.3	9.3 to 12.6
2°C (66% likelihood)	-18.5 to 24.1	22.4 to 65.0

197. The dramatic conclusion is that if 1992 is taken as the baseline (and EU emissions since that time are counted in determining any emissions budget now remaining), and the target is to reach a 50% chance of aligning with a 1.5°C increase, **no budget** remains available to the EU. Even if the target is to have a 66% chance of staying below 2°C, the lower range of the available budget to the EU is negative and the mean value between the lowest and highest range (i.e. negative 18.5 and positive 24.1) is only 3.25 $GtCO_2$.

198. If the baseline for the budget is taken to be 2021 (ie. the EU's emissions up until 2021 are not counted against its budget over time, and the EU is essentially allowed to start in 2021 with a clean slate), the range of budgets appropriate for staying below 1.5°C or 2°C –from 9.3 to 12.6 Gt and from 22.4 to 65.0Gt, respectively – are still relatively small.

199. The implications of these budget calculations for the level of emissions reductions pursued by the EU are developed in the following section.

d. Implications of any EU budget for the level of emissions reductions

200. The EU's policy in the current ETS period (and the period 2021-2030) is to impose reductions in emissions on a linear basis, applying a fixed percentage annual reduction over a period of years.

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[90] Where 1992 is taken as the baseline, the budget is calculated by calculating the share of global emissions (according to population) available to EU Member States from 1992 onwards, subtracting from that figure the emissions actually made (and projected to be made) from the EU from 1992 to 2020. The resulting figure is the budget available to the EU from 2021 onwards, on a 1992 baseline. When 2021 is used as a baseline, the EU budget is calculated by ascertaining the total emissions available on a global basis in 2021, and then calculating the EU's share of that budget on a proportionate (per capita) basis.

[91] **[Annex 31, pp. 2896 f.]**

It would of course be open to the EU to adopt a policy of deeper cuts at an earlier stage, and there would be much to commend such an approach (often referred to as a "concave" curve); more ambitious preventive measures adopted earlier in time are more likely to avoid damage and are more consistent with principles of inter-generational equity, and would have a much better chance of meeting the EU's longer-term target for reducing emissions to 20% of 1990 levels by 2050.

201. It would certainly not be appropriate for the EU to adopt the regressive pathway of emissions reductions, of deferring reductions in earlier years on the promise that deeper cuts will be made later (a "convex" curve). The later that action is deferred, the more dangerous the climate change that will occur (especially as, for example, tipping points are reached), and the more technically and economically demanding it will be to take measures in order to stay within the allowable budget. In legal terms the deferral of stringent measures would violate the prevention principle (Article 191 (2) (2) TFEU) and discriminate against younger generations in favor of older generations.

202. Therefore, for the purposes of analysis in this application the applicants work on the assumption that the linear reduction approach taken by the EU is appropriate.

203. The following is a summary account of allowable EU emissions. More precise calculations are attached, with references.[92]

204. The EU's climate policy requires emissions to fall by 2020 to 80% of 1990 levels; i.e. to 3.38 GtCO2/y. The rate at which the EU would need to reduce (by a linear annual reduction) its emissions from 2021 onwards to ensure that its budget was not exceeded can be calculated by taking this figure of 3.38 GtCO2 as the starting point, and then utilizing the various budget figures to calculate the annual rate of reduction that would be needed. In simple terms, the calculation can be explained graphically:

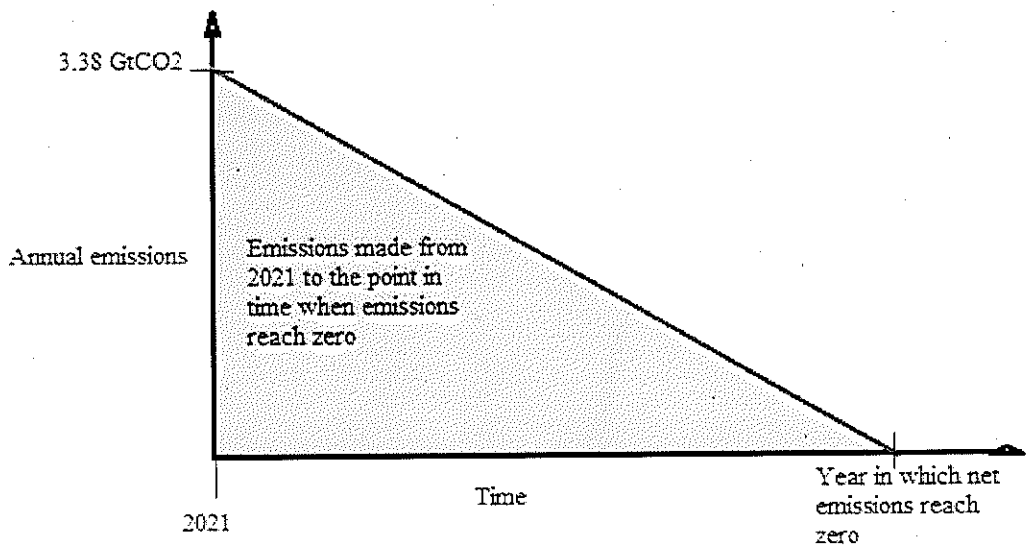


Figure 1, Source: Climate Analytics gGmbH

205. The point in time at which net emissions would need to reach zero to ensure that the EU's budget is not exceeded can be calculated by dividing the total emissions budget by the dimensions of

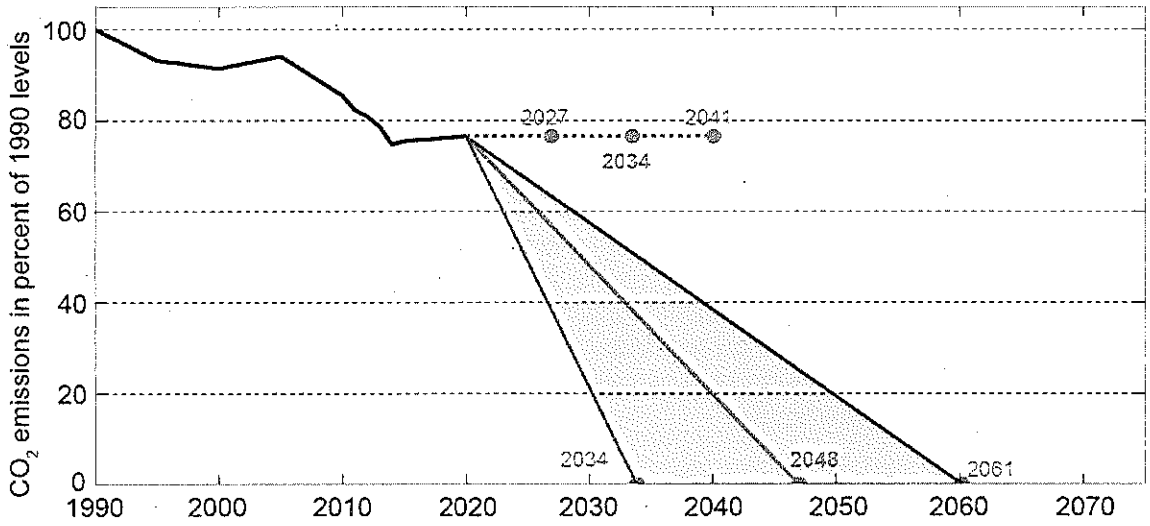
[92] **[Annex 32, pp. 3119 ff.]**

the x-axis (i.e. by 3.38), and then multiplying the figure reached by 2.[93] This will give a figure in years, beginning in 2021.

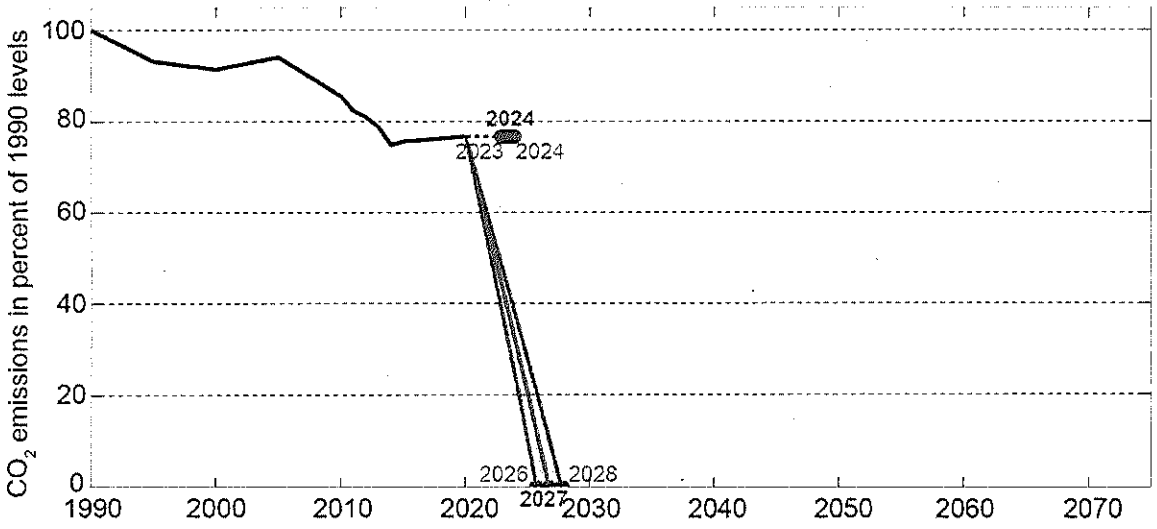
206. The rate of linear reduction implied by these calculations can then be used to indicate the emissions reductions that the EU would need to make, within this budget, by 2030 (the final year covered by the GHG Emissions Acts), as compared with 1990 levels (4.22 GtCO2 per year).

207. Figure 2 shows - for the 2°C and 1.5C budgets - when the lower, middle and upper ranges of the available budgets will be consumed. The 2°C budget is exhausted in 2027 (or 2034 or 2041, respectively) if emissions remain constant after 2020, and exhausted in 2034 (or 2048 or 2061, respectively) where linear emissions reductions are made. The 1.5°C budget is exhausted in 2024 (or 2023 or 2024, respectively) if emissions remain constant after 2020, and exhausted in 2027 (or 2026 or 2028, respectively), of linear emissions reductions are implemented.

EU CO_2 emissions under a constant emissions and linear reduction of the 2°C budget



EU CO_2 emissions under a constant emissions and linear reduction of the 1.5°C budget



[93] The formula for the area (A) of a rectangular triangle is A = (x * y) / 2. X is then (A/y) * 2.

Figure 2: CO_2 emissions scenarios, including land-use, for the EU from 2021 following an equal per capita approach based on 2020 population percentage of the EU. The top panel (red lines) shows a utilisation of the 2°C carbon budgets (>66% chance) starting in 2021, and the lower panel (blue lines) shows similar utilisation of the 1.5°C budget (>50% chance, no overshoot). The disks represent when the various budgets are used up, following either constant CO_2 emissions (dotted lines), or linearly reducing CO_2 emissions (solid lines).The range of budget-exhaustion-dates (coloured disks) reflect the budget range (extreme values) and the middle of budget range (central value in bold).

Figure source: Climate Analytics gGmbH, own calculation.

208. These calculations indicate that for **every** emission budget assumption based on limiting temperature increases to 1.5°C or 2.0°C, the EU would be required to make deeper emissions cuts than the 40% reduction it has adopted in the GHG Emissions Acts. This is all the more striking given that:

a. The budgets for a 1.5°C and 2.0°C increase are based on a relatively modest likelihood (50% and 66%, respectively) that the temperature would in fact be kept within those limits. Prudence and the precautionary principle would strongly dictate that still deeper cuts are necessary to reduce the likelihood of temperatures increasing beyond those limits.

b. The budget that is calculated for the higher temperature increase of 2°C is in fact at odds with the Paris Agreement itself, which requires any temperature increase to be kept 'well below' 2°C. The EU has thus failed to lay down emissions reductions consistent with a temperature target of the Paris Agreement.

c. There are strong reasons in law and policy to find that the EU's share of emissions should be calculated on the 1992 baseline. The basic causal chain between GHG emissions, temperature increases and dangerous climate change was established at that date and reflected in the UNFCCC. It was clear to any government from that point on that further emissions posed a serious risk to humankind, and that deep emissions cuts were necessary. The EU made some reductions (albeit connected with broader changes in the economy) but continued and continues to emit GHGs at a higher level than its proportion of the world's population would merit.

d. As set out above, section H3, the precautionary principle demands to use the lower end of emissions budget estimates as the meaningful estimate, and to disregard the higher end of each estimate.

209. **Conclusion:** It follows that according to the standards flowing from the Paris Agreement – to which the EU has bound itself – the emissions reduction targets are manifestly inadequate and unjustifiable. The difference between the targets set by the EU and the targets implied from the Paris Agreement are very significant:

a. The targets implied by a temperature increase limited to 1.5°C (at a 50% likelihood) require the EU to reduce its net emissions to zero even before 2030.

b. If the option of seeking (with 66% likelihood) to limit the temperature increase to 2° C is used, the lower end of the estimate (even using 2021 as a baseline) would require a reduction by 2030 to around 20% of 1990 levels. In other words, deeper emissions cuts, in the order of at least the 80% reduction calculated from a 2°C increase, are called for.

J3. The breaches of duty and infringements of rights cannot be justified

210. As set out above, section I, the obligations to make deep reductions in GHG emissions in accordance with fundamental rights, the international no-harm rule and the Paris Agreement, may be weighed up against other concerns provided such concerns are legitimate and the reductions that would otherwise be required are adjusted only to the extent that is necessary.

211. Insofar as the EU may contend that any infringement of these higher rank rules was justified by other policy concern, the EU would therefore first need to establish that it was in fact motivated by legitimate objectives. It would then need to establish that, to the extent it adopted targets that fell short of the requirements of the higher rank norms, it was necessary to do so to realize those objectives.

212. As developed in Section J4 below, the applicants submit that the EU, in adopting the GHG Emissions Acts, failed to identify the legitimate concerns in such a way as to provide a sufficient basis to justify the serious risks of continued GHG emissions.

213. Moreover, if legitimate concerns (such as preserving employment) are to be weighed against the need to reduce emissions, the EU would be obliged to ensure that the best available means of reducing emissions, within technical and economic capability, were used. The EU failed to take account of several critical factors, which clearly indicate that deeper reductions in emissions were technically and economically feasible; in short the EU failed to take what may be characterized as a **bottom up approach**. This is shown in the following section, in particular drawing on the scope, methods and results of the various (five) impact assessments conducted by the European Commission. This includes the impact assessment for the 2030-Framework (2014) as well as the proposals for the sectoral legal acts (2016 and 2017).

214. The defendants similarly failed to take account of the economic advantages that could follow from deeper emissions reductions, and therefore would necessarily have approached the weighing up of competing concerns on an incorrect premise.

J4. Failure to take account of technical and economical capability

215. The core document that underpinned the choice of the 40% reduction target was the Impact Assessment of the Commission of January 2014 (hereafter, "**2030-Impact Assessment**").[94] This document considered scenarios that represented different pathways to different reduction targets in the decade 2021 - 2030.

216. The 2030-Impact Assessment designed a reference scenario that is based on the continuance of the 2020 conditions, and seven other scenarios with increasing ambition from 35% to 45% reductions to be achieved in 2030. It is clear from the Impact Assessment itself, however, that the Commission's working assumption was that the scenarios aiming at 40 % reduction were preferable, and so significantly less consideration (if any) was given to other, more ambitious, reduction targets.

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[94] European Commission (2014) Impact Assessment – A policy framework for climate and energy in the period from 2020 up to 2030, SWD (2014) 15 final, **[Annex 33 pp. 3124 ff.]** (short: 2030-Impact Assessment).

217. The -40% target has its roots in a conclusion of the European Council of 2009 and the 2050 Roadmap of 2011 which aimed at a reduction of the 1990 emissions by 80% to 95% in 2050[95], following the related recommendation of the IPCC 4th Assessment Report.[96] In its Green Paper of 2013 the Commission suggested a trajectory of emissions reductions by 20% in 2020, 40% in 2030, and 80-95% in 2050, finding the -40% target to be "cost-effective".[97] After public consultations this led to the Commission Communication in January 2014 proposing a -40% target[98], drawing on the 2030-Impact Assessment which was explicitly based on finding pathways to an ultimate target of an 80-95% reduction by 2050.[99]

218. The target 80-95% by 2050 is in itself legally flawed because precaution would have required to decide in favour of 95% rather than allowing for only 80 % as an option.

219. More importantly, the target 80-95% by 2050 was clearly superseded (indeed, repudiated) as soon as the Paris Agreement set a commitment for Parties to pursue a specific long term temperature goal. The critical significance of that commitment was that, a temperature goal having been set, a specific budget for emissions was then implied. Previously, under the Roadmap policy and other policies, the EU (and some other States) had set emissions reductions targets for particular dates, but without reference to any specific temperature goal. Those earlier targets were, while arguably laudable, not attached to any specific outcome and did no more than point in the direction of movement. The Paris Agreement totally changed the legal landscape by committing the parties to a specified result.

220. The Applicants' case therefore is that the EU's institutions undertook the legislative process with a preference or assumption that the 40% target was appropriate, because it was seen as the cost-effective way of meeting the long term Roadmap target. The consequence is that the EU failed to take account of the range of evidence as to the feasibility of adopting the deeper reductions that would otherwise be required by the Union's obligations and the Paris Agreement.

221. The Impact Assessment and hence the target itself as reflected in the GHG Emissions Acts are flawed in terms of feasibility of more ambition in the following respects:

- More ambitious scenarios were discarded or underestimated (**section a**, below)
- The analysis ignored several key factors showing the economic advantages of more ambitious emissions reductions, which would be material to any assessment that seeks to balance competing factors (**section b**).
- The analysis ignored the possibility of changing consumption patterns (**section c**)
- Insofar as it takes relevant factors into account it commits errors in fact or evaluation concerning the sectoral emission sources(**section d**).
- More ambitious scenarios have been proven to be realisable (**section e**).

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[95]See European Commission (2011) A Roadmap for moving to a competitive low carbon economy in 2050, COM (2011) 112, p. 4, [**Annex 34 pp. 3359 ff.**].

[96]IPCC (2007) 4thAssessment Report WG III, p. 776, Box 13.7. [**Annex 35 pp. 3375 ff.** citation at p.3384].

[97]European Commission (2013) Green Paper: A 2030 framework for climate and energy policies, COM (2013) 169, p. 8. [**Annex 36, pp. 3386 ff.**]

[98]European Commission, A policy framework for climate and energy in the period from 2020 to 2030, COM (2014) 15, section 2.1, p. 5 [**Annex 37, p. 3402 ff.**]

[99] 2030-Impact Assessment, section 3.2.1, p. 36. [**Annex 33, p. 3160**]

a. Discarding or underestimating more ambitious scenarios

222. The 2030 Impact Assessment explicitly excluded any scenarios from consideration that aim at more the 45% reduction[100]:

> "All scenarios based on GHG reductions in the EU below 35% and above 45% were discarded at an early stage. The Reference scenario itself results in a 32% reduction. A 45% reduction domestically is assessed as an upper range taking into account reduction pathways assessed in the Commission's Low-carbon Roadmap as regards the cost-efficient trajectory towards meeting the 2050 objectives."

223. In fundamental contrast, the Impact Assessment should have started with exploring scenarios that allow an 80 % emissions reduction by 2030 this being the target derived from the "top down" determination of the objectively remaining emissions budget of the EU.

224. As for the 45% reduction scenario this scenario "was analysed but is not evaluated in full", a decision explained to be taken "in order to keep the number of scenarios assessed manageable".[101] This is hardly a valid reason in terms of serious search for more ambitious scenarios.

225. As explained in more detail in [**Annex 38**], a full evaluation of the same 45 % scenario shows that this scenario is in fact economically more effective than the comparable 40% scenario.

226. Also, the 2030 Impact Assessment only contains incidental analysis of a 50% scenario in the specific context of increased international climate action. The Assessment noted that a 50% target would result in loss GDP of 3.4%. As shown in the [Annex 38] the economic model used for this prognosis was not PRIMES, the one used for the 40% and 45% scenarios, but GEM E-3, a model which tends to project significantly higher costs as compared with other models. Such change in model use is a serious scientific flaw, to say the least.

b. Disregarding evidence of economic benefits from deeper reductions

227. The 2030-Impact Assessment ignored several important means by which more ambitious emissions mitigation would prove more beneficial, and thus offset the costs of deeper reductions, as follows.

228. **Employment and other economic benefits.** The 2030-Impact Assessment did provide analysis of the potential positive economic consequences, and the possibility of increased employment, of mitigation measures.[102] However, as it notes, "The analysis focuses on the GHG40 reduction scenario";[103] it accepted that the option of a 45% reduction is "not evaluated in full";[104] no other options received any related evaluation.

229. Had the Impact Assessment considered more ambitious targets, the analysis would have pointed strongly towards deeper reductions. Analysis conducted in 2015 using the very same economic

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[100] 2030-Impact Assessment, section 4.1.2.3, p. 47. [**Annex 33, p. 3171**]

[101] 2030-Impact Assessment, section 4.1.2.3, p. 47. [**Annex 33, p. 3171**]

[102] 2030-Impact Assessment, sections 5.1.4 and 5.1.5.1 – 5.1.5.2. [**Annex 33** citation at pp. 3199 ff.]

[103] 2030-Impact Assessment, para 5.1.4.2, p. 82. [**Annex 33**, p 3206].

[104] 2030-Impact Assessment, para 4.1.2.3, p.47. [**Annex 33**, p.3171].

modelling used by the Commission (referred to as 'GEM-E3'), showed that an investment oriented climate policy aiming at a reduction by 50% of 1990 levels would lead to an ***increase*** in economic growth and employment.[105]

230. **Costs of adaptation** The 2030-Impact Assessment gave no consideration to the costs of adaptation to climate change (such as, eg, irrigation in agriculture or dike construction at coasts). Including these costs in the account could make more ambitious scenarios relatively cheaper compared to less ambitious ones because, with deeper reductions (particularly where more ambitious action by the EU in turn encourages deeper reductions by other countries), some adaptation measures could be foregone. This effect would be reinforced under the assumption that global ambition is influenced by pioneering action of the EU.[106]

231. **Avoided costs of global warming** The Commission's Impact Assessment failed to take account of the avoided impact of global warming. The EU Joint Research Centre (JRC) in 2014 estimated that the costs of climate change impacts in the EU would reach around EUR 120 billion per year by the 2080s (equivalent to 1.2% of GDP in 2017) in a plus 2°C world(without public adaptation). These costs would be substantially higher at greater levels of warming, such as e.g. ~EUR 190 billion, or 1.8% of 2017 GDP, for a scenario leading to global average warming of 3.5°C.[107] This finding was cited in the European Commission's 2013 Impact Assessment for an EU strategy on adaptation to climate change.

232. **Fossil fuel costs** The economic impact of lower demand for fossil fuels in the context of a more ambitious reductions target was not accounted for in the 2030-Impact Assessment. A more ambitious reductions target would lower consumption of fossil fuels, reduce the cost of their purchase and reduce the need for imported quantities.[108]

c. Ignoring the sufficiency factor

233. Sufficiency is a concept concerning the consumers of products and services which explores how less consumption, and more considerate consumption can contribute to reducing the exploitation of natural resources.

234. Less, and more considerate, consumption would in various ways indirectly reduce GHG emissions because energy would be saved if less and sustainable products were purchased and used.

235. The Commission in its 2030-Impact Assessment largely disregarded entirely the potential of measures steering consumer behavior towards sufficiency. When addressing the different sources of emissions, the 2030-Impact Assessment rather focuses on the design of some products, such as of the CO2 emissions of automobiles but leaves out the potential of directing consumption behavior towards public transportation, cycling, electric cars, etc.

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[105] Global Climate Forum (2015) Investment-oriented climate policy: An opportunity for Europe, p. 10, **[Annex 39 pp. 3517 ff. / citation at p. 3528]**.

[106] Delft (2014), Review of the Impact Assessment for a 2030 climate and energy policy framework, p. 16, (hereafter: Delft (2014).**[Annex 40, pp. 3642 ff./ p. 3657]**.

[107] JRC (2014) Climate Impacts in Europe – the JRC PESETA II Project, pp. 19-20. **[Annex 41, 3686 ff.]** / citation at p. 3706f

[108] Delft (2014), p. 17 **[Annex 40, p. 3658]**.

d. Flaws regarding the reduction potential of various emission sectors

236. Examination of the ETS, ESR and LULUCF sectors reveals that the Commission's analyses – both in the 2030-Impact Assessment and subsequent impact assessments for sectoral policies – significantly underestimated the feasibility of the EU achieving more.

1. *Emissions Trading Sector*

a) *Possibility of further restricting free allowances*

237. As noted in Section E above, in the initial stages of the ETS, large quantities of emissions allowances were allocated for free, leading to an excess of allowances in the market that has persisted despite some reductions in their numbers.

238. The step now proposed to address this is to transfer allowances in circulation to the carbon market stability reserve. Even then, however, this mechanism will still guarantee a supply of 400 million tonnes of allowances per year.[109]This means that within the decade 2021-20304Gt may be emitted regardless of whether this is really necessary. Moreover, the share of the oversupply that will be taken off the market will be, initially, only 24% of the proportion of free allowances earlier allocated. After 2023, the number of allowances to be removed will fall to only 12%.

b) *Possibility of a higher target for renewables*

239. The performance of the ETS is highly dependent on the availability of renewable energy sources. At present, the EU's assumption is that by 2030, renewables would account for 27% of energy consumption. The Applicants submit that recent research shows an increase in the generation of renewables to 35% (at least) of the total would be feasible. The Commission failed to seriously consider this possibility. The Parliament also endorsed a target of 35% renewables in a resolution of 2017.[110]

240. One reason for higher levels of renewables penetration than may earlier have been expected is that renewable energy costs have dropped dramatically and will attract a substantial increase in investment.[111]

241. An increase in the level of renewables to 35% by 2030 would itself result in the target for GHG emissions reductions being increased to a reduction of 47.5 % as compared with 1990 levels

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[109] European Parliament and Council (6 October 2015) Article Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC, OJ L 264/ 2015 p. 4, Article 1 para 6.

[110] European Parliament (2017) Report on the proposal for a directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources, A8-0392/2017, p. 149, http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A8-2017-0392+0+DOC+PDF+V0//EN.

[111] Bloomberg New Energy Finance (2017), New Energy Outlook 2017, p. 3,**[Annex 42, pp 3841 ff.]**/ 3844. See also Agora Energiewende (2017) The cost of renewable energy: A critical assessment of the Impact Assessments underlying the Clean Energy for All Europeans-Package, p. 16, **[Annex 43 pp. 3847 ff.]** / p. 3862.

overall, and a reduction of 50.1% of 2005 levels in the ETS sector and a reduction of 37.7% of 2005 levels in the ESR sector.[112]

c) Feasibility of reducing coal power generation

242. As of 2015, around 18% of EU emissions arose from the combustion of coal. There is, however, a wide range of levels of coal consumption across the EU.[113]

243. The 2030-Impact Assessment does not consider any phasing out of fossil fuels other than by reference to their competitiveness, affordability and supply security.[114] In that line, the Commission's 'Reference Scenario 2016' report,[115] assumes that coal will continue to account for 16% of electricity generation in the EU in 2030, and will not be phased-out of the electricity mix until the second half in the century.

244. The feasibility of pursuing an accelerated phasing out of coal is evident from the conduct of individual Member States. Several Member States already have very low levels of coal usage. A significant number have also committed to phasing out coal by 2030: including Austria, Belgium, Denmark, Finland, France, Ireland, Italy, the Netherlands, Portugal, Sweden and the UK. Others – Cyprus, Estonia, Lithuania, Luxemburg and Malta – do not have coal power plants at all.[116] Leadership by the European Union would assist other Member States that may wish to phase out coal (such as Germany) in doing so. It could also restrain efforts of some Member State governments (such as Poland) to support coal despite its increasing lack of market competitiveness.

245. There is a compelling economic case for accelerating the closure of coal power plants:

a. The average global economic and technical lifetime of a coal power plant is 40 years. Most of the coal power plants operating in the EU exceed or are approaching the end of this lifetime.[117] Investing in those plants to extend their lifetime is unreasonable from almost any point of view, including climate change and air pollution.[118]

b. Nearly all coal power plants will need highly costly investments required for plant retrofitting to meet new emissions standards for SO2, NOx and particles under the Industrial Emissions Directive 2010/75/EC and related Best Available Techniques Reference Documents (BREFs).[119]

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[112] F. Simon (2 March 2018, updated 8 March 2018) Fresh EU analysis makes case for higher renewable, energy saving goals, EURACTIV **[Annex 44** , pp. 3866 ff.].

[113] Europe Beyond Coal (2017) No. 3/ Their CO2 Impact **[Annex 45, pp. 3872 ff.]**.

[114] 2030-Impact Assessment, pp. 10-11 [**Annex 33**, pp. 3134].

[115] European Commission: The EU Reference Scenario 2016 – **[Annex 31.1 pp. 2898 ff.]**. This Reference Scenario is comparable with the projection for the With Existing Measures (WEM) scenario.

[116] Europe Beyond Coal (2018) Overview: National coal phase-out **[Annex 46, pp. 3877 ff.]**.

[117] Climate Analytics (2017) A Stress Test for Coal in Europe under the Paris Agreement: Scientific Goalposts for a coordinated Phase-Out and Divestment, p. 11. **[Annex 47, pp. 3883 ff.**/ p.3902].

[118] CAN Europe (2016) Europe's Dark Cloud: How Coal-Burning Countries are making their Neighbours sick.http://www.caneurope.org/docman/coal-phase-out/2913-dark-cloud-report/file. Annex omitted.

[119] DNVGL (2016) Fact-based scenario to meet commitments under the LCP BREF, pp. 21-23.**[Annex 48, pp. 3945 ff.]** p. 3968-3970; EU Science Hub (14 September 2017) New EU environmental standards for large combustion plants, **[Annex 49 pp. 3975f]**.

c. According to Carbon Tracker, 54% of EU coal-fired power plants are currently cashflow negative and this could increase to 97% by 2030; the early phasing out could avoid 22 bn € in losses.[120]

2. *Effort Sharing Regulation sectors*

246. The target for emissions reductions in the ESR sector has been set at30% from 2005 levels by the European Council. It is clear from the Commission's Impact Assessment that this target followed from the overall target of a 40% reduction in GHG emissions:[121]

> "The scenarios achieving 40% GHG reductions compared to 1990 show that an EU-wide reduction of 30% to 35% will be required in non-ETS sectors compared to 2005."

247. The Commission's own analysis therefore makes plain that the overall target was **not** determined on the basis of an assessment of feasibility across different sectors. Rather, the analysis was undertaken to ensure that an overall target of 40% could be met, without determining the extent of the contribution that the non-ETS sectors *could* have made to the overall target. There simply is no "bottom up" analysis of the reduction capability of the ESR sectors.

a) Transport

248. As regards transport, the Commission's Impact Assessment takes as its premise an existing target for transport sector reductions set in a 2011 Commission White Paper. That *Roadmap to a single European Transport Area* sets a 2030 target for the transport sector of 20% emission reduction below 2008 emissions. The White Paper acknowledged that given the substantial increase in transport emissions over the past decades this would still put the emissions 8% above the 1990 level.[122]

249. The 2030-Impact Assessment referred with approval to the 2011 White Paper,[123] but put forward no proposals for making any further reductions in the transport sector.

250. This is a significant failing by the Commission, undermining its analysis and the GHG emissions targets, given the clear evidence that more significant reductions were feasible.

a. The Commission itself had stated in its Communication concerning the 2030 targets that deeper reductions from the transport sector were achievable.[124]

b. The Commission could have more closely explored the margin of capability and factored it into a more ambitious calculation of the overall -40% target.

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[120] M. Gray, W. Laurence (2017) Lignite of the living dead: Below 2°C scenario and strategy analysis for EU coal power investors, Carbon Tracker **[Annex 50 pp. 3977 ff.]**.

[121] 2030-Impact Assessment, p.129 [**Annex 33,** p.3253].

[122] European Commission (2011) White Paper – Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, COM (2011) 144 final, para 6 at p.3, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0144&from=EN. Annex omitted.

[123] 2030-Impact Assessment, p.14[**Annex 33,** p. 3139].

[124] COM (2014) 15 final, p.14 **[Annex 37,** p. 3415**]**.

c. A key example is fuel efficiency. The 2030-Impact Assessment assumed, in all of the modelling for a 40% reduction in 2030, that CO2 standards for passenger cars would reach70g of CO2/km in 2030.[125]This is only 26% below the CO2 standard assumed for 2020, 95 gCO2/km. In the meantime, the Commission has considered reductions by 2030 of up to 40% of the 2021 emissions[126], but decided to propose a reduction of only 30%.[127]It must be noted that the limit values refer to a whole fleet of a producer, allowing for high fuel consumption cars which by themselves should be phased out, because they cause unnecessary GHG emissions.

d. More fundamentally the Commission failed to devise a transition from fossil fuel to electricity driven automobiles, including the introduction of production or market access quota for electric vehicles and the provisioning of charging infrastructure.

b) Agriculture

251. GHG emissions from agriculture currently account for 10% of total EU GHG emissions.[128] The main sources are nitrous oxide emissions from application of mineral nitrogen fertilizer and from application and storage of manure, and methane emissions from enteric fermentation from cattle and sheep. Reductions of emissions have occurred from 1990 to 2001 but since then slowed down significantly.[129]

252. The scenarios used by the European Commission during its analysis for the Effort Sharing Regulation impact assessment(2016) assumed little abatement effort in the agricultural sector. As figure 33 in the Impact Assessment for the ESR Regulation shows, the Commission did not expect any reduction of non-CO2 emissions in this sector.[130]

253. Compelling evidence shows that reductions in emissions from agriculture are feasible. The 2016 report of the Joint Research Centre (JRC) considered a reference scenario based on existing policies and 4 scenarios of a 20% reduction in 1990 GHG emissions by 2030.[131] The JRC concludes that a 20% reduction target would be feasible.[132]

254. The report sets out the pathways to emissions reduction considering changes in agricultural technology (such as, for instance, precision farming, genetic improvements and feed additives)

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[125] 2030-Impact-Assessment, at p.45. [**Annex 33,** p.3169].

[126]European Commission (2017) Impact Assessment. Accompanying the document "Proposal for a Regulation [...] setting performance standards for new passenger cars and for new light commercial vehicles [...]SWD (2017) 676 final (part 1/2), pp. 35-36. [**Annex 51 pp. 3989 ff.**/ p. 4023].

[127]European Commission (2017) Proposal for a Regulation of the European Parliament and of the Council setting emission performance standards for new passenger cars and for light commercial vehicles as part of the Union's integrated approach to reduce CO2 emissions [...], COM (2017) 676 final 2, Article 1.**[Annex 52, pp. 4158 ff.]**

[128]JRC Technical Reports (2015) An economic assessment of GHG mitigation policy options for EU agriculture, p.3 **[Annex 53, pp. 4228 ff.]** p. 4231.

[129]JRC Technical Reports (2015), **[Annex 53]**, p. 4231.

[130]European Commission (2016) Impact Assessment, SWD (2016) 247 final, Impact Assessment - Accompanying the document Proposal for a Regulation ... on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 (ESR), p. 131, **[Annex 54, pp. 4350 ff.]** p. 3880.

[131] See JRC Science for Policy Report (2016) An economic assessment of GHG mitigation policy options for EU agriculture, p.3 Table A. **[Annex 53]** p 4232.

[132]JRC Science for Policy Report, p. 4 **[Annex 53,** p 4233].

and reductions in production through decreasing livestock and decreasing the utilisable agricultural area.[133]

255. The potential for emissions reductions is primarily sought in technology improvements. The possibility of reducing livestock and cropland is only taken as an option that must be avoided by all means rather than as a chance towards a more holistic agricultural production, including also a change in consumption patterns.

256. Disregarding the options demonstrated by the JRC, the Commission did not propose a mitigation target of any substantial amount, still less one aiming at 20% or even further reductions.

257. In addition to the lack of a substantial target to *reduce* emissions, the GHG Emissions Acts will in fact allow additional emissions to be produced in the agricultural sector through 'flexibility' mechanisms. These mechanisms authorise Member States to use allowances from the EU ETS sector (up to an EU-wide total of 100 MtCO2 over 2021–2030) and credits from the LULUCF sector (up to 280 million credits over 2021–2030), allowing (indeed encouraging) a lack of ambition in the agricultural sector to be offset with action elsewhere. The practical consequence is that net emissions reductions from those two other sectors that would otherwise have been realised will in fact be consumed by the agricultural sector. There is no reasonable justification for such an approach.

c) Buildings

258. The Commission's 2030-Impact Assessment considered several possible scenarios, and the scenario considered that is closest to the actual 2030 targets adopted ("GHG40/EE") includes in its energy efficiency policies "measures speeding up the building renovation rate which attains on average (2020-2050) 1.69%".[134] This action was said to be based on "enabling conditions", including the "vigorous implementation" of both the Energy Efficiency Directive (EED) and the Energy Performance of the Buildings Directive (EPBD).[135] While the Commission proposed that the currently existing legislation (the EED and EPBD) should be properly enforced, it did not consider whether the objectives of that legislation were sufficient, or whether more ambitious measures for buildings were feasible.

259. The evidence again clearly shows that more ambitious measures were indeed feasible and would realise significant reductions in emissions:

a. The European Parliament has resolved that "energy demand in buildings 'could be reduced by up to three quarters if the renovation of buildings is speeded up', and that deep renovation is particularly important because '75% of the existing European building stock is energy inefficient, and estimates show that 90% of these buildings will still be in use by 2050'".[136]

b. Steps beyond the existing EPBD framework were clearly feasible and would bring a range of environmental, economic and social benefits. The EPBD was adopted in 2010, and in 2016 proposals were made for its revision. The Impact Assessment accompanying the proposal for legislative changes considered three options, among

[133] JRC Science for Policy Report, p.7, Figure B **[Annex 53**, p 4236] .

[134] 2030-Impact Assessment (2014), pp.44-45 **[Annex 33**, pp. 3168 f.].

[135] 2030-Impact Assessment (2014), p.40. **[Annex 33**, p. 3164].

[136] European Parliament Resolution of 13 September 2016 on an EU Strategy on Heating and Cooling (2016/2058(INI)), paragraphs 14, and 50. Annex omitted.

them an "Option III", which proposed enhanced implementation and fundamental legislative revision of the EPBD, with a view to further harmonisation and higher ambition. Ultimately, "Option II" was chosen; it provided for enhanced implementation of the EPBD and targeted legislative changes and discarded Option III on the ground of cost, subsidiarity and proportionality as it would require the mandatory renovation of existing buildings. This is unreasonable on grounds of both climate protection and economic opportunities because according to the Commission's own findings Option III "would lead to two and half times the energy savings of Option II by 2030 (...)", and "would result in more than double the additional construction activity, roughly double the economic growth and jobs created".[137]

d) Non-ETS Industry

260. Industrial production processes are a source of GHG emissions insofar as it consumes fossil energy, such as through production processes. Heavy industry is covered by the ETS, but smaller industry not. It is another lacuna of the ESR Impact Assessment not to have explored the emissions reduction potential of smaller industry such as through energy efficiency, recycling, etc.

e) Products

261. Products that consume electricity produced from fossil fuels are an indirect source of GHG emissions. While the emissions from electricity production are already covered by the ETS the saving of electricity use by products would reduce the quantity of electricity that must be produced. There is a broad scope of other electricity consuming products, such as electronic and electric devices.

262. The contribution of energy saving product design has not been factored into the calculation of the -30% ESR target. The core legal basis would be the Ecodesign Directive, but the 2016 Impact Assessment for the ESR regulation[138] only mentions this directive when putting together the parameters for the reference scenario, i.e. the scenario which describes business as usual.

263. The progress of regulating products on this basis is still very modest.[139] It could be much accelerated. Nothing in this regard has been explored by the ESR Impact Analysis.

3. Land Use, Land Use Change and Forestry (LULUCF)

264. The EU has agreed that the LULUCF sector is included in the 2030 emissions reduction target, and the LULUCF regulation provides rules for how this is to be done. The sector has traditionally provided net removals of GHG. The sink is currently around 300 MtCO2/yr.[140]

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[137] Commission Staff Working Document Impact Assessment, SWD (2016) 414 - Impact Assessment accompanying the document Proposal for a Directive of the European Parliament and of the Council amending Directive 2010/31/EU on the energy performance of buildings, pp. 41-42: section 6.1.3 "Impacts of Option III". **[Annex 55 pp.4506 ff]** p.4546.

[138] See **[Annex 54]**.

[139] Bundgaard, A. M. e.a. (2017) From energy efficiency towards resource efficiency within the Ecodesign Directive", Journal of Cleaner Production 144, p. 358-374 **[Annex 56** pp. 4627ff.].

[140] European Commission (2016) Impact Assessment (LULUCF), SWD (2016) 249 final, p.10, Figure 2. **[Annex 57, pp. 4644 ff.**] p. 4663.

265. By contrast, the core component of the LULUCF Regulation is the 'no debit rule', which means that any emissions from the LULUCF sector must be compensated for by removals (at Member State level).[141]Rather than continuing to require net removals of GHGs in any significant quantities, the LULUCF sector will be expected simply to lead to no net increase in GHGs.

266. The no debit rule manifestly displays an absence of ambition for the LULUCF sector. In no sense does it utilise what is technically and economical feasible. Countries with large sinks will be able to increase harvest rates without the associated emissions being counted towards the 2030 target. There is no incentive for the EU as a whole to increase the size of its sink, and the incentive to reduce deforestation and increase reforestation is weak given that the LULUCF sector is already a net sink for the EU. The evidence clearly indicates that the LULUCF Regulation could have required net removals:

a. The Parliament proposed amendments under which the EU would go beyond the no debit rule and strive for net removals.[142]

b. The objective of the net removals proposal is supported by studies showing that the EU could increase removals of GHGs through a 'land sink': a European Forestry Institute report found that by 2030 climate smart forestry could yield more than an extra 200 MtCO2/year in removals by forests, on top of the existing sink.[143]

c. For its part the Commission has pointed to the possibility of enhancing the removal capacity by afforestation, a decrease of deforestation and increasing carbon storage in harvested wood products which have a lifespan of many years.[144]

267. It is a further material deficiency in the LULUCF Regulation regime that emissions reductions can be transferred between the LULUCF and the ESR sectors, diluting the target for each sector.

a. Given that the target for LULUCF of no net additional emissions is, as set out above, clearly feasible within the sector given that at present the sector actually achieves net removals, there should be no need for any additional emissions allowances to be provided to the LULUCF sector from the ESR sector.

b. Up to 280 million tonnes of reductions achieved in the LULUCF sector may be credited to the ESR sector, which in practice will principally allow continued high emissions from agriculture. On the contrary any net removals that are achieved from the LULUCF sector should be utilised as removals for the benefit of the climate system, rather than used to weaken the target set in the ESR sector.

c. For the sub-sector of forest management, the method of measurement would allow some emissions to go unaccounted for, in the "no debit" analysis. For forest management, emissions and removals are counted not by reference to the actual levels, but rather by

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[141]European Commission (2016) Impact Assessment, (LUUCF) p.8. [**Annex 57,** p. 4661].

[142] European Parliament, Report of 17 July 2010 on the proposal for a regulation of the European Parliament and of the Council on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry into the 2030 climate and energy framework; Amendments 4 (Recital 4) and 6 (Recital 4b), calling for negative levels of emissions and for the LULUCF Regulation to reflect this ambition: http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A8-2017-0262&language=EN. Annex omitted.

[143]G.-J. Nabuurs, et.al. (2015) A new role for forests and the forest sector in the EU post-2020 climate targets, p. 17, **[Annex 58 pp. 4783 ff.]** 4799.

[144]European Commission (2016) Agriculture and LULUCF in the 2030 - Final Report, p. 29,.**[Annex 59 pp. 4815ff.]** p.4848.

reference to a *change* in the level as compared with a particular year, chosen as a reference point. This is described as "net-net" accounting.[145] If a significant volume of emissions actually occurred in, say, 2022, those emissions would not be counted unless (and to the extent that) the volume of emissions increased as compared with the reference year. Indeed, it could be the case that forest management (using the "net-net" system) is counted as making net removals even if, in absolute terms, the sector was actually adding substantial emissions.

e. Feasibility of more ambitious scenarios

268. As set out above, the scope of the Commission's analysis was incorrectly premised on finding the emissions target suited to realizing the Roadmap to the 2050 emissions target.

269. Had the Commission (and the Union)not misdirected itself in this way and incorrectly fettered its discretion, it could have considered a range of different, more ambitious scenarios. A range of compelling evidence provided by scientific and economic studies shows these scenarios to be feasible[146]:

a. Drawing on an analysis of the added benefits of higher ambition, a report from CE Delft finds the 45% of the 2030 Impact Assessment to be the optimal one which if better "balanced" with benefits and enabling policies could achieve **49%**.[147]

b. A report from Ecologic seeks to find a target steering to a reduction of 95% over 1990-2050. This leads to a recommendation of a target of at least **-45%** and around **50%** if offsets are included".[148]

c. A report from The Global Climate Forum used, amongst others, the same model used by the European Commission and found benefits of a more ambitious target for economic growth and employment: "The results of the simulations using GEM-E3 show that even with a **50% GHG emission reduction target**, an investment-oriented climate policy can lead to an increase in economic growth and employment."[149]

d. A report from Ecofys shows that if the resolution of the European Parliament – 30% share of renewables in final energy consumption by 2030 and a 40% energy savings target[150]– is implemented, the emissions reductions that will be achieved will reach at least **45%, and up to 54%by 2030**. If the non-energy emissions reduction pathway follows the overall GHG emissions reduction trends, the reduction exceeds 50%.[151]

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[145]Article 8 para 1 with Article 3 para 1 no (7) LULUCF Regulation.

[146] It must be noted that the studies select certain strategic variables and therefore cannot replace the required full exploration of all sectors which allegedly would yield even more ambitious targets.

[147]CE Delft (2014) Review of the Impact Assessment for a 2030 climate and energy policy framework, p. 36 [**Annex 40**, p 3677].

[148]Ecologic (2014) p. 24, [**Annex 60, pp. 4941 ff.**], p 4973.

[149]Global Climate Forum (2015) p. 10,[**Annex 39**, p.3528] .

[150]European Parliament (2014) A 2030 framework for climate and energy policies - European Parliament resolution of 5 February 2014 on a 2030 framework for climate and energy policies (2013/2135(INI)), Target 8, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014IP0094&from=DE.

[151]Ecofys (2014) The EU Parliament's 2030 resolution could achieve emissions reductions of up to 54%, p. 2, Table 1 **[Annex 60, pp. 5046 ff./]** p.5048] .

e. A report from WWF/Ecofys finds that the EU could be using at least 38% less energy and generate more than 40% of its energy from renewable resources, and on that basis finds a 2030 target of **50% reduction** achievable.[152]

f. A report from Öko-Institut examines various realistic initiatives of GHG emission reduction in a range of emissions sectors in terms of achievable emission reduction.[153] The study concludes that the EU can reach, by 2030, **a reduction of over 60%**of the level of 1990.[154] The inclusion of the sink initiatives of LULUCF would add even more to this.

g. A report from by NewClimate Institute concludes that the EU has the potential to reach -55% to -62% below 1990 by 2030, if best practice policies implemented in some Member States, notably in the key sectors power generation, transport, building and industry, are spread among all EU Member States.[155]

J5. Conclusion

270. The fundamental error in the Commission's analysis, on which the GHG emission Acts are based, is that the range of targets for reducing GHGs was based on an incorrect appreciation of the overall objective and of the law, which led to more appropriate and effective options being excluded:

a. The explicit premise for the Commission's analysis was to find a target that was the most cost-effective pathway to the long-term emissions target for 2050 (of an 80-95% reduction) set in the Roadmap policy.

b. That policy does not take account of the Union's international, human rights, and treaty legal obligations, or the long term temperature goal set by the Paris Agreement and the emissions budget implied from it. It did not consider or weigh consequences of climate change at all. The emissions target set in the Roadmap is in reality incompatible with these obligations and the budget.

c. The Commission's analysis was focused on finding cost-effective means of delivering a 40% reduction, without giving any or adequate consideration to the practicability of using additional means to make the deeper cuts in emissions that are required by those obligations and the budget.

d. Had the Commission and the Union made the inquiries actually required of it when determining an allocation of GHG emissions until 2030, a range of compelling evidence – from scientific studies and from the Union's own expert analysis – shows that materially deeper reductions in emissions were indeed feasible.

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[152]WWF/Ecofys (2013) Re-energising Europe - Putting the EU on track for 100% renewable energy, p. 11 [**Annex 62, pp. 5049 ff**] p.5059.

[153]J. Graichen, e.a. (2017) International Climate Initiatives - A way forward to close the emissions gap? Initiatives' potential and role under the Paris Agreement. Final Report, Umweltbundesamt, Climate Change 22/2017, p. 37-38, [**Annex 63, pp. 5081 ff.**] p. 5117.

[154]J. Graichen,e.a. (2017), p. 38. [**Annex 63**, p.5118].

[155]NewClimate Institute (2018) The EU can increase its climate targets to be in line with a global 1.5 °C target. The key is to apply proven best practice policies from member states across the EU, p. 4, [**Annex 64**, pp. 5146 ff.] p. 5149] .

271. The Applicants submit that, had the correct legal framework been used and had the relevant evidence been taken into account, a target of a reduction by 2030 of at least 50-60% (and likely deeper reductions) from 1990 levels would have been irresistible.

a. The 'top-down' analysis of budgets set out in section J2 demonstrates the significance of the changes required in emissions to limit the temperature increase to defined levels. Even if temperature increases can be held within the maximum level set by the Paris Agreement, dangerous climate change and significant damage to the applicants will still occur, as explained in Section D above.

b. This is the context against which assessments of the appropriate level of reductions, and analysis of feasibility, must be made.

c. It is not necessary for the applicants to place a precise number on the level of reductions that would be required. The applicants and their advisers have done their best to identify key areas overlooked by the Union; it is the responsibility of the Defendants to undertake a comprehensive assessment. Even the (necessarily constrained) analysis summarised above, however, shows that any rational assessment would find a range of feasible options for deeper reductions. Many of these are difficult for the applicants to quantify, but the following key examples are noted:

(a) The adoption of a renewables target of 35% would itself allow total emissions to be reduced by 47.5% rather than 40% (see J4(c)(1)(b) above);

(b) Cancelling the 'free' allowances provided in the earlier ETS periods would reduce the quantity of allowances in circulation by up to 400 million tonnes per year – more than 10% of the EU's projected emissions in 2021;

(c) Steps to reduce coal combustion (or even to reduce the cross-subsidy given to coal) offer the possibility of eliminating up to 18% of the EU's emissions (as at 2015);

(d) Agricultural emission, which are between 400 and 500 million tonnes of GHG emissions annually, could be reduced by 20% through technological measures alone, which would alone constitute a reduction in the order of 2.5% of the emissions projected for 2021;

(e) Net reductions that may be achieved in the LULUCF sector should be counted as contribution to climate protection rather than permitting transfers of up to 280 million tonnes/year to allow higher emissions in the ESR sector. This figure represents more than 8% of the emissions that are projected for 2021.

272. The applicants therefore submit that the Union's binding legal obligations require a reduction of **at least** 50%-60% from 1990 levels.

273. In any event, the target actually set by the three GHG Emissions Acts, of a 40% reduction, is grossly inadequate and based on a fundamentally flawed analysis and so should be declared void, with revision required.

K. THE UNION'S NON-CONTRACTUAL LIABILITY

274. Further to the Applicants' case that the targets in the GHG Emissions Acts are incompatible with the Union's legal obligations and must therefore be annulled, the Applicants also contend that the non-contractual liability of the Union is established, entitling them to seek relief under Article 340 TFEU.

275. In overview, the Applicants' case is as follows:

a. First, the EU has failed to take sufficient steps required by law to reduce emissions from within the Union. It has been in breach of its obligations to take these steps since 1992 (when the UNFCCC was adopted), alternatively since 2009. It continues to be in breach of this obligation today.

b. Second, these failures have made and are continuing to make a material contribution to dangerous climate change that has already occurred, is occurring, and will occur, and for which the EU therefore bears a significant degree of responsibility.

c. Third, this dangerous climate change has caused, is causing, or will cause the Applicants material loss.

276. It follows that the Applicants seek injunctive relief from this Court requiring the Union swiftly to adopt measures to bring its wrongful and damaging conduct into compliance with the law. Such relief may be granted in response to a claim for non-contractual liability; the Applicants do not seek pecuniary compensation for their individual losses. Rather, they seek to reduce and to the extent possible prevent the further damage that may occur.

277. The specific elements of this claim – unlawful act, entailing a sufficiently serious breach of rights conferred on individuals, causing damage – are addressed below.

K1. Unlawful act

278. As set out above, higher rank law establishes obligations on the Union to avoid inflicting harm (under international law), to prevent damage (Article 191, TFEU) and to avoid or prevent infringements of fundamental human rights (under the ChfR). The first source of these obligations has been binding on the EU at all material times; the latter two sources have progressively come into force, in December 2009 (the Lisbon Treaty) and in 2000 (under the ChfR).

279. The Applicants submit that the Union has been in breach of such of these duties as have been in effect, since 1992, and continues to be in breach, as follows.

280. Since 1992 at the latest it had become general knowledge that serious action had to be undertaken in order to prevent damage from climate change. In 1990 the IPCC issued its first assessment report which already included, *inter alia*, statements calling for immediate drastic reduction of CO2 and methane emissions. Importantly, in 1992 the EU Member States and the EU became parties to the UNFCCC which accepts the essential mechanism between GHG emissions and dangerous climate change, as well as the collective responsibility of the parties to pursue the objective of preventing dangerous climate change (Art.2).

281. The Union's breach of the law was compounded from 2009 onwards. At that point, the obligations binding on the EU became more extensive, and the EU's responsibility for emissions became clearer still:

a. the Charter and Article 191 TFEU were in force as primary rank law;

b. the ETS entered the post-experimental phase through the adoption of the minus 20 % target and the amendment of Directive 2003/87 (by 2009/29);

c. the effort sharing mechanism was made binding through EP/Council Decision 406/2009; and

d. the language of the pertinent legislation accepted that emissions were *allocated*, thus confirming the Union's legal responsibility for such emissions as emanated from its territory.

282. Despite the requirements of these legal obligations, EU institutions throughout this period continued to authorize the emission of GHGs and to allocate rights to do so, despite the scientifically established link between the emission of GHGs and dangerous climate change; a link which the EU had accepted through participation in the UNFCCC.

283. The EU's conduct in this regard was not justified. The EU has not and cannot credibly suggest that the steps it took in that period represented the extent of its technical and economic capacity, such that the continued emission of GHGs leading to climate change could be justified.

284. This unlawful conduct continues today and its gravity is compounded by the ever-strengthening legal obligations, the immense scientific literature on the subject, and the emerging factual evidence of climate change, already occurring. As set out in detail in Sections H, I and J above, the EU is compelled by higher rank law to adopt measures to reduce GHG emissions and thus abate climate change to the extent of its technical and economic capability. The measures that the EU has to date put forward (as embodied in the GHG Emissions Acts) are inadequate to discharge this obligation. It follows that the EU is in continuing breach of its obligations.

K2. Sufficiently serious breach of a rule conferring rights on individuals

285. It is settled case law that the requirement for a 'sufficiently serious breach' is satisfied where the institution has manifestly and gravely disregarded the limits of its discretion.[156] If the institution in question has considerably reduced discretion, or no discretion, the mere infringement of law may be sufficient to establish a sufficiently serious breach.[157]

286. In this case, the obligations of higher rank law leave the Union with limited or no discretion as to the minimum reductions in emissions that must be made.

a. The Union may have discretion as to the manner in which those reductions are achieved and the economic burden distributed. As to the depth of the reductions, however, the institutions do not enjoy a discretion. It is obliged to identify emissions reductions to the extent of its technical and economic capability.

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[156] ECJ decision of 4 July 2000, Case C-352/98 P (Bergaderm and Goupil), ECLI:EU:C:2000:361, para. 43.

[157] ECJ decision of 4 July 2000, Case C-352/98 P (Bergaderm and Goupil), ECLI:EU:C:2000:361, para. 44.

b. The defendant institutions, moreover, have no discretion to refuse to give due consideration to plainly relevant means for achieving reductions in GHG emissions, as set out in Section J. above.

287. The Union has exceeded its discretion in these respects, as set out in full above in Section J. Its failure to consider and adopt the range of feasible means for making deeper reductions stemmed from its fundamental error as to the applicable legal framework; in particular its adherence to a long term emissions reduction target for 2050 set in the Roadmap, which is incompatible both with its higher rank legal obligations and with the implied budget in the Paris Agreement. The Union had no discretion to determine the appropriate depth of emissions cuts in this way.

288. The legal rules invoked by the applicants, moreover, are intended to confer rights on individuals in the sense required by the case law.

a. The express purpose of human rights norms is to confer rights protection on individuals; these self-evidently meet the test.

b. Moreover, it is established that even where legal rules in the main concern interests of a general nature, those rules will meet the required standard if they also protect the individual interests of the person concerned.[158] The rationale of the broader international law rules on which the applicants rely is to prevent and/or provide redress for harm caused by a State, whether to individuals, firms, or other States.

K3. Causation of harm

289. In general, non-contractual liability requires proof of damage to be actual and certain.[159] This condition must be applied, however, in light of the principle by which an applicant may seek relief in respect of future losses, provided that these can be shown with sufficient certainty in the circumstances.[160]

290. An applicant must also establish that the damage complained of is a sufficiently direct consequence of the breach of duty.[161]

291. The Applicants submit that these conditions as to causations are satisfied; their case is in two parts.

292. **First,** the Union accepts and the scientific and legal consensus holds that a failure to adopt measures to reduce GHG emissions – in breach of fundamental human rights and other higher-ranking norms – will cause a variety of material damage to many people, including persons such as the applicants.

293. It is accepted that the emission of greenhouse gases causes climate change and that the purpose of adopting measures to reduce GHG emissions is to prevent dangerous anthropogenic interference with the climate system. See eg, Directive 2003/87/EC recital 3, and UNFCCC, Article 2.

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[158] ECJ decision of 14July 1967, Cases 5/66, 7/66, 13/66 and 24/66 (Kampffmeyer v Commission) [1967] ECR 245, at 263; GC decision of 23 November 2011, Case T-341/07 (Sison v Council) ECLI:EU:T:2011:687, para 47.

[159] ECJ decision of 9 November 2006,Case C-243/05 P (Agrazand Others), ECLI:EU:C:2006:708, para 27; ;GC order of 4 Mai 2018, Case T-197/17 (Mar Abel v Commission), ECLI:EU:T:2018:258, paras. 26 and 31.

[160] ECJ decision of 2 June 1976, Joined Cases 56-60/74 (Kampffmeyer), ECLI:EU:C:1976:78, paras 6-8.

[161] See ECJ order of 31 March 2011, Case C-433/10 P (Mauerhofer), ECLI:EU:C:2011:204, para 127.

294. The EU and non-EU States then also recognise that they have the capacity, and bear the responsibility, to reduce greenhouse gas emissions. States party to the UNFCCC have assumed multilateral obligations to reduce emissions,

295. Further, it is recognised that the efforts of various States should be coordinated. States have plainly recognised that uncoordinated action, or isolated action, will be ineffective, whereas more ambitious action led by large developed economies such as the EU will encourage, and be indispensable to, emissions reductions by other States. See for example:

a. The UNFCC, 6th recital, 'Acknowledging the global nature of climate change', and calling 'for the widest possible cooperation by ball countries... in accordance with their common but differentiated responsibilities...'

b. The link between actions taken internationally on actions within the EU are acknowledged in EU legislation: see Directive 2003/87/EC, article 30(2).

c. A key mechanism in the Paris Agreement is the 'global stocktake', as provided for under Article 14.

296. The intrinsic logic of these legal instruments – and the basis for the Union adopting measures to reduce GHG emissions – is that reductions in emissions by the EU is essential to reduce harmful anthropogenic climate change. It must therefore follow that the *absence* of sufficient emissions reductions by the EU will *worsen* climate change and its effects.

297. **Second**, the scientific consensus has established that climate change will very likely result in a range of harmful consequences as set out in Section C. By way of particular example:[162]

a. The IPCC projects that higher temperatures will occur throughout Europe, and elsewhere (including East Africa).

b. It also forecasts decreased precipitation in Southern Europe and an increase in drought conditions there and in other regions, such as East Africa.

c. Crop yields in southern Europe are also forecast to decline.

d. The IPCC also anticipates that a rise in sea levels will lead to an increase in coastal and river flooding risks.

298. Taken together, these elements of the evidence indicate that a failure by the EU to adopt sufficient reductions in GHG emissions will both worsen the effects of climate change overall; it must necessarily follow that the negative consequences of climate change for the applicants would also be materially worsened.

299. As set out in detail in Section D. above, these general indications of harmful effects on a regional or sub-regional basis are confirmed by and support the individual Applicants' appreciation of individual harm. Reference is made to that section and to the Annexes **[15-24]**. The following is a summary of the damage complained of.

a. Many of the Applicants have already incurred direct, quantifiable harm:

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[162] See IPCC (2014) 5thAssessment, WG II, Chapter 23, p.1270, 1271 **[Annex 3]**, p. 234.

(a) The Carvalho family in Portugal experienced a devastating fire, of an intensity attributable to the high temperatures and low rainfall causally linked by the scientific analysis to climate change.

(b) The Conceicao family (also in Portugal) have experienced a significant reductions in the yields of their beehives, attributable to higher temperatures, more extreme heat events, and lower precipitation.

(c) The Sendim and Caixeiro families (again in Portugal) have a significant loss of agricultural and horticultural yields from their collective farm, and have had to invest in irrigation systems due to the same phenomena.

(d) The Feschet family in France have experienced a significant decline in the productivity and yields of their lavender farm in France, arising from the higher average temperatures and declining rainfall, as well as extreme weather events (flooding). These are, the scientific studies show, the result of climate change.

(e) The Guyo family in Kenya have found their agricultural and animal herding activities to be affected by higher temperatures and lower rainfall. Their children are also exposed to dangerously hot conditions, leading to health problems. These climactic conditions are as predicted by the scientific literature on climate change.

(f) The Vlad family in Romania's Carpathian mountains have had a decline in agricultural production caused by increases in temperature (affecting dairy production), and as well by more extreme temperature variations in late winter and early spring leading to loss of crops. Higher temperatures and lower precipitation have led to a need for importing animal feed, and to the loss of productive orchards.

(g) The Elter family in Italy have experienced a decline in the yields of their fields due to higher temperatures occurring earlier in the year. The Italian authorities attribute the change in temperature conditions to climate change.

(h) The Qaloibau family in Fiji have already lost their fishing boat and shed in a cyclone, and incurred loss of income from tourism due to coral bleaching. More intense cyclones, and higher water temperatures leading to coral bleaching, as well as possibly the relocation of the entire village are the consequence of climate change.

(i) Members of the Sáminourra have already found that the viability of reindeer husbandry has become risky due to higher winter temperatures affecting the ability of reindeer to feed. Many families have incurred increased costs for winter fodder.

b. Damage of this sort will continue to occur and will worsen in consequence of climate change.

c. Still further damage will occur as time goes on as a consequence of climate change:

(a) The Carvalho family would face physical danger from further uncontrollable forest fires in the future.

(b) The Elter family's Bed and Breakfast and tourism business will be directly adversely affected by higher temperatures leading to a decline in ice climbing and other winter sports in the [redacted] national park.

(c) The Recktenwald family face the loss of their home and business, and direct threats to their physical well-being, as a result of sea level rises and storm surges inundating the island of [redacted].

(d) The Qaloibau family similarly face sea level rises and storms that would inundate their home in [redacted], destroying their property and exposing them to physical danger.

(e) Reindeer husbandry in Sweden might become wholly untenable.

300. This is confirmed by the simple logic of increased adverse effects on the climate driven by higher temperatures, as set out in Section C. The analysis of the IPCC there set out illustrates the substantially more severe adverse effect on ecology and economic activities that result from incremental increases in temperature.

301. The incontrovertible basis for the Union's participation in the UNFCCC, and for the adoption of GHG emissions reductions of any degree, is that anthropogenic climate change will lead to serious material harm and that reducing emissions is the indispensable means for reducing or minimising that harm. The Union's climate change policy itself, read with the world-standard analysis provided by the IPCC, clearly establishes a direct causal link between a failure by the Union to act adequately, and harm.

K4. Relief claimed

302. The applicants in this case do not seek damages, but rather an injunction to compel the EU to do or not to do something. The basis for such an injunction is well-established in the legal systems of Member States, as recognized in the case law of the General Court.[163] In *Galileo* the court noted:[164]

> "In that regard, it must be noted that, under the second paragraph of Article 288 EC, '[i]n the case of non-contractual liability, the Community shall, in accordance with the general principles common to the laws of the Member States, make good any damage caused by its institutions or by its servants in the performance of their duties'. That provision covers the conditions of non-contractual liability as well as the detailed rules and scope of the right to compensation. Furthermore, Article 235 EC gives the Court of Justice 'jurisdiction in disputes relating to compensation for damage provided for in the second paragraph of Article 288'.
>
> "It follows from those two provisions that the Community Courts have the power to impose on the Community any form of reparation that accords with the general principles of non-contractual liability common to the laws of the Member States, including, if it accords with those principles, compensation in kind, if necessary in the form of an injunction to do or not to do something."

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[163]See CFI decision of 10 May 2006, Case T-279/03 (Galileo International Technology and Others), ECLI:EU:T:2006:121, paras 62-63, 71-73; GC decision of 8 November 2011, Case T-88/09 (Idromacchine and Others), ECLI:EU:T:2011:641, paras 81-83.

[164]CFI decision of 10 May 2006, Case T-279/03 (Galileo International Technology and Others), ECLI:EU:T:2006:121, paras 62-63.

303. The present case is particularly appropriate for the grant of an injunction, given the very serious and irreversible harm that would arise from unchecked climate change, which an award of damages would be unlikely to remedy, and which it would be difficult fully to quantify. As many domestic legal systems recognize, the grant of an injunction is particularly appropriate where it is apparent that pecuniary compensation may not be adequate or could not be fully assessed; so it is here.

304. The relief sought is an order requiring the EU to adopt emissions reduction targets through the existing framework of the ETS, ESR and LULUCF regimes that are sufficient to bring the EU into compliance with its legal obligations. Based on the analysis of the emissions budget and of feasibility set out in Section K above, the Court can be confident that the minimum that the EU is obliged to is to adopt targets to the full extent of its capability.

305. The Applicants submit that this requires emissions reductions of at least 50%-60% by 2030, or such other level as the Court finds appropriate.

L. OVERALL CONCLUSION

306. The emissions quantities allocated by the three GHG Emissions Acts – decreasing from 2021 to 60% of the 1990 emissions by 2030 – exceed the emissions allowed by higher rank law. This breach of higher rank law causes and will continue to cause damage to the applicants.

307. Higher rank law demands that the emissions are reduced by at least 50% to 60% below the level of 1990 emissions, by 2030.

308. The three GHG Emissions Acts must therefore be declared void insofar as they allow the Commission to allocate emission allowances to Member States at quantities that exceed this demand.

309. The declaration of nullity if made relatively soon (such as even in 2019) would allow time for the EU institutions to adapt the relevant provisions to the higher rank requirements before the fourth allocation period starts in 2021.

310. Should the decision of this Court take additional time, the consequence of the declaration of nullity would be subject to the interpretation of the remaining provisions of the three GHG emissions acts. The consequence could either be that from the date of the abrogation no emission allowances could be allocated, or that no restriction to emissions applies. In that case the Court is asked to introduce some intermediate solution based on Article 264 sec. 2 TFEU.[165] In any event, the applicants would seek an injunction pursuant to Art.340 TFEU requiring the adoption of emissions reduction targets of at least 50%-60% from 1990 levels.

311. The applicants request that this Honourable Court:

a. Declare the GHG Emissions Acts unlawful insofar as they allow the emission between 2021 and 2030 of a quantity of greenhouse gases corresponding to 80% of the 1990 emissions in 2021 and decreasing to 60% of the 1990 emissions in 2030.

[165] For an example of an application for intermediary measures see AG Reischl in ECJ opinion of 29 October 1980, Case 138/79 (Roquette Frères), ECLI:EU:C:1980:213 (p. 3391). The case concerned the allocation of production quota for isoglucose. The plaintiff had argued that it had received smaller quota than claimed. The declaration of nullity would have resulted in no allocation at all.

b. Annul the GHG Emissions Acts insofar as they set targets to reduce GHG emissions by 2030 by 40% of 1990 levels, and in particular: Art.9 para 2 ETS Directive; Art.4 para 2, and Annex I, ESR; and Art.4 LULUCF Regulation.

c. Order the Defendants to adopt measures under the GHG Emissions Acts requiring a reduction in greenhouse gas emissions by 2030 by at least 50%-60% of 1990 levels, or such higher level of reduction as the Court thinks fit.

d. In the alternative, if the Court is not minded to grant an injunction and its decision to annul the reduction targets comes too late to allow for a modification of the relevant provisions before 2021, the applicants claim that the Court should order that the contested provisions of the GHG Emissions Acts shall remain in force until a defined date, by when they must be modified in accordance with the higher rank legal requirements.

e. Order the Defendants to bear the costs of the proceedings.

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[2nd JULY 2018]