COMMUNICATION TO THE COMMITTEE ON THE RIGHTS OF THE CHILD

In the case of

CHIARA SACCHI (Argentina); CATARINA LORENZO (Brazil); IRIS DUQUESNE (France); RAINA IVANOVA (Germany); RIDHIMA PANDEY (India); DAVID ACKLEY, III, RANTON ANJAIN, AND LITOKNE KABUA (Marshall Islands); DEBORAH ADEGBILE (Nigeria); CARLOS MANUEL (Palau); AYAKHA MELITHAFA (South Africa); GRETA THUNBERG (Sweden); RASLEN JBEILI (Tunisia); & CARL SMITH AND ALEXANDRIA VILLASEÑOR (USA);

Petitioners,

V.

ARGENTINA, BRAZIL, FRANCE, GERMANY & TURKEY,

Respondents.

Submitted under Article 5 of the Third Optional Protocol to the United Nations Convention on the Rights of the Child

23 September 2019

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^{*}The public version of the Communication excludes some identifying information for privacy reasons. The full Communication has been filed with the Committee on the Rights of the Child.

I. Introduction

"There may be no greater, growing threat facing the world's children— and their children— than climate change."—UNICEF¹

- 1. The science is incontrovertible: global warming is caused by human activities that emit carbon dioxide ("CO₂") and other greenhouse gases ("GHG")² into the atmosphere of the planet.³ Each day, the burning of fossil fuels, deforestation, industrial processes, and agriculture add hundreds of millions of tons of CO₂ to the atmosphere, where it will remain for centuries. There is now more CO₂ in the atmosphere than at any time in the past 800,000 years.
- 2. The Earth is 1.1°C hotter than before the industrial revolution, and it is approaching a tipping point of foreseeable and irreversible catastrophic effects. If the Earth reaches 2°C of heating, the exacerbated air pollution alone is forecast to cause 150 million deaths. If the Earth reaches 3-4°C of heating by 2100—which is the current trajectory if states do not make drastic emissions reductions—the impacts of climate change will threaten the lives and welfare of over 2 billion children.
- 3. The climate crisis is not an abstract future threat. The 1.1°C rise in global average temperature is presently causing devastating heat waves, forest fires, extreme weather patterns, floods, and sea level rise, infringing on the human rights of millions of people globally. Because children are among the most vulnerable to these life-threatening impacts, physiologically and mentally, they will bear the burden of these harms far more and far longer than adults.
- 4. Petitioners, children from around the world, already carry that burden. Climate change is exposing them to life-threatening dangers and harming their health and development. For the indigenous petitioners, their thousand-years-old cultures are threatened by climate change.

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¹ Unless we act now: The impact of climate change on children, UNICEF (Nov. 2015).

² Throughout this Communication, the petitioners refer to these emissions as "carbon emissions" or simply "carbon pollution."

³ IPCC (2013) Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA) p. 1535 (hereinafter "IPCC 2013: Physical Science"). The main GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂₀), ozone (O₃), and fluorinated gases. U.S. Environmental Protection Agency, https://www.epa.gov/ghgemissions/overview-greenhouse-gases.

- 5. Hotter temperatures foster the spread of infectious diseases and exacerbate health hazards. In Lagos, Nigeria, Petitioner Debby Adegbile has been repeatedly hospitalized for asthma as hotter temperatures worsen the air quality. Mosquito-borne diseases have spread to new regions. In the Marshall Islands Petitioner Ranton Anjain contracted dengue fever in 2019, now prevalent in the islands, and Petitioner David Ackley III contracted chikungunya, a new disease there.
- 6. Wildfires are growing more frequent and intense because of hotter and drier conditions. In Tabarka, Tunisia, Petitioner Raslen Jbeili heard screams one night and saw a wildfire approaching his home: he was spared, his neighbors were not. In California, Petitioner Alexandria Villaseñor suffered smoke inhalation from the Paradise wildfire and was bedridden for three weeks.
- 7. Heat waves and drought are threatening children's lives and creating water scarcity. In Cape Town, South Africa, drought has made Petitioner Ayakha Melithafa's family and 3.7 million other residents prepare for the day municipal water supplies run dry. In Bordeaux, France, the first summer of Petitioner Iris Duquesne's life was Europe's hottest summer since 1540: tens of thousands died in the heat wave of 2003. Unfortunately, heat waves have become a regular part of her life.
- 8. Extreme storms that were once rare are now regular events. On Ebeye in the Marshall Islands, a violent storm forced Petitioner Litokne Kabua and his family to evacuate to a U.S. army base. In Haedo, Argentina, an unprecedented windstorm devastated Petitioner Chiara Sacchi's neighborhood. In Hamburg, Germany, Petitioner Raina Ivanova waded through knee-deep water on her school's grounds during the "Hervert" storm of 2017. South Atlantic storms come more often in Bahia, Brazil; one damaged the home of Petitioner Catarina Lorenzo.
- 9. Floods and rising sea levels are transforming children's relationships with the land. The Marshall Islands could become uninhabitable within decades. In Palau, Petitioner Carlos Manuel sees waves increasingly breach the sea walls and crash into homes as the Pacific sea level rises. In Haridwar, India, Petitioner Ridhima Pandey has seen downpours flood infrastructure and cause sewage to overflow into the sacred Ganges river, increasing the risk of infectious diseases.
- 10. The subsistence way of life of many indigenous communities is at stake. In northern Sweden, children learn the reindeer herding traditions of the Sami people, passed down from millennia, but climate change is destroying the reindeers' food sources. In Akiak, Alaska, Petitioner Carl Smith learned to hunt and fish from the elders of the Yupiaq tribe, but the salmon population on which

- they rely has been dying from heat stress in record numbers, and the warming temperatures have prevented his tribe from accessing traditional hunting grounds.
- 11. Climate change has affected children's mental health around the world. As the American Psychological Association observed, psychologists now grapple with new, 21st Century disorders, including climate anxiety and *solastalgia*—mourning the destruction of a cherished place. In Sweden, Greta Thunberg states she was so disturbed by the climate crisis that she fell into depression and stopped eating.
- 12. These harmful impacts are the result of just 1°C of global warming. As heating accelerates, unabated climate change will expose the petitioners to further deadly and foreseeable consequences for the rest of their lives. The extent of the harm depends on the extent of the warming. Every day of delay depletes the remaining "carbon budget"—the amount of carbon that can still be emitted before the climate reaches unstoppable and irreversible ecological and human health tipping points. The respondents are creating an imminent risk; it will be impossible to "make up" for lost mitigation opportunities and impossible to ensure the sustainable and safe livelihood of future generations.
- 13. The climate crisis is a children's rights crisis. Children have an inalienable right to life under the Convention on the Rights of the Child (the "Convention"). The Convention—the most widely ratified human rights instrument in the world—obligates nations to respect, protect, and fulfill children's inalienable right to life, from which all other rights flow. Mitigating climate change is a human-rights imperative.
- 14. In the context of the climate crisis, obligations under international human rights law are informed by the rules and principles of international environmental law. The CRC must be interpreted taking into account the respondents' obligations under international environmental law. Each respondent has failed to uphold its obligations under the Convention to (i) prevent foreseeable domestic and extraterritorial human rights violations resulting from climate change; (ii) cooperate internationally in the face of the global climate emergency; (iii) apply the precautionary principle to protect life in the face of uncertainty, and (iv) ensure intergenerational justice for children and posterity.

⁴ Petitioners respectfully note that children and adults generally share the same human rights; however, children's rights focus on the special needs specific to children and young people. *See Child rights and why they matter*, UNICEF, https://www.unicef.org/child-rights-convention/child-rights-why-they-matter.

Each respondent has knowingly caused and perpetuated the climate crisis

- 15. Each respondent—Argentina, Brazil, France, Germany, and Turkey—has known about the harmful effects of its internal and cross-border contributions to climate change for decades. In 1992, each signed the United Nations Framework Convention on Climate Change ("Climate Change Convention") and undertook to protect children from the foreseeable threats of climate change. It was clear then that every metric ton of CO₂ that they emitted or permitted was adding to a crisis that transcends all national boundaries and threatens the rights of all children everywhere. It was even clearer that their emissions were endangering children's lives in 2016, when each signed the Paris Agreement. In Paris, each pledged to make efforts to limit global warming to 1.5°C above pre-industrial levels. None of the respondents has kept nor met that pledge, which in itself is inadequate to prevent human rights violations on a massive scale.
- 16. The Climate Change Convention, 1997 Kyoto Protocol, and 2016 Paris Agreement were important steps in securing recognition from all states that the climate crisis is a "common concern of humankind." But none of these efforts have reduced carbon emissions enough to avert further disaster and widespread human rights violations. In the twenty years after the Kyoto Protocol was signed, the world produced more emissions than in the twenty years before.
- 17. Every nation has contributed to climate change. For decades, the excuse that no harm can be traced to any particular emission or country, and thus that no state bears responsibility, has led to inaction. But under human rights law, states are individually responsible for, and should be held accountable for, their sovereign actions and inactions that cause and contribute to climate change, and thereby breach their fundamental human rights obligations.
- 18. As major historical emitters and influential members of the Group of Twenty ("G20"), a forum of the world's 20 leading economies, the respondents must lead by example, reducing emissions at the greatest possible rate and consistent with a scale that is scientifically established to protect life. Moreover, emissions from other G20 members and in particular the "major emitters"—China, the United States ("U.S."), the European Union ("E.U."), and India—must also be curbed to ensure children's rights. Therefore, the respondents must also use all available legal, diplomatic, and economic tools to ensure that the major emitters are also decarbonizing at a rate and scale necessary to achieve the collective goals.
- 19. To date, however, each respondent is failing on both of these fronts.

- 20. *First*, each respondent has failed to prevent foreseeable human rights harms caused by climate change by reducing its emissions at the "highest possible ambition." Each respondent is delaying the steep cuts in carbon emissions needed to protect the lives and welfare of children at home and abroad.
- 21. Not one of the respondents is on an emissions pathway that is consistent with keeping heating under 3.0°C much less under 1.5°C. Each respondent has set inadequate emission reduction targets in its Paris Agreement pledges—and then failed to even meet these inadequate goals. For example, if all the world's governments implemented comparable reductions to Argentina's Paris commitments, it would lead to 3-4°C of global warming by 2100. Comparable reductions to Brazil's emissions would lead to 2-3°C, *before* President Bolsonaro's rollback of environmental protections that will likely make Brazil's contribution even greater. Comparable emissions to France and Germany—in many ways leaders on international climate action—would lead to 3-4°C. Meanwhile, comparable emissions to Turkey's rate of emissions would lead to more than 4°C of warming, as it continues to invest in new coal-fired power plants.
- 22. Second, as members of the G20, which makes up 84% of all global emissions, each respondent has failed to use all available legal, diplomatic, and economic means to protect children from the life-threatening carbon pollution of the major emitters (China, the U.S., the E.U., and India) and other G20 members. As G20 members, the respondents have diplomatic, legal, and economic tools at their disposal. Yet, none of the respondents have used, much less exhausted, all reasonable measures to protect children's rights from the major emitters.

Each respondent's actions that caused and are perpetuating the climate crisis are violating the petitioners' human rights.

- 23. The Convention enshrines children's rights as universal. All governments have a responsibility to take all available measures to ensure these rights are respected, protected, and fulfilled.
- 24. By recklessly causing and perpetuating life-threatening climate change, the respondents have failed to take necessary preventive and precautionary measures to respect, protect, and fulfill the petitioners' rights to life (Article 6), health (Article 24), and culture (Article 30) and are thus violating the Convention. Under the Convention, states must "limit ongoing and future damage" to these rights, including those caused by environmental threats.
- 25. *Right to life*. The respondents' acts and omissions perpetuating the climate crisis have already exposed the petitioners throughout their childhood to the foreseeable, life-threatening risks of human-caused climate change, be it heat,

floods, storms, droughts, disease, or polluted air. A scientific consensus shows that the life-threatening risks confronting the petitioners will increase throughout their lives as the world heats up to 1.5°C and beyond. If the respondents continue their current emissions pathways, the world would warm enough to threaten the lives of billions of children worldwide. The respondents have thus violated the petitioners' right to life under Article 6(1).

- 26. Right to health. The respondent's acts and omissions perpetuating the climate crisis have already caused injuries to the petitioners' mental and physical health—from asthma to emotional trauma. These injuries violate the petitioners' right to health under Article 24. And the injuries will worsen as the world continues to warm.
- 27. Right to Culture. The respondents' contributions to the climate crisis have already jeopardized millennia-old subsistence practices of the indigenous Petitioners from Alaska the Marshall Islands, and the Sapmi (the cultural region inhabited by the Sami people in the Arctic region of Europe), which are not just the main source of their livelihoods, but directly relate to a specific way of being, seeing, and acting in the world, that are essential to their cultural identity. If rising sea levels force the Marshallese to relocate to other nations, they would lose thousand years old cultural practices tied to their islands. If the respondents continue their current emissions pathways, the world would warm enough to decimate indigenous cultures, including those of the indigenous petitioners here. The respondents are thus violating Article 30 of the Convention.
- 28. Best interests of the child. By supporting climate policies that delay decarbonization, the respondents are shifting the enormous burden and costs of climate change onto children and future generations. In doing so, they have breached their duty to ensure the enjoyment of children's rights for posterity, and failed to act in accordance with the principle of intergenerational equity. No state acting rationally in the best interests of the child would ever choose to delay and impose this burden upon them. As such, the respondents have each violated the petitioners' right under Article 3 to have children's bests interests be made a primary consideration in their climate actions and omissions.
- 29. This petition documents the violation of the petitioners' rights under the Convention, but the scope of the climate crisis should not be reduced to the harms of a small number of children. Ultimately, at stake are the rights of every child, everywhere. If the respondents, acting alone and in concert with other states, do not immediately take available measures to stop the climate crisis, the devastating effects of climate change will nullify the ability of the Convention to protect the rights of any child, anywhere.

- 30. Each of the respondents has contributed to causing the climate crisis through their past emissions. The cumulative sum of the respondents' historical emissions show that they are major emitters, responsible for a significant share of today's concentration of GHG in the atmosphere. Each of the respondents ranks in the top 50 historical emitters since 1850, based on fossil fuel emissions: Germany ranks 5th, France 8th, Brazil 22nd, Argentina 29th, and Turkey 31st. When land-use, such as deforestation, is factored in, Brazil surpasses France in its historical share.
- 31. These emissions continue to grow. The respondents are currently emitting at levels they know with scientific certainty are damaging the climate, harming children's health, and jeopardizing their lives. Yet they continue to delay and undermine the domestic and international actions needed to mitigate climate change.
- 32. In short, each respondent has contributed to the degradation of the climate that is directly harming the petitioners and threatening their lives. Through their acts and omissions, they have caused and are perpetuating climate change, and they have caused and are causing the violations of the petitioners' rights.

Request for Relief

- 33. The petitioners do not seek compensation; no amount of money could compensate for the harm children are and will be suffering from climate change, both now and in the future. Instead, the petitioners respectfully request that the Committee on the Rights of the Child (the "Committee" or "CRC") adopt the following recommendations for precautionary, declaratory, and remedial relief:
 - Finds that climate change is a children's rights crisis.
 - Finds that each respondent, along with other states, has caused and is
 perpetuating the climate crisis by knowingly acting in disregard of the
 available scientific evidence regarding the measures needed to prevent
 and mitigate climate change.
 - Finds that by recklessly perpetuating life-threatening climate change, each respondent is violating the petitioners' rights to life, health, and the prioritization of the child's best interests, as well as the cultural rights of the Petitioners from indigenous communities.
 - Recommends that the respondents review, and where necessary, amend their laws and policies to ensure that mitigation and adaptation efforts are being accelerated to the maximum extent of available resources and on the basis of the best available scientific evidence to (i) protect the petitioners' rights and (ii) make the best interests of the child a primary

- consideration, particularly in allocating the costs and burdens of climate change mitigation and adaption.
- Recommends that each respondent initiate cooperative international action—and increase its efforts with respect to existing cooperative initiatives—to establish binding and enforceable measures to mitigate the climate crisis, prevent further harm to the petitioners and other children, and secure their inalienable rights.
- Recommends that pursuant to Article 12, the respondents shall ensure the child's right to be heard and to express their views freely, in all international, national, and subnational efforts to mitigate or adapt to the climate crisis and in all efforts taken in response to this Communication.⁵

II. The Petitioners

34. **Chiara Sacchi (Argentina).** Chiara is a seventeen-year-old from Haedo, Argentina, which lies along the outskirts of Buenos Aires. She recently took part in a global project called "Terra Madre," which seeks to protect and support small-scale food producers.



35. **Catarina Lorenzo (Brazil).** Catarina is a twelve-year-old from Salvador, Brazil, located in Brazil's northeastern state of Bahia. Catarina is an aspiring professional surfer and spends a lot of time on Brazil's beaches. She is very passionate about protecting Brazil's trees and forests.



36. **Iris Duquesne (France).** Iris is a sixteen-year-old from Bordeaux, France, which lies along France's southeastern coast. Since moving to California earlier this year, Iris has become an avid surfer and is dedicated to raising awareness about climate change.



37. **Raina Ivanova (Germany).** Raina is a fifteen-year-old who lives in Germany's northern city of Hamburg. Raina's favorite subjects in school are geography and philosophy. She participates in



⁵ The Petitioners reserve the right to request interim measures.

"Fridays for the Future," foregoing school on Fridays in an effort to bring awareness and spark action to combat climate change.

38. **Ridhima Pandey (India).** Ridhima is an eleven-year-old from Haridwar, India. Ridhima is passionate about protecting India's forests. In 2017, at just nine-years-old, Ridhima sued the Indian government for failing to take adequate action to tackle climate change.



39. **David Ackley III "David" (Marshall Islands).** David is a sixteen-year-old from Majuro, the capitol of the Marshall Islands. David loves everything to do with basketball and has traveled to Micronesia with his club team. David participated in Heirs to Our Oceans, 6 where he spoke with government officials about passing legislation to protect the environment.



40. **Ranton Anjain (Marshall Islands).** Ranton is a seventeen-year-old from Ebeye Island, Marshall Islands. Ranton now attends high school on Chuuk in the Federated States of Micronesia but used to go fishing on Ebeye every day. Ranton began participating in the Heirs to Our Oceans programs in 2018 and is now an advocate on climate issues with local leaders.



41. **Litokne Kabua (Marshall Islands).** Litokne is a sixteen-year-old from Ebeye Island, Marshall Islands who understands the importance of the ocean to the Marshallese, and has studied coral health on his island as part of a summer camp through Heirs to Our Oceans. When Litokne grows up, he wants to work for his government to encourage the government to become more active in fighting climate change.



⁶ Heirs to our Oceans is a non-profit organization dedicated to providing environmental education, leadership development, and ensuring that all youth, regardless of socio-economic status, race, ethnicity, or religion are empowered to participate in environmental conservation. https://h2oo.org/vision-mission-and-pillars/.

42. **Deborah ("Debby") Morayo Adegbile (Nigeria).** Debby is a twelve-year-old from Lagos, along Nigeria's southwestern coast. Debby wants to be a lawyer when she grows up and has joined Heirs to Our Oceans to learn more about the changing climate and advocate against plastic pollution.



43. **Carlos Manuel (Palau).** Carlos is a seventeen-year-old originally from the Philippines, now living on Koror, Palau. Three years ago, after attending a meeting as a school requirement, Carlos started an Heirs to Our Ocean chapter at his school, educating his peers about ocean health and the impacts of climate change.



44. **Ayakha Melithafa (South Africa).** Ayakha is a seventeen-year-old living in Eerste River on the outskirts of Cape Town in the Western Cape province of South Africa. She is a dedicated climate activist, taking part in Project 90 by 2030 YouLead initiative and acts as a recruitment official for the African Climate Alliance.



45. **Greta Thunberg (Sweden).** Greta is sixteen-year-old climate activist who began the global 'Skolstrejk for Klimatet' (School Strike for Climate) when she began protesting outside of the Swedish Parliament in August 2018. Greta has inspired hundreds of thousands of other children and adults around the world to speak up and urge world leaders to take action to combat the climate crisis.



46. **Raslen Jbeli (Tunisia).** Raslen is a seventeen-year-old from Tabarka, Tunisia, located along Tunisia's northern coast. Raslen loves playing basketball with friends. He participates in the Access Program, a school program that allows him to research climate change and other environmental issues affecting Tabarka.



47. **Alexandria Villaseñor (USA).** Alexandria is a fourteen-year-old climate activist who grew up in Davis, California and moved to New York City in the fall of 2018. Alexandria began school striking for the climate outside the United Nations on December 14, 2018, inspiring thousands of others, and also started and runs her own youth-led nonprofit, Earthuprising.org.



48. **Carl Smith (USA).** Carl is a seventeen-year-old from Akiak, Alaska. As a member of the Indigenous Yupiaq tribe, Carl grew up learning the traditional hunting, fishing, and cultural practices that have shaped his community for thousands of years. Carl is speaking out about climate change because as the temperatures rise Akiak is changing and Carl fears that the Yupiaq way of life will disappear.



- 49. Pursuant to Rule 17(2) of the Rules of procedure under the Optional Protocol to the Convention on the Right of the Child on a communications procedure (the "OPIC"), the petitioners respectfully request that the Committee consider this Communication jointly, since they arise from a common core of facts: the respondents' contributions to the life-threatening impacts of climate change.
- 50. Additional personal information of the petitioners is on file with the petitioners' legal representatives and is available upon request.
- 51. This Communication is submitted by Hausfeld LLP (USA & UK) and Earthjustice (USA), who are retained as *pro bono* legal representatives of the petitioners, through their parents and legal guardians. Letters of Authority are included in a confidential Annex filed simultaneously with this Communication.
- 52. Address for exchange of confidential correspondence:

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⁷ Petitioners also recognize the support of expert consultant Professor John Cerone of The Fletcher School of Law & Diplomacy (Tufts University).

III. The Respondents

- 53. The five respondents have all accepted the jurisdiction of the Committee under the OPIC.
- 54. ARGENTINA—The Argentine Republic ratified the Convention on 4 December 1990. The Convention entered into force for Argentina 30 days later. Argentina ratified the OPIC on 14 April 2015 without reservation or declaration. Argentina ratified the Paris Agreement on 21 September 2016, the Kyoto Protocol on 28 September 2001, and the Climate Change Convention on 11 March 1994 (Non-Annex I Party).
- 55. BRAZIL—The Federative Republic of Brazil (Brazil) ratified the Convention on 24 September 1990. The Convention entered into force for Brazil 30 days later. Brazil ratified the OPIC on 29 September 2017 without reservation or declaration. Brazil ratified the Paris Agreement on 21 September 2016, the Kyoto Protocol on 23 August 2002, and the Climate Change Convention on 28 February 1994 (Non-Annex I Party).
- 56. FRANCE—The French Republic (France) ratified the Convention on 7 August 1990. The Convention entered into force for France 30 days later. France ratified the OPIC on 7 January 2016 without reservations or declarations. France ratified the Paris Agreement on 05 October 2016, the Kyoto Protocol on 31 May 2002, and the Climate Change Convention on 25 March 1994 (Annex I Party).
- 57. GERMANY—The Federal Republic of Germany (Germany) ratified the Convention on 6 March 1992. The Convention entered into force for Germany 30 days later. Germany ratified the OPIC on February 28, 2013 without reservation. Germany also entered a declaration accepting the competence of the Committee to receive inter-state communications under Article 12 of the OPIC. Germany ratified the Paris Agreement on 05 October 2016, the Kyoto Protocol on 31 May 2002, and the Climate Change Convention on 9 December 1993 (Annex I Party).
- 58. TURKEY—The Republic of Turkey (Turkey) ratified the Convention on 4 April 1995, reserving the right to interpret and apply Articles 17, 29, and 30 "according to the letter and spirit of the Constitution of the Republic of Turkey and those of the Treaty of Lausanne of 24 July 1923." The Convention entered into force for Turkey 30 days later. Turkey ratified the OPIC on 26 December 2017 with a declaration affirming its reservations to the Convention. Turkey signed the Paris Agreement on 22 April 2016, ratified the Kyoto Protocol on 28 May

2009, and acceded to the Climate Change Convention on 24 February 2004 (Annex I Party).

IV. Competence of the Committee on the Rights of the Child

59. The Committee is competent to receive and act on this Communication in accordance with Articles 1 and 5 of the OPIC. The respondents are parties to the Convention and the OPIC; the Communication concerns multiple violations of the Convention; and the victims of the violations are within the jurisdiction of the respondents, as discussed below in Section VIII.

V. The climate crisis is already here and harming children

A Dangerous Path

We are beyond the safer global temperatures of 1972. Current policies have put us on a catastrophic path of global warming.



A. The climate crisis is approaching a tipping point of irreversible catastrophic effects, threatening the lives and welfare of millions of children.

- 60. Climate change is human made. A scientific consensus holds that global warming is caused by human activities that emit CO₂ and other GHGs⁸ into Earth's atmosphere.⁹ The burning of fossil fuels, industrial manufacturing, and agriculture add tons of CO₂ to the atmosphere each day, to remain there for centuries and cause more dangerous global warming.¹⁰
- 61. Nearly 70% of this CO₂ comes from the burning of fossil fuels. ¹¹ Another driver of global warming is the destruction of natural carbon

⁸ GHG are defined in the Kyoto Protocol to the UN Framework Convention on Climate Change as Carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6).

⁹ See generally IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T.

sinks, such as forests and sea grass meadows, which absorb more carbon than they emit. Human activities like deforestation, agriculture, and urbanization can turn carbon sinks into carbon sources, producing a quarter of all emissions. ¹²

- As a result, the average temperature on Earth is 1.1°C hotter now than at any time before the industrial revolution, and it is approaching a tipping point of foreseeable and irreversible catastrophic effects. ¹³ 2014 to 2018 were each, in succession, the hottest years on record; 20 of the warmest years on record have occurred over the past 22 years. ¹⁴ Some regions like the Arctic and Alaska have experienced two to three times more warming than elsewhere on Earth. ¹⁵ Already, with this amount of warming, the world is seeing widespread harm to the environment and human health and well-being from more frequent and intense storms, droughts, heatwaves, and other climactic events.
- 63. Every fraction of a degree of warming brings greater risks. In 2018, the Intergovernmental Panel on Climate Change ("IPCC")—the world's foremost authority on climate science—reported that at the current rate of emissions, the global average temperature will likely reach 1.5°C between 2030 and 2050, with much higher averages in various regions,

Waterfield (eds.)] (hereinafter "IPCC 1.5 SPM 2018 Report"); Climate change 2014: Impacts, Adaptation, and Vulnerability 2. 5th Assessment Report (ARS) (hereinafter "IPCC 2014"). Throughout this Communication, the Petitioners refer to these emissions as "carbon emissions" or simply "carbon pollution."

¹⁰ Appendix B, Joeri Rogelj, Climate physics consequences of further delay in achieving CO₂ emission reductions and intergenerational fairness, Grantham Institute Science Brief, (Sept. 2019) (hereinafter "Rogelj Report 2019") at 4.

¹¹ IPCC 2014, "Drivers, Trends and Mitigation" in Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, at 354, https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc wg3 ar5 chapter5.pdf.

¹² IPCC 2014: "Agriculture, Forestry and Other Land Use (AFOLU)" in Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, p. 816, https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter11.pdf.

¹³ IPCC 1.5 SPM 2018 Report.

¹⁴ Climate Central, The Ten Hottest Global Years on Record (February 6, 2019), https://www.climatecentral.org/gallery/graphics/the-10-hottest-global-years-on-record.

¹⁵ Appendix C, Climate Analytics, *Scientific Report on Impacts and Drivers on Climate Change* (Sept. 10, 2019) (hereinafter "Climate Analytics Report 2019") at 121-132, 144-158.

like the Arctic and sub-Saharan Africa.¹⁶ At 1.5°C of heating, an estimated 4.5 billion people will be exposed to deadly heat weaves.¹⁷ If the Earth reaches 2°C of heating by the end of the century, some models estimate that 150 million people will die from air pollution alone.¹⁸

- 64. 1.5°C and 2°C are not random numbers: they are the limits to global warming proposed by the Paris Agreement under the Climate Change Convention, which aims to keep heating by 2100 well below 2°C and to pursue efforts "limit[ing] the temperature increase to 1.5°C above preindustrial levels". The IPCC's 2018 special report now demonstrates a greater scientific understanding of these limits. It makes clear that even attaining these limits would still not be sufficient to avoid widespread violations of human rights. Nonetheless, every fraction of a degree makes a difference. Preventing any additional rise in global warming matters to the ultimate health and survival of the planet and the children of today and tomorrow. 20
- 65. The Paris Agreement benchmarks, unfortunately, are already considered unduly optimistic compared to the current emissions trajectories of the Agreement's parties. A year after the Paris Agreement opened for

¹⁶ IPCC 1.5 SPM 2018 Report at 6.

¹⁷ IPCC, 2018: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)] (hereinafter "IPCC 1.5 SR 2018 Report"), at 453.

¹⁸ Drew Shindell et al., "Quantified, Localized Health Benefits of Accelerated Carbon Dioxide Emissions Reductions," Nature Climate Change 8 (Mar. 2018) at 291-95. By comparison, "150 million people is the equivalent of twenty-five Holocausts." David Wallce-Wells, The Uninhabitable Earth: Life After Warming, Penguin Random House (2019) at 28 (hereinafter "Uninhabitable Earth").

¹⁹ U.N. Framework Convention on Climate Change Conference of the Parties, 21st Session, Adoption of the Paris Agreement, pmbl., U.N. Doc. FCCC/CP/2015/10/Add.1 (Jan. 29, 2016) (hereinafter "Paris Agreement"), art. 2.

²⁰ Based on statistical models, limiting warming to 1.5°C would: reduce the number of people frequently exposed to extreme heatwaves by about 420 million; reduce the number of people susceptible to climate-related poverty risks by as much as several hundred million by 2050; and reduce the number of people in urban areas exposed to severe drought by 61 million. Alan Buis, *A Degree of Concern: Why Global Temperatures Matter*, NASA (Jun. 19, 2019), https://climate.nasa.gov/news/2865/a-degree-of-concern-why-global-temperatures-matter.

- signature, global annual emissions increased, reaching a record high of 53.3 billion metric tons in 2017.²¹ At current rates, global emissions are projected to cause 3.3-4°C of heating over the next 80 years.²²
- 66. With each fraction of a degree of heat, the Earth comes closer to more tipping points, critical thresholds beyond which rapid climate change becomes unavoidable and irreversible.²³ The disintegration of the Greenland ice sheet is one tipping point; melting permafrost is another.²⁴ There is scientific certainty that these tipping points exist; when exactly they will occur is less certain.²⁵
- 67. There is no doubt that more heat brings us closer to going over the edge. Continuing on this path will endanger the lives of over 2 billion children by 2100.²⁶
- 68. There is no more time to delay mitigating CO₂ emissions. The world's nations have a finite amount of carbon—called a "carbon budget"—that can still be emitted before catastrophic climate change becomes unavoidable and irreversible. To stay within the remaining carbon budget, global emissions must be cut in half by 2030 with total decarbonization by 2050 to have at minimum a 50% chance of limiting warming to 1.5°C or less.²⁷
- 69. Global warming requires an immediate increase of mitigation commitments. Even with that, adaptation must also play a critical role in protecting children from the adverse impacts of climate change, particularly those acute impacts that have and continue to occur, and

 $^{^{21}}$ UN Environmental Programme, Emissions Gap Report 2018 (herinafter "UNEP Gap Report 2018") at XV.

²² Climate Action Tracker, https://climateactiontracker.org/global/cat-thermometer/.

²³ IPCC 1.5 SR 2018 Report at 177, 252, 257.

²⁴ Lenton TM, et al. (2008) Tipping elements in the Earth's climate system. Proc. Natl. Acad. Sci. U. S. A. 105(6):1786-1793.

²⁵ Rogelj Report 2019 at 4-5.

²⁶ When will the world reach "peak child," Our World in Data (Feb. 8, 2018) https://ourworldindata.org/peak-child.

²⁷ IPCC 1.5 SMP 2018 Report at 15; UNEP Gap Report 2018 at .XV. The IPCC's report is critically important because it represents a scientific consensus that is conservative in its approach, drawing on 6,000 scientific papers and more than 42,000 comments.

which will certainly occur more severely in the future. These impacts include, for example, extreme weather events, floods, drought, food insecurity, and water shortages. The IPCC has identified adaptation measures that can assist in lessening the damage to children caused by these occurrences. Such measures include flood levees and culverts, water storage and pump storage, improved drainage, flood and cyclone shelters, storm and wastewater management, food banks and distribution of food surplus, improved water and sanitations services, and essential public health services.²⁸

70. In sum, the climate crisis is caused by human economic, industrial, and consumption activities. It is perpetuated by political decisions to delay decarbonizing. The laws of physics dictate the remaining amount of carbon that we can still emit into the atmosphere before the tipping points are reached. We have already reached the limit.

1. Climate change is substantially altering our global environment.

- 71. The rise of 1.1°C in global average temperature that we experience today has already transformed the environment and damaged the planet.
- 72. The multiple heat waves that swept through the Northern Hemisphere in the summer of 2019 illustrate the far-reaching and inter-connected threat of the climate crisis. Between June and September, record high temperatures hit Europe (namely, the Netherlands, France, the United Kingdom, and Germany), North America (namely, Alaska),²⁹ and the Arctic, melting glaciers, exacerbating wildfires, and imperiling public health, among other impacts.³⁰ June and July were the hottest months on

²⁸ IPCC 2014, Impacts, Adaptation, and Vulnerability at Table 14-1. While adaptation measures are not the subject of this Communication, they are important human rights obligations for states to uphold.

²⁹ Temperatures in Alaska reached record highs of up to 32°C (90°F) on July 4, 2019. World Meteorological Organization, *Unprecedented wildfires in the Arctic* (Jul. 12, 2019), https://public.wmo.int/en/media/news/unprecedented-wildfires-arctic.

³⁰ World Meteorological Organization, *July matched, and maybe broke, the record for the hottest month since analysis began* (Aug. 1, 2019), https://public.wmo.int/en/media/news/july-matched-and-maybe-broke-record-hottest-month-analysis-began; BBC News, *Europe heatwave: French city of Bordeaux hits record temperature* (Jul. 24, 2019), https://www.bbc.com/news/world-europe-49083283.

- record globally, with temperatures more than 2°C above average in Europe.³¹
- 73. The climatic events associated with the 2019 heat waves are not an anomaly; they have become the new normal. Climate change has significantly increased the chances of more intense and regular heatwaves, including those that took place in 2019. For example, a recent multi-institutional study found that climate change made the 2019 record-breaking heatwave in France and Netherlands, which would typically be 1,000 year events, ten times more likely. The record-high temperatures, the study concluded, "would have had extremely little chance to occur without human influence on climate." The 2003 Central European hot summer, which would have been a one in one-hundred year event without climate change, is projected to be a one in four year event at current global temperatures.
- 74. Indeed, record-high heatwaves intensified the melting of Greenland's ice sheet, the second largest in the world, after Antarctica. In just five days between July 30 and August 3, 2019, it lost approximately 55 billion tons of ice through melt runoff. Before 2003, it used to lose approximately 74 billion tons *in an entire year*.³⁵ A recent study based on NASA data predicts that at current rates of global warming, the melting Greenland ice sheet will contribute 1.6 meters (5.25 ft) to global sea-level rise over the next 200 years.³⁶

³¹ Climate Change Service, *Record-breaking temperatures for June* (Jul. 2, 2019), https://climate.copernicus.eu/record-breaking-temperatures-june. Climate Change Service, *Another exceptional month for global average temperatures* (Aug. 5, 2019), https://climate.copernicus.eu/another-exceptional-month-global-average-temperatures.

³² Robert Vautard et al, *Human contribution to the record-breaking July 2019 heat wave in Western Europe* (Aug. 2019), https://www.worldweatherattribution.org/human-contribution-to-the-record-breaking-july-2019-heat-wave-in-western-europe/.

³³ *Id*.

³⁴ Climate Analytics Report 2019 at 6-8.

³⁵ National Snow and Ice Data Center, *Greenland Ice Sheet Today*, https://nsidc.org/greenland-today.

³⁶ NASA, *Study Predicts More Long-Term Sea Level Rise from Greenland Ice* (Jun. 19, 2019), https://www.nasa.gov/feature/goddard/2019/study-predicts-more-long-term-sea-level-rise-from-greenland-ice.

75. In 2019, people in Iceland gathered in midsummer on a small patch of ice atop a volcano to mourn the country's first glacier to succumb to warming.³⁷ The crowd honored the former glacier with a plaque that read:

[Okjökull] is the first Icelandic glacier to lose its status as glacier. In the next 200 years all our main glaciers are expected to follow the same path. This monument is to acknowledge that we know what is happening and what needs to be done. Only you know if we did it.³⁸

- 76. In the Arctic Circle, June 2019 wildfires emitted 50 million tons of carbon dioxide, roughly equivalent to Sweden's total annual emissions, and more than the combined total of all June Arctic fires between 2010 and 2018.³⁹ By mid-July, Alaska had over 400 fires, ⁴⁰ while an estimated 745 wildfires had burned 33,200 square kilometers in Siberia by the end of July.⁴¹
- 77. These are just a handful of examples of how climate change is already taking place. The world is seeing more extreme storms and weather events, sea level rise, severe droughts, flooding, and many other adverse impacts, which are already harming billions of people globally, in particular children.⁴²

³⁷ BBC News, *Iceland's Okjokull glacier commemorated with plaque* (Aug. 18, 2019), https://www.bbc.com/news/world-europe-49345912.

³⁸ *Id*.

³⁹ World Meteorological Organization, *Unprecedented wildfires in the Arctic* (Jul. 12, 2019), https://public.wmo.int/en/media/news/unprecedented-wildfires-arctic.

⁴⁰ *Id*.

⁴¹ World Meteorological Organization, *July matched, and maybe broke, the record for the hottest month since analysis began* (Aug. 1, 2019), https://public.wmo.int/en/media/news/july-matched-and-maybe-broke-record-hottest-month-analysis-began

⁴² Climate Analytics Report 2019 at 6-8; Report of the Special Rapporteur on Human Rights and the Environment on Climate Change, U.N. Doc. A/74/161, (Jul. 15, 2019) at ¶¶ 6-11.

2. Climate change is triggering life-threatening, adverse impacts.

- 78. The changes described above are harming human health, threatening food and water security, causing mass migrations, and destroying species and the environment.⁴³
- 79. For instance, extreme heat waves like those that hit Europe seriously endanger human health. High temperatures increase hazardous levels of ozone air pollution, which cause shortness of breath, coughing, intense asthma attacks, child mortality and premature death.⁴⁴ Hot temperatures also cause a wide range of physiological stress such as heat cramps, heatstroke, hyperthermia, and exhaustion, and quickly worsen existing health conditions.⁴⁵ Extreme heat causes death and hospitalization.⁴⁶ For example, a European heat wave in 2003 killed an estimated 70,000 people.⁴⁷ Certain populations are more vulnerable to these harms, including infants and children, pregnant women, and the elderly.⁴⁸
- 80. Melting glaciers are one of the main causes of sea level rise, along with thermal expansion of warming ocean water. Currently, global sea level has risen about 20 cm from pre-industrial times;⁴⁹ however, the rate at which sea level is rising has increased significantly in the past two decades.⁵⁰ Sea-level rise is exposing coastal freshwater supplies to saltwater intrusion, creating bigger storm surges, and threatening and

⁴³ See, e.g., U.N. Doc. A/74/161 at ¶¶ 6-11; Climate Analytics Report 2019 at 21-27.

⁴⁴ Euronews, *Why was there a spike in pollution during the European heatwave?* (Apr. 7, 2019), https://www.euronews.com/2019/07/04/why-was-there-a-spike-in-pollution-during-the-european-heatwave; American Lung Association, State of the Air 2019, https://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2019-full.pdf.

⁴⁵ World Health Organization, Information and public health advice: heat and health, https://www.who.int/globalchange/publications/heat-and-health/en/.

⁴⁶ *Id*.

⁴⁷ *Id*.

⁴⁸ *Id*.

⁴⁹ Climate Analytics Report 2019 at 8.

⁵⁰ U.S. Global Change Research Program, Climate Science Special Report: Fourth National Climate Assessment (2017), Chapter 12, https://science2017.globalchange.gov/chapter/12/.

destroying coastal infrastructure.⁵¹ It has already forced entire communities in some countries to relocate, including the communities of Vunidogoloa, Fiji; Nusa Hope and Taro, Solomon Islands; and Shishmaref, Kivalina.⁵²

- 81. The oceans, seas, and other large bodies of water are also absorbing large amounts of the heat and carbon dioxide in the atmosphere, causing them to warm, acidify, and expand. The ocean has warmed at all depths since the 1960s and surface waters have warmed by about 0.7°C (1.3° ± 0.1°F) globally from 1900 to 2016.53 2018 set a record for ocean heating.54 In addition to causing sea level rise, warming oceans already contribute to more intense storms and heavier rains, declining ocean oxygen, melting sea ice and ice shelves through bottom heating, and increasing frequency and duration of marine heat waves.55 For example, as of 2016, the number of floods and other hydrological events globally had quadrupled since 1980 and had doubled since 2004, and meteorological events, such as storms, have doubled since 1980.56
- 82. Warming oceans have increased the occurrence of major storms, particularly in the North Atlantic and Pacific basins, and sea-level rise

⁵¹ Lijing Cheng et al., 2018 Continues Record Global Ocean Warming (2019), Adv. Atmos. Sci., 36(3), 249–252, https://link.springer.com/content/pdf/10.1007%2Fs00376-019-8276-x.pdf; U.N. Doc. A/74/161 at ¶ 10.

⁵² U.N. Doc. A/74/161 at ¶ 10; The Conversation, "Climate change forced these Fijian communities to move – and with 80 more at risk, here's what they learned" (Apr. 30, 2019), http://theconversation.com/climate-change-forced-these-fijian-communities-to-move-and-with-80-more-at-risk-heres-what-they-learned-116178.

⁵³ U.S. Global Change Research Program, Climate Science Special Report: Fourth National Climate Assessment (2017), Chapter 13: Ocean Acidification and Other Ocean Changes, https://science2017.globalchange.gov/chapter/13/.

⁵⁴ Cheng, *supra* note 51, at 249-52.

⁵⁵ *Id.* (For example, "Hurricanes and other storms are natural phenomena and they are affected by many other factors besides ocean changes, but conditions allowing for the formation of severe hurricanes are occurring more often because of the record high OHC, with increases in intensity, lifetime, size, and especially increases in heavy rainfall."); Ove Hoegh-Guldberg, Jacob, D., Taylor, M., & et al. (2018); IPCC 1.5 SR 2018 Report at 177.

⁵⁶ European Academies' Science Advisory Council (EASAC) (2018), Extreme weather events in Europe Preparing for climate change adaptation: an update on EASAC's 2013 study, Figure 1, https://easac.eu/fileadmin/PDF_s/reports_statements/Extreme_Weather/EASAC_Statement_Ext reme Weather Events March 2018 FINAL.pdf

is amplifying the damage from such storms.⁵⁷ For example, in 2016, Cyclone Winston, which was one of the largest and strongest tropical cyclones recorded in the Southern Hemisphere, displaced over 130,000 people in Fiji and destroyed about 500 schools.⁵⁸ In 2015, Cyclone Pam displaced 65,000 people in Vanuatu.⁵⁹

83. More intense rainfall events due to climate change are causing increased flooding, particularly in urban environments that have poor or defunct infrastructure. This increases vector-borne diseases, causes deaths, and destroys homes, farms, infrastructure, and businesses, creating billions of dollars of damages. For example, climate change is causing increasingly intense rainstorms in Nigeria that have triggered unprecedented flooding and damage. In 2012, massive flooding occurred in 30 of Nigeria's 36 states, causing an estimated \$16.9 billion in damage, killing 431 people, and displacing over 1.3 million people. Three years later, floods in the south displaced more than 1,200 families and destroyed 4,500 farms, while floods in the north killed 53 people and displaced more than 100,000. In 2016, floods displaced 92,000 people and killed 38. In 2018, floods again wreaked havoc, affecting

⁵⁷ Union of Concerned Scientist, *Hurricanes and Climate Change: Increasingly destructive hurricanes are putting a growing number of people and structures at risk*, https://www.ucsusa.org/global-warming/science-and-impacts/impacts/hurricanes-and-climate-change.html.

⁵⁸ Adelle Thomas et al., Briefing Note on Tropical Cyclones: Impacts, the link to Climate Change and Adaptation (2017), Impact, https://bit.ly/2kuSCkA

⁵⁹ *Id*. at 2.

⁶⁰ Climate Analytics Report 2019 at 24-27.

⁶¹ Quartz Africa, (Don't) Send Down the Rain: It's only just started, flooding is going to get a lot worse in Nigeria (Aug. 17, 2017), https://qz.com/africa/1054825/climate-change-in-nigeria-floods-in-lagos-abuja-niger-delta-are-going-to-get-a-lot-worse/; Council of Foreign Relations, Nigerian and U.S. Flooding Similar, Linked to Climate Change (October 2, 2018), https://www.cfr.org/blog/nigerian-and-us-flooding-similar-linked-climate-change.

⁶² *Id*.

⁶³ *Id*.

⁶⁴ BBC News, *Why does Nigeria keep flooding?* (Sept. 27, 2018), https://www.bbc.com/news/world-africa-45599262.

- 1.9 million people, destroying 82,000 houses, displacing 210,000 people, and again devastating crops and livestock.⁶⁵
- 84. The frequency and intensity of droughts has also already increased in some regions, including the Mediterranean, west Asia, some South Pacific islands, many parts of South America, much of Africa, and northeastern Asia. 66 Severe droughts threaten food and water supplies. For example, after three of its lowest rainfall years on record, in January 2018 Cape Town became the first major world city on the verge of shutting off its water supply. 67 That day, known as "day zero", did not occur, but imminently threatened to cut off water to 3.7 million people. Climate change has already made the 1 in 100-year drought that contributed to the Cape Town water crisis three times more likely. 68 Another drought in southern Africa in late 2018 hit just after the maize planting season, causing a severe food crisis for 10.8 million people. 69
- 85. Between 2008 and 2015, increased big storms, intense rainfall, drought, and other climatic disasters have displaced an estimated 22.5 million people per year on average equivalent to 62,000 people every day.⁷⁰

3. Children are among the most vulnerable to climate change.

86. In addition to the fact that today's children and their children will bear the brunt of climate change impacts as they get older, children are among the most vulnerable to the current consequences of climate change, along with women, persons with disabilities, indigenous peoples, and persons living in poverty.⁷¹

⁶⁵ Relief Web, *Nigeria Floods 2018: Work Report 1* (Oct. 24, 2018), https://reliefweb.int/report/nigeria/nigeria-floods-2018-work-report-1.

⁶⁶ Climate Analytics Report 2019 at 11-16.

⁶⁷ World Weather Attribution, Likelihood of Cape Town water crisis tripled by climate change (July 13, 2018), https://www.worldweatherattribution.org/the-role-of-climate-change-in-the-2015-2017-drought-in-the-western-cape-of-south-africa/.

⁶⁸ *Id*.

⁶⁹ Relief Web, Southern Africa: Drought - Nov 2018, https://reliefweb.int/disaster/dr-2018-000429-zwe.

⁷⁰ UNICEF, Unless we act now, at 30.

⁷¹ U.N. Doc. A/74/161.

- 87. For example, nearly 160 million children are currently living in areas of high or extremely high drought severity, predominately in Africa and Asia. 72 Food and water insecurity from increased drought will disproportionately affect children because they need to consume more food and water per unit of body weight to meet their developmental needs. 73 The World Health Organization ("WHO") estimates that climate-induced malnutrition will increase moderate or severe stunting in an additional 7.5 million children. 74
- 88. More than half a billion children live in extremely high flood occurrence zones, and about 115 million live in areas of high or extremely high risk of tropical cyclones.⁷⁵ These events harm children in many ways, including increasing the risk of death, injury, or illness from drowning, ingesting contaminated drinking water, and lack of water and food.⁷⁶ These events also cause long-term displacement, which exposes children to multiple risks, such as increasing their vulnerability to child labor and trafficking.⁷⁷
- 89. Extreme heat also poses unique dangers to children's health. Wildfires and air pollution, aggravated by extreme heat, also disproportionately harm children.⁷⁸
- 90. Climate change will also increase the risks of many lethal diseases, such as malaria, dengue fever, cholera, and meningitis, all of which pose greater harm to children than adults.⁷⁹ The WHO has estimated that 88 percent of the existing burden of disease from climate change occurs in

⁷² UNICEF, Unless we act now, at 22.

⁷³ *Id*.

⁷⁴ WHO, Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s (2014) at 80.

⁷⁵ *Id.* at 30, 34.

⁷⁶ *Id*. at 10.

⁷⁷ *Id.* at 30, 34, 54.

⁷⁸ *Id.* at 44.

⁷⁹ *Id.* at 48.

- children under five years of age. 80 The United Nations Children's Fund ("UNICEF") stated, "[w]hen it comes to the spread of disease influenced by climate change, the risk falls squarely on children." 81
- 91. Further, climate change has a unique impact on indigenous children, whose close connection to nature and dependence on wildlife and plants are integral to their livelihoods and their spiritual and cultural practices. 82 As UNICEF has noted, "[d]ue to their close, dependent relationship with the environment and its resources, climate change is posing an existential threat to today's indigenous children and future generations."83
- 92. Climate change also places girls (and women) at a particularly heightened risk of harm due to existing gender-based inequities in access to health care and resources, as well as impacts on maternal health.⁸⁴
- 93. In addition to physical harm, climate change causes significant acute and chronic mental health impacts on children. 85 For example, mental health professionals have identified a range of conditions and symptoms related to experiencing extreme weather events including depression, anxiety, Post-Traumatic Stress Disorder, increased drug and alcohol

⁸⁰ *Id*.

⁸¹ UNICEF, Unless we act now, at 48.

⁸² U.N. Doc. A/74/161 at ¶ 48.

⁸³ UNICEF, Unless we act now, at 62

⁸⁴ See World Health Organization, Gender, Climate Change, and Health at 8-18.

⁸⁵ Susie E. L. Burke et al., "The Psychological Effects of Climate Change on Children," Current Psychiatry Reports 20: 35 (Apr. 11, 2019), 2 ("[C]hildren exposed to EWE disasters and the ensuing family stress [19], disruptions to social support networks, and displacement are at risk of developing PTSD and other mental health problems like depression, anxiety, phobias and panic, sleep disorders, attachment disorders, and substance abuse. . . In addition to diagnosable mental health problems, other psychological effects of traumatic experiences in climate-related disasters and their ensuing disruptions can include negative impacts on children's capacity to regulate emotions, increased cognitive deficits, learning problems, behavioral problems, adjustment problems, impaired language development, and an undermining of academic performance. Sustained and repeated stressful early-life events, likely in the context of climate change, can also create a predisposition to adverse mental health outcomes later in life."); see also American Psychological Association, *Mental Health and our Changing Climate:*Impacts, Implications, and Guidance, (Mar. 2017) at 22-23, 25-27 (discussing acute impacts) (hereinafter "Mental Health and Our Changing Climate").

abuse, domestic violence, and child abuse.⁸⁶ In addition, as climate change transforms communities, "large numbers are likely to experience a feeling that they are losing a place that is important to them—a phenomenon called *solastalgia*."⁸⁷

94. Children are especially vulnerable to the mental health impacts of climate-related disasters. The psychological toll can become chronic – triggered by acute events, slow-moving disasters, and the persistent awareness of current and predicted impacts of climate change. Psychological literature identifies a distinct phenomenon of climate anxiety, where "habitual ecological worrying" about impending climate-related disasters can "elicit dramatic reactions, such as loss of appetite, sleeplessness, and panic attacks." This can impact childhood development, with lifelong consequences: "Chronic stress from the acute and ongoing impacts of climate change may alter biological stress response systems and make growing children more at risk for developing mental health conditions later in life, such as anxiety, depression, and other clinically diagnosable disorders." 1

B. Climate change is already exposing the petitioners to life-threatening dangers, harming their health, and disrupting their cultural traditions.

95. Climate change is already harming the petitioners, threatening and altering the regions where they live, in many ways:92 rising temperatures both on land and in the ocean; droughts; severe storms; sea level rise; wildfires; unhealthy air quality; increased diseases; and their mental health. These changes have threatened their homes, their livelihood, and their sense of safety. The excerpts below highlight some examples of how the petitioners are experiencing, and are threatened by, climate

⁸⁶ *Id*.

⁸⁷ *Id.* at 25.

⁸⁸ Philipsborn et al, Climate Change and Global Child Health, Pediatrics v.141, n. 6 (Jun. 2018).

⁸⁹ Mental Health and our Changing Climate at 22.

⁹⁰ Eva Gifford and Robert Gifford, *The largely unacknowledged impact of climate change on mental health*, Bulletin of the Atomic Scientists, v. 72, no. 5 (2016), http://dx.doi.org/10.1080/00963402.2016.1216505.

⁹¹ USDHHS Impacts Study at 224.

⁹² See Appendix A.

change. A full description of climate impacts faced by each petitioner is set forth in Appendix A; a description of climate impacts on their countries and regions is set forth in Appendix C.

1. Extreme heat

- 96. **France.** The first summer of Petitioner Iris Duquesne's life was the hottest summer in Europe since 1540. 93 Born in Bordeaux, Iris was three months old when the deadly heat wave of 2003 swept France. In Bordeaux, temperatures reached a record-breaking 40.7° C. It was one of the worst weather events in the Continent's history, killing some 15,000 people in France alone. 94 Along with the elderly, young children like Iris were most at risk; her parents were scared they would lose their baby to the heat. In July 2019, two months after Iris's 16th birthday, Bordeaux broke a new record at a scorching 41.2°C. 95
- 97. **Argentina.** Haedo, Argentina is also warming. Petitioner Chiara Sacchi explains the extreme heat has also significantly increased the use of airconditioning units, placing pressure on the electricity grid. Frequent power outages are common and interrupt Chiara's daily life. For example, Chiara cannot complete her homework during power outages because the school system uses web-based platforms. In the extreme heat of summer, power outages quickly ruin food.
- 98. **Tunisia.** In Tabarka, a coastal town in north-western Tunisia, Petitioner Raslen Jbeili is also experiencing changing temperatures, noting that "Tabarka used to have four distinct seasons. Now we have two main seasons—summer and winter." Summers have been extremely hot, with temperatures exceeding 40°C. Raslen says, "we can't go outside. We will melt if we go outside."
- 99. **Alaska, USA and Sweden.** In the world's North, Petitioner Carl Smith experienced significant global warming, beyond that in most other parts of the world. Unprecedented heat in the Arctic last summer led to temperatures in Alaska above 32°C (90°F), and widespread forest fires in the Scandinavian Arctic. As explained below, this extreme heat is threatening Carl and other northern communities' thousand years old

⁹³ Rene Orth, et al 2016 Environ. Res. Lett. 11 114021, https://bit.ly/2kFXa7M.

⁹⁴ World Bank, *Turn Down the Heat: Why a 4C World Must be Avoided* (2012), p. 13, http://documents.worldbank.org/curated/en/865571468149107611/pdf/NonAsciiFileName0.pdf.

⁹⁵ NASA, Climate Change: how do we know, https://climate.nasa.gov/evidence/.

- subsistence practices, including reindeer herding, hunting, and fishing, which are closely connected to their heritage, culture, and livelihoods.
- 100. Deadly heatwaves will increase as the world warms. The rising temperatures affecting the petitioners are just the beginning. In the coming years, the petitioners and other children will experience hotter, more frequent, and more deadly heatwaves. The IPCC calculates that if warming reaches 1.5°C, 350 million additional people could be exposed to deadly heat wave conditions in 2050 than present. Without climate change, the 2003 European heat wave that killed 70,000 would be a one in one-hundred years event. With 1.5°C of warming, the probability of such a heat wave would increase to four out of ten summers—at 2°C, six out of every ten. 97

2. Wildfires

- 101. **Tunisia**. Wildfires are also increasing in and around Tabarka. Through a school program, Raslen documented 146 fires in 2017, a dramatic increase from the 37 in 2016. One fire in 2018 came within reach of his home. "We heard screams and yelling in the night," he recalls. "I looked up and saw a huge fire approaching our home and we could do nothing. We just prayed for the fire not to reach our home. Although we were spared, it burned down many of our neighbors' homes."
- 102. **United States.** In November 2018, one of the deadliest wildfires blazed across Paradise, California, destroying nearly 14,000 residences and killing about 85 people. 98 Over the last 100 years, California has warmed by about 1.7°C (3°F), 99 drying the plants and soil and leaving shrubs, grassland, and trees in California prone to burning. 100
- 103. The toxic clouds from the Paradise Wildfire reached Petitioner Alexandria Villaseñor's home in Davis, California. Alexandria

⁹⁶ IPCC 1.5 SR 2018 Report, Chapter 5, table 5.1.

⁹⁷ Climate Analytics Report 2019 at 11-13.

⁹⁸ Kristin Lam, *Death Toll drops to 85 at Camp Fire; 11 people remain missing*, USA Today, (Dec. 3, 2018) https://www.usatoday.com/story/news/2018/12/03/camp-fire-death-toll-california-deadliest-wildfire/2199035002/.

⁹⁹ Alexandra Borunda, *See how a warmer world primed California for large fires*, National Geographic, Nov. 15, 2018, https://www.nationalgeographic.com/environment/2018/11/climate-change-california-wildfire/.

¹⁰⁰ *Id*.

remembers feeling as if needles were pricking her chest. As the fire spread, Alexandria recalls,

I would wake up nauseous from all the smoke because the smoke was seeping into our house. We had rolled up wet towels and put them under doors and windows to keep the smoke from coming in. Because I have asthma, it was a really scary situation.

- 104. Because of the deadly air quality and her quickly deteriorating asthma, Alexandria's family evacuated her for health reasons to New York City, where she had been living with her mother since the fall of 2018. In New York, Alexandria continued feeling the effects from the smoke inhalation. She was bedridden for three weeks and had to go to the emergency room for her asthma.
- 105. Extreme wildfires will burn more regularly, consume more land, and spew more smoke into the atmosphere. Globally, the wildfire season has grown by roughly 20% since 1979 as warming reached 1°C.¹⁰¹ The risk of more frequent, devastating wildfires increases with global warming, especially at 2°C or more.¹⁰² Already, 260,000 to 600,000 people die each year from smoke from wildfires, with impacts felt across continents: in 2018, smoke from Arctic fires in Siberia reached mainland U.S.¹⁰³

3. Drought

106. **South Africa.** In early 2018, Petitioner Ayakha Melithafa, along with the other residents of Cape Town, prepared for "Day Zero" – the day when municipal water supplies would largely be switched off and up to 3.7 million residents would have to queue for their daily ration of water. Ayakha explains,

The water crisis was really bad because we always had to buy water. At home we had to take shorter showers. We had

¹⁰¹ W. Matt Jolly et al., *Climate-Induced Variations Global Wildfire Danger from 1979 to 2013*, Nature Communications 6, no. 7537 (July 2015).

¹⁰² Climate Analytics Report 2019 at 11-15.

¹⁰³ Fay H. Johnston et al., *Estimated Global Mortality Attributable to Smoke from Landscape Fires*, Environmental Health Perspectives 120, no. 5, at 695 (May 2012), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3346787/pdf/ehp.1104422.pdf; NASA, *Fires in Russia's Siberian Area Send Smoke to U.S.* (Jul. 11, 2018), https://www.nasa.gov/image-feature/goddard/2018/fires-in-russias-siberian-area-send-smoke-to-us.

to water our garden less or not at all. We had to be really cautious so we don't reach Day Zero. There were a lot of water restrictions. There are other people who grow their own food where I live, and it was really hard on them. It was hard to see them unable to feed their families because of the water restrictions.

107. **Tunisia.** Tunisia, which is a water-scarce country, is particularly vulnerable to its new, drier climate. Over the past few years, drought has threatened the country's water supply. Tabarka, which typically has more precipitation than most of the country, has also experienced frequent supply disruptions. Raslen and his family have had to buy water in these situations, making it "too hard to cook, shower, and clean." Raslen explains,

The water is shut-off without any notice, sometimes for hours, sometimes for days. Last year we had three days without water. Once it is shut-off, we don't know when it will return.

- 108. **Brazil**. In Salvador, Petitioner Catarina Lorenzo notes, "It's raining less now. It should rain between April through August, but now it's just raining between July and August." This brings numerous problems, says Catarina. "We are having water shortages. There are times when the city lacks water for a day or two and cuts off our water supply for that time." Because of these water shortages—which come without warning from the local government—Catarina and her family save water in a tank in preparation for the next water shortage. Some of her neighbors, however, who do not have access to a large water tank, try to store water in buckets to use for showering or washing dishes, or otherwise go without water.
- 109. **India**. Drought is worsening in India's northern eastern city of Haridwar, and greater region of Uttarakhand. Petitioner Ridhima Pandey explains, "the rainy season is getting shorter. The rain used to last for weeks during the rainy season" June through September "but now the rain that does fall only lasts for a day every once in a while. It is not consistent like before." The lack of rain is lowering the water level in the holy Ganges River in the summer and endangering the religious rituals and festivals centered on it, such as Kanwar Yatra—a festival in which people come from all over India to collect water from the Ganges and give back to the Lord Shiva with the Ganges' holy water.

110. Extreme drought events will increase, threatening food and water security. Up to 1.15 billion people will experience water stress at 1.5°C warming, and up to 1.34 billion with 2°C warming. 104 Similarly, 1.5°C will expose up to 36 million people to lower crop yields, increasing up to 396 million with 2°C warming. 105 The petitioners, like all children alive today, will grow up in a world where fresh water can no longer be taken for granted.

4. Dangerous air quality

- 111. **Nigeria.** In Lagos, where twelve-year old Petitioner Debby Adegbile has lived her entire life, rising temperatures are exacerbating smog. Debby is now hospitalized several times a year because of asthma attacks triggered by the hot and polluted air in Lagos. "Whenever I have an attack it takes about 5 days to get over it, and I'm usually hospitalized." Her family must pay for the costly medications and injections provided by the hospital. Her frequent illnesses and hospitalization force her to miss school.
- 112. **United States.** New York City consistently has unhealthy levels of ozone pollution. 106 The hotter temperatures increase ozone pollution to hazardous levels. 107 Although New York City provided a respite for Alexandria from the smoky air in California during the Paradise wildfire, the air pollution in New York City has also affected her health. Alexandria's inhaler has become her "best friend," accompanying her everywhere around the city to make sure her asthma does not land her back in the emergency room.
- 113. Global warming will worsen ozone and particle pollution and increase mortality from respiratory illnesses. With additional warming, mortality related to ozone concentrations, allergens, and particles will increase. 108 Children are at particular risk. Because of their smaller lungs and more

¹⁰⁴ IPCC 1.5 SR 2018 Report, Chapter 5, table 5.1 at 453.

¹⁰⁵ *Id*.

¹⁰⁶ Adam Nichols, NYC Is Among Smoggiest Cities In Nation, Report Says, Patch Media (Apr. 24, 2019), https://patch.com/new-york/new-york-city/nyc-among-smoggiest-cities-nation-report-says.

¹⁰⁷ American Lung Association, *supra* note 44, at 5.

¹⁰⁸ Climate Analytics Report 2019 at 25-26.

rapid breathing rate, children disproportionately inhale more polluted air. ¹⁰⁹ By mid-century the U.S. will see a 70% increase in days with health-threatening ozone smog, according to one study. ¹¹⁰ Another study estimates that globally 150 million more people will die prematurely from air pollution at 2°C of warming by 2100. ¹¹¹

5. Storms and flooding

114. **Marshall Islands.** The South Pacific is experiencing more severe storms and flooding. In 2015, a violent storm struck Ebeye in the Marshall Islands, tearing open the roof of Petitioner Ranton Anjain's home.

In 2015, we were inside my house, my dad was off island for meetings, and a really strong wind came and opened the roof of my house. It flooded my house. I was with family, but then we evacuated to our neighbor's house.

- 115. During another storm, Petitioner Litokne Kabua's family had to evacuate their home on Ebeye and seek shelter on the Kwajalein U.S. Army Base.
- 116. **Nigeria.** When it floods in Lagos, Nigeria, Debby's parents carry her and her siblings to school because the children cannot walk in the high waters. Because it is so difficult to get to school, children in Lagos miss class when the flood waters are high. Lagos, with its tropical climate, historically had a rainy season that spanned between April and September. But recently with climate change, "the rainy season extends to December," says Debby. The excess rain poses serious logistical and health problems: "every time it rains in Lagos, there is flooding." Debby's mother, Ronky, remembers,

It used to take five hours of rainfall to flood the streets, and now it just takes one hour.

117. The frequent flooding is extreme, making it difficult to walk or commute by car while also increasing the spread of diseases and other illnesses.

¹⁰⁹ *Id*.

¹¹⁰ G.G. Pfister et al., "Projections of Future Summertime Ozone over the U.S.," Journal of Geophysical Research Atmospheres 119, no. 9 at 5579-79 (May 2014), https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2013JD020932.

¹¹¹ Shindell, *supra* note 18, at 291-95.

- Tunisia. Over the past two years, Tabarka has also experienced heavier rainstorms that flood roads and buildings. When it rains intensely, Raslen's school floods because it is located in a low-lying area surrounded by wetlands. Sometimes the floods submerge the school up to four feet. Raslen explains, "[w]hen we have consecutive or heavy rains our school floods and closes. I don't want to miss school, and last year we had no school for a week." In one terrible incident, Raslen recounts how overflowing rivers fatally swept away some schoolchildren on their way home from school.
- 119. A hotter world will increase the occurrence of the most devastating storms, causing widespread damage and displacement. The storms that have terrified the petitioners and damaged some of their homes will only get worse. Researchers have found a 15-30% increase in Category 4 and 5 hurricanes with just 1°C of global warming. Warming of 1.5° C and 2° C will substantially increase the occurrence of the most devastating tropical cyclones. Warming of 2.5° C would double the occurrence of Category 4 or 5 cyclones across all ocean basins and quadruple their occurrence in the South Pacific. Because warmer air holds more moisture, a hotter climate will mean heavier rainfall during storms, increasing the risk of flooding and damage. 114

6. Sea-level rise

120. **Marshall Islands.** The Pacific islands of Oceania are facing an existential threat from sea-level rise. One of the countries most threatened by sea-level rise is the Marshall Islands. Ebeye Island is getting "smaller, and the waves are still eating up the islands" Litokne says. The rising sea levels threaten to submerge Litokne's home in Ebeye during his lifetime and have already caused stronger storm surges and other flooding events. Litokne's stepfather, Carl, remarks, "[t]he level of sea level rise you see, it is so crazy, it's scary." Additionally, exceptionally high "king tides" now consistently breach the sea walls on Majuro and damage homes and property, says Petitioner David Ackley III. Wave driven flooding contaminates freshwater resources and

¹¹² Adelle Thomas et al., *Briefing Note on Tropical Cyclones: Impacts, the link to Climate Change and Adaptation, Impact*, at 4 (2017), https://bit.ly/2kuSCkA.

¹¹³ *Id*.

¹¹⁴ Id.

- destroys infrastructure. A recent study shows that most tropical atolls will be uninhabitable by 2050 due to wave over-wash.¹¹⁵
- 121. **Palau.** The coastal lowlands of Koror, Palau are also under threat from sea-level rise. Increasingly high tides and storm surges have forced Petitioner Carlos Manuel's friends and neighbors to abandon their homes near the beach. The government will have to relocate Koror's only hospital due to the rising sea level.
- 122. **Tunisia.** Non-island coastal areas are also threatened by the rising seas. Higher and more damaging storm surges have struck Tabarka, Tunisia. For the first time that Raslen and his family can recall, a storm pushed the tide and waves above the rocky barrier protecting the town, flooding and damaging restaurants and other buildings situated near the sea.
- 123. Sea level will continue to rise as the climate warms, threatening cities and countries around the world. Globally about 145 million people live within a meter above the current sea level. At 1.5°C warming, global sea level will rise up to 0.77 meters by 2100 and would be much greater for higher warming scenarios. 116 At the world's current trajectory of 3-4°C warming by 2100, it is increasingly likely that large parts of the Antarctic and Greenland ice sheets will collapse, causing a rapid rise in sea-level. 117
- 124. Additional sea level rise will have devastating impacts on coastal communities. For example, a 1.5°C temperature rise would expose up to 69 million people living in cities to coastal flooding, increasing up to 79 million with a 2°C rise. 118 Another study found that a one-meter rise in sea level would destroy over 15,000 square kilometers of land in the Niger Delta, displacing 80 percent of the population. 119

7. Warming oceans and threatened marine life

¹¹⁵ Climate Analytics Report 2019 at 8-11, 96-103.

¹¹⁶ Climate Analytics Report 2019 at 8-10; IPCC 1.5 SR 2018 Report, Chapter 3 at 178.

¹¹⁷ See id.

¹¹⁸ IPCC 1.5 SR 2018 Report, Chapter 5, table 5.1 at 453.

¹¹⁹ Etiosa Uyigue and Matthew Agho, Community Research and Development Centre (CREDC) Nigeria, Coping with Climate Change and Environmental Degradation in the Niger Delta of Southern Nigeria (2007), http://www.credcentre.org/Publications/adaptation_nigerdelta.pdf.

125. **Marshall Islands.** Ocean warming is profoundly affecting the Marshall Islands. Fishing is a way of life there. But as the ocean gets warmer, it becomes harder for David, Litokne, and Ranton to fish on the islands. Litokne says,

My grandpa used to get more fish, like a lot more fish than the number of our family. But nowadays when we go fishing, you could come home with a bucket of nothing.

- 126. Some of the fish traditionally eaten have become poisonous, likely from ingesting toxic ciguatera algae, which tends to proliferate on dead coral reefs. ¹²⁰ People have recently died from eating these fish. Ranton and his father now avoid catching and eating bottom fish, explaining that "red snapper from the northern part of the atoll is a 'no-no,' but if the snapper is from the southern part it is ok."
- 127. **Brazil**. According to Catarina, the ocean and beaches in Bahia are much hotter than before. In summer 2019, Catarina observed, "the water was really, really hot and the coral was white it was dead. I had to swim away from the coral reef because it was all white and there were pieces of the coral reef floating around the water." Brazil has six major coral reef areas, and the Abrolhos Bank reef, which is the southernmost reef located in the state of Bahia, is the largest reef in Brazil.¹²¹ Marine heat waves between 2014 and 2017 caused coral bleaching across Brazil's reefs, including among the Abrolhos reefs.¹²²
- 128. Ocean warming and acidification will eradicate vast amounts of marine life. The risk of irreversible loss of many marine and coastal ecosystems increases with global warming, especially at 2°C or more. ¹²³ Coral bleaching is expected to affect 70-90% of coral reefs with a 1.5°C temperature rise, and reefs will be irreversibly lost at 2°C. ¹²⁴ Coral reefs support as much as a quarter of all marine life and supply food and half

¹²⁰ ScienceDirect, Cigautera, https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/ciguatera.

¹²¹ Carol Luther, *Coral Reefs of Brazil*, USA Today (Mar. 21, 2018), https://traveltips.usatoday.com/coral-reefs-brazil-1153.html.

¹²² Climate Analytics Report 2019 at 30-31.

¹²³ *Id.* at 96-103.

¹²⁴ IPCC 1.5 SR 2018 Report, Chapter 5, table 5.1 at 453.

a billion people depend on reefs for their food and livelihoods. ¹²⁵ At the same time, it is estimated that annual global fisheries catches will decrease by more than three million metric tons per 1°C of warming, and species turnover is more than halved when warming is lowered from 3.5° to 1.5°C. ¹²⁶

8. Increased incidents of malaria, dengue fever, and other diseases

- 129. **Marshall Islands.** This past summer, Ebeye in the Marshall Islands experienced its second dengue fever outbreak in two years, forcing the government to declare an emergency. Ranton caught dengue during the 2019 emergency, and his father Jelton caught dengue in 2018. Mosquitos spread dengue, known as "bone-break fever" because of the pain it causes. Dengue used to be rare on Ebeye, Ranton's father recalls, and there was never an emergency declaration before last year.
- 130. Mosquito-borne illnesses have also become much more common on Majuro Island. According to David's father, a doctor on Majuro, chikungunya and zika are new to the islands since 2015 and growing more common. In October 2018, David contracted chikungunya. For an entire week, he felt weak and dizzy, he kept throwing up, and his arm went numb.
- 131. **Nigeria.** Debby gets malaria two or three times every year. The fever often lasts for three days, forcing Debby to go to the hospital to get medication, which can come at a high cost. Her mother Ronky believes that increased flooding is behind the malaria outbreaks. Every member in Debby's family has had malaria—and gets it at least once a year.
- 132. Global warming will expand the geographic reach of tropical pandemic diseases and increase the risk of water-borne diseases. As tropical climates expand northwards and southwards, mosquito-borne diseases—malaria, dengue, yellow fever, zika, chikungunya—will reach new parts of the globe and affect new populations. 127 At the same time, flooding, severe storms, and strained infrastructure will increase

¹²⁵ United States National Oceanic and Atmospheric Administration, "Coral Reefs: Essential and Threatened," https://www.noaa.gov/explainers/coral-reefs-essential-and-threatened.

¹²⁶ William W. L. Cheung et al., Large benefits to marine fisheries of meeting the 1.5°C global warming target, Science 23Vol. 354, Issue 6319, at 1591-1594 (Dec. 2016).

¹²⁷ Climate Analytics Report 2019 at 25.

incidents of water-borne diseases such as cholera.¹²⁸ Currently, 88% of the burden of climate-related vector-borne disease occurs in children under five years of age: over the coming decades, the youngest children will face the greatest risk of exposure.¹²⁹

9. Threats to the cultural and subsistence practices of indigenous communities

- 133. Although all the petitioners are experiencing harm from climate change, for the Sami community in Sweden; Carl Smith of the Yupiaq Tribe in Akiak, Alaska; and David, Litokne, and Ranton of the Marshall Islands, the effects of the climate crisis could destroy their way of life, culture and livelihoods.
- 134. **The Sami people** have lived in the Arctic regions for thousands of years in what is now Norway, Sweden, Finland, and Russia. The Arctic region where the Sami people live is called the Sapmi. Many Sami people depend on the thousands-of-years-old tradition of reindeer husbandry or herding for their livelihoods. The Sami rely on reindeer for their own subsistence and as a source of income. Every part of the reindeer is used, nothing is wasted.
- 135. Reindeer herding is crucial to their way of life:

The reindeer are our life. It's everything. We live with, and we live off the reindeers, and I can't even imagine a life without them. . . Reindeer herding is our livelihood, our economy, our culture, our way of living for many, many generations. We and the reindeer depend on each other.

136. Generation after generation have passed on the reindeer herding tradition that is essential to Sami culture and spiritual practices. Reindeer herding is passed down from generation to generation:

I was very little when I was with him the first time, but I don't know if I was too much help then. I first went in the summer when I was five years old. We brought our own child at two months old up to the mountain when we were working with the reindeer. . . The children are intimately connected to the life of living with the reindeers, and they learn this culture by doing and helping out. . . I plan to be

¹²⁸ *Id*.

¹²⁹ *Id*.

a reindeer herder my whole life and will do everything I can to assure my children can continue with it.

- 137. The changing climate in the Sapmi is threatening the traditional methods of reindeer herding. Reindeer are wild animals, and the Sami migrate with the animals into the lowlands in the winter and to the mountains in the summer. In recent decades, increased warming and rains have caused the soil and snow to get very wet, which then freezes to ice. The ice prevents the reindeer from accessing the lichens and plants essential to their survival in the winter. The result is increased costs of reindeer herding, geographic displacement of the reindeer herds, and the need to supplement the reindeers' entirely natural sources of food.
- 138. Herding reindeer now requires harder work, longer hours, and more expenses, impacting families:

The reindeer herders have to work longer days, have to drive around much more with their snowmobiles, and the expenses for fuel has increased a lot. The climate crisis for us who live with reindeer is like when you throw a rock in the water, the problem just spreads as ripples and cause many new types of problems.

139. Adults worry about passing reindeer herding to their children, and are already seeing in their own lifetimes the severe changes in the Arctic environment.

It is not only about the economic value of a reindeer, it's the whole culture. The value is in the culture of living with reindeer and in nature—all of which is being threatened for the first time in thousands of years.

- 140. *The Yupiaq Tribe in Akiak* are an indigenous tribe that have lived for millennia in southwestern Alaska next to the Kuskokwim River. Carl moved to Akiak, Alaska with his family, who come from the Yupiaq Tribe, after spending the first ten years of his life in Anchorage.
- 141. The Yupiaq are a self-sustaining people, who have practiced traditions of subsistence hunting and gathering for as long as they can remember. Hunting, fishing, and gathering are integral to maintaining their livelihoods and the traditional cultural and spiritual practices passed down from their ancestors for generations. Carl cannot imagine living anywhere else. He says,

Everyone is our family here. Our parents taught us to respect our teachers, adults, the elders especially whenever they need it. Everyone helps each other out.

- 142. The elders in the tribe educate the younger generations about cultural practices and the importance of fishing and hunting. Carl's uncles, grandfather, and father have taught him hunting and fishing, and the traditions surrounding these generations old practices. Carl explains, "They teach us discipline and to respect everyone. It's really important because when we get older, we will have to teach our kids how to do it so they can survive in the winter."
- 143. The sharing of harvests with elders and others from within the community is also a key component of maintaining and strengthening tribal and communal cultural and social connections. For example, Carl explained that there is a "first catch" celebration when a young hunter catches their first animal and gives it away to the elders who can no longer hunt for themselves; this is called *payugteq*.
- 144. The warming temperatures are making hunting and fishing more difficult. For example, last year, Carl's family did not catch any caribou, which only pass by the Yupiaq hunting region from November to December each year. Carl explained that the river must freeze solid in order for the hunters to access their hunting grounds, and last year it did not get cold enough to freeze the river in time.
- 145. The rising temperature has also affected the men's ability to fish, a large part of which is done on the ice during the winter. Traditionally, "we used to go on the river and set fish nets and fish traps," Carl says. Now, with the river no longer freezing solid, fishing has become dangerous, and sometimes Tribe members fall through thin ice and die. "One of my buddies fell through the ice," Carl says. Carl's mother Kimberly explains,

Usually we are good to travel on the river through end of April, beginning of May. But this last winter we had five people fall through the ice and two didn't survive. You can't go up and fish during the fall time and wintertime because the ice is thin.

146. Fish in the winter has become important because summer fish, especially salmon, are also becoming harder to catch due to their dwindling population. Increasingly warming river temperatures are making things worse by killing salmon and increasing parasites in them.

This past summer, record-high water temperatures killed large numbers of salmon along the Kuskokwim River between Bethel and Akiak.¹³⁰ This never happened when Kimberly was younger.

147. Now, because of her family is catching less food, Kimberly has to buy more food for her family than she used to, which is an added cost and less nutritious. Kimberly explains,

Because I have a huge family, we usually relied on one to two moose per year, one to two caribous, and a whole lot of fish. Last year we were only able to catch one moose, so I catch myself having to buy processed meat when I don't want to. Because what we eat is what we catch, and I've noticed that we've had to buy a lot of store bought.

- 148. Climate change is also directly threatening Akiak. Excess rain, the breaking up ice on the river, and unusual high winds are eroding the Kuskokwim River. According to Carl, because of unprecedented "south winds in front of the villages they get three to five-foot waves and it crashes against the riverbank and it takes away sand and the bank starts falling over, and there is starting to be little cliffs. This year in May sixty feet eroded and our fish camp got lost in the erosion."¹³¹
- 149. All of these changes signify to Carl the loss of his way of life. He says,

Climate change might change everything—how we feel, how we hunt. It is scary because if I have kids, I want them to live like I did—to hunt, fish, gather. I want to teach them but I'm scared because there might not be any more subsistence. There will be less fish and there won't be any more ice in the winter, and it will be warm, and it might not be the same. I feel scared, like we'll have to adapt to climate change, and teach them a different way.

150. **The Marshallese culture**, which has existed in the southern Pacific for millennia, is closely connected to the ocean. The Marshallese live on 29

¹³⁰ See e.g., Anna Rose MacAruthur, *Record Warm Water Likely Gave Kuskokwim Salmon Heart Attacks*, Alaska Public Media (July 12, 2019) *available at* https://www.alaskapublic.org/2019/07/12/record-warm-water-likely-gave-kuskokwim-salmonheart-attacks/.

¹³¹ See, e.g., Greg Kim, Erosion in Akiak Swallows up to 100 Feet of Riverbank Along the Village, Anchorage Daily News (May 23, 2019), https://www.adn.com/alaska-news/rural-alaska/2019/05/23/erosion-in-akiak-swallows-up-to-100-feet-of-riverbank-along-the-village/.

- low-lying coral atolls, 1,156 islets, and five single islands, as part of the larger island group of Micronesia. 132
- 151. According to Litokne, his family has lived on Ebeye Island "since the beginning of time." The relationship between Ebeye and the ocean that surrounds the island is paramount. Litokne explains that, "culturally, the ocean is the center-way of life." The ocean connects Litokne to his family on the outer islands and is the main way by which people distribute supplies between islands. The ocean is also an important means of subsistence to the Marshallese.¹³³ For example, Litokne often eats red snapper and tuna at lunch or dinner, and Ranton used to fish every day when he was younger.
- 152. The family is also a centerpiece of Marshallese culture and society. 134 As Ranton explains, the Marshallese community is built on respect, "it is what makes us Marshallese." According to David's mother, Neilani, to be Marshallese in the Marshall Islands "means safety"—not having to worry where her son is because she knows her neighbors and everyone in their community.
- 153. There are also many ancient Marshallese traditions that are vital to maintaining the Marshallese culture. For example, Neilani describes *kemem*, which arose long ago and is a baby's first birthday celebration when the baby is given a name. Many Marshallese, including Litokne, also grow traditional foods for subsistence, medicinal purposes, and to make baskets and other handicrafts. For example, Litokne explains that bananas are the most common traditional medicine for reduction of body pain and easing toothache, while ground cherries (physalis peruviana) and scented fern are mixed together for patients to drink to treat diabetes. The leaves of the pandanus tree are used to make mats, baskets, thatch walls and roofing, and other handicrafts. 135
- 154. As described above, risings seas, warming and acidifying ocean, drought, and more severe storms threaten the Marshall Islands'

¹³² The Republic of the Marshall Islands, 2050 Climate Strategy, "Lighting the Way," at 6 (Sept. 2018).

¹³³ See, e.g., Embassy of the Republic of the Marshall Islands to the United States of America, Culture, http://www.rmiembassyus.org/index.php/about/marshall-islands/culture.

¹³⁴ *Id*.

¹³⁵ *Id*.

- continued existence, and with it these ancient cultural practices and traditions. For the petitioners living in small-island nations, the threat of climate change instils particularly strong fears about relocating from their home and country—and losing their culture and traditions.
- 155. David and his family talk about climate change often. It is hard to avoid the topic when you can see the impacts of climate change creeping up onto your island with the rising sea. David's family wonders if they will have to move away from their home, something that worries David, who wants to live in the Marshall Islands when he grows up. He does not want to be separated from his community, his homeland, and his culture.

I feel lost. I like to keep my mind off it because it scares me, but it still pops up a couple of times a day.

- 156. Litokne now "knows" his home and his island "are not here forever... they will disappear, unexpectedly." Despite the fact that Ebeye is noticeably shrinking, when Litokne grows up he says, "I want to live here. It is my home, there is no place other like Ebeye."
- 157. Ranton worries about losing his home and culture. He thinks about climate change all the time, and "sometimes in my mind I just see Ebeye sinking and a lot of people drowning."

10. Emotional distress Linked to Present and Future Impacts

158. **Greta Thunberg (Sweden).** Petitioner Greta Thunberg, a sixteen-year-old from Stockholm, Sweden, began researching the climate crisis after she first learned about it in school, reading everything she could. To her, the crisis was akin to a world war: once she understood the climate crisis, she could not "un-understand it." Greta thought about the climate emergency all the time: "I was a lot more worried about it and I thought about this very often – I had climate anxiety."

How could we just continue like before? Why were there no restrictions? Why wasn't it made illegal? To me, that did not add up. It was too unreal. So when I was eleven, I became ill. I fell into depression, I stopped talking, and I stopped eating. In two months, I lost about 10 kilos of weight.

159. **Alexandria Villaseñor (United States).** For Alexandria, the wildfires she experienced last year were highly traumatizing. Her experience was so distressing that she "compartmentalized" those memories, and only

recalled them after recently locating a journal she had kept during the frightening wildfires. She remembered,

It was really scary. At nighttime, I'd sleep next to the air filter. I'd get a wet washcloth and I'd have to keep it over my face because the smoke was preventing me from actually sleeping . . . I'd have sleep deprivation because I'd be so worried to fall asleep and I would have panic attacks.

160. **Chiara Sacchi (Argentina).** Chiara is scared of the future world with climate change. She says,

It's hard to imagine a future with all these events. I think we are all quite desperate. . . It feels like we are alone, like no one knows what to do, and when you know what to do, nobody takes action.

161. **Iris Duquesne (France).** Iris thinks about climate change every day and often feels powerless.

The world is going to be sad. There will be climate refugees everywhere in Europe and the US. There will be tension and pollution and the geography will be completely changed. There are islands that are going to disappear and countries like the Netherlands that will disappear. I don't want to have kids if they're going to live in a world like that.

162. **Catarina Lorenzo (Brazil).** The extreme temperatures and changing weather patterns in Salvador, Brazil also worry Catarina.

I feel that I don't know exactly what will happen in the future. If we don't act to stop the climate crisis, it will be the kids who pay the consequences.

163. **Raslen Jbeli (Tunisia).** The changing climate is also deeply affecting Raslen. He says,

Sometimes I have nightmares that climate change is destroying our world. I am very worried about the future. If we don't do something, maybe we will face extinction. That is scary. It is not fair that my generation has to experience this.

164. **Ayakha Melithafa (South Africa).** The climate changes Ayakha is experiencing in Cape Town makes her feels sad and angry, and she thinks of a "miserable future" with climate change.

- 165. **Raina Ivanova (Germany).** The consequences of climate change disrupt Raina's daily life, thoughts, and dreams. Her younger sisters have begun to ask her about the rising temperatures. Raina tries to soothe their worries, although she is also concerned. As she says, "[climate change] makes me really sad" and "is something that really scares me when I talk about it with my little sister" because "global warming will have a bigger impact on our lives."
- 166. In summary, temperature increases, sea-level rise, extreme weather events and other impacts associated with climate change are already harming the petitioners' health and well-being, and for some, their cultural and traditional ways of life. If the world does not reduce its carbon emissions urgently and drastically, the impacts of the climate crisis will significantly worsen.



VI. The climate crisis triggers human rights obligations informed by environmental law.

167. This Communication concerns the violation of the petitioners' rights under the Convention, as set forth above. But the scope of the climate crisis cannot be reduced to the particular harms of any small group of children. The climate crisis threatens to undermine every right under the Convention. At stake are the human rights of every child, everywhere.

- 168. The Convention enshrines children's rights as universal. All governments have a responsibility to take all available measures to ensure these rights are respected, protected, and fulfilled. 136
- 169. As a foundational rule of international law, all signatories to a treaty are bound, before they even ratify it, not to take any action or inaction that would "defeat the object and purpose of the treaty." ¹³⁷ If emission reductions are further delayed and irreversible tipping points reached, climate change will defeat the purpose of the Convention and nullify its ability to protect children anywhere.
- 170. Each respondent has ratified not only the Convention, but also the Climate Change Convention. All have signed the Paris Agreement, which all but Turkey have ratified.
- 171. These treaties, as well as the development of international human rights and environmental law, demonstrate the emerging consensus that mitigating climate change is a human rights imperative. From the creation of the IPCC in 1988, through the adoption of the Climate Change Convention in 1992, to the negotiation of the Paris Agreement in 2015, the international climate action framework has moved towards a rights-based approach.
- 172. The Climate Change Convention—now universally ratified—called for efforts to mitigate the adverse effects of climate change on human health and welfare. 138 The Paris Agreement went a step further, calling on states to "respect, promote and consider their respective obligations on human rights" including the rights of the child and intergenerational equity, when "taking action to address climate change." 139
- 173. In the Paris Agreement, State Parties pledged to keep global warming well below 2°C above pre-industrial levels and pursue efforts to limit it to 1.5°C. 140 To achieve this, they set voluntary emission reduction targets

¹³⁶ Only 45 states, however, have ratified the OPIC, which is an essential safeguard of children's rights.

¹³⁷ Vienna Convention on the Law of Treaties, art. 18, May 23, 1969, 1155 U.N.T.S. 331.

¹³⁸ UN Framework on Climate Change, 1771 UNTS 107; UN Doc. A/AC237/18 (Part II)/ Add 1 (1992), art. 1(1), art. 3(3) (hereinafter "UNFCCC") (May 9, 1992).

¹³⁹ Paris Agreement, *supra* note 19.

¹⁴⁰ *Id.* art. 2(1).

- called Nationally Determined Contributions ("NDCs")¹⁴¹ and pledged to reduce emissions at the "highest possible ambition."¹⁴²
- 174. To date, the emission reduction targets pledged under the Paris Agreement are nowhere in line with keeping heating under 2°C, much less 1.5°C. The UN Environmental Program has determined that the world's combined NDCs would lead to 3°C of warming by 2100, with warming continuing afterwards. A rise of 3°C is associated with catastrophic climate change impacts and would result in widespread violations of rights under the Convention. Unlike the voluntary commitments under the Paris Agreement, obligations under the Convention are binding and enforceable.
- 175. In light of the above, the Convention must be interpreted as taking into account the respondents' obligations under international environmental law. 144 Thus, all states, including the respondents, have four related obligations under the Convention: (i) to prevent foreseeable domestic and extraterritorial human rights violations resulting from climate change; (ii) to cooperate internationally in the face of the global climate emergency; (iii) to apply the precautionary principle to prevent deadly consequences even in the face of uncertainty, and (iv) to ensure intergenerational justice for children and posterity.

A. The duty to prevent foreseeable human rights harms caused by climate change.

¹⁴¹ *Id.* art. 3.

¹⁴² Id. art. 4.

¹⁴³ UNEP Gap Report 2018 at 18.

¹⁴⁴ This interpretive principle is anchored in the Vienna Convention on the Law of Treaties, art. 31(3)(c) U.N.T.S. Doc. A/CONF. 39/27, 1155 U.N.T.S. 331, 340 (1980) ("[T]here shall be taken into account, together with the context: any relevant rules of international law applicable to the relation between the parties.") and incorporated throughout the CRC Convention, which repeatedly references having regard to relevant instruments of international law. See, e.g., The Convention, Article 41 (providing the Convention does not supersede any norms that offer greater child-rights protection under "International law in force for that State"). Similarly, the Human Rights Committee has noted that international environmental law should "inform the contents of Article 6 [right to life] of the Covenant [on Civil and Political Rights], and the obligation of States parties to respect and ensure the right to life should also inform their relevant obligations under international environmental law." UNHRC, General Comment No. 36, on Article 6 of the International Covenant on Civil and Political Rights on the Right to Life, 124th Sess. ¶ 62 CCPR/C/GC/36 (2018).

- 176. This Committee and four other Human Rights Treaty Bodies unanimously recognized that "State parties have obligations, including extra-territorial obligations to respect, protect and fulfill all human rights of all peoples." These obligations include a duty "to prevent foreseeable human rights harm caused by climate change, [and] to regulate activities contributing to such harm." 146
- 177. To meet this obligation, all states must reduce emissions "at the highest possible ambition" ¹⁴⁷ and, as the Committee on Economic, Social, and Cultural Rights ("CESCR") observed, use the "maximum available resources." ¹⁴⁸ The Committees' joint statement further clarifies:

In order for States to comply with their human rights obligations, and to realize the objectives of the Paris Agreement, they must adopt and implement policies aimed at reducing emissions, which reflect the highest possible ambition, foster climate resilience and ensure that public and private investments are consistent with a pathway towards low carbon emissions and climate resilient development.¹⁴⁹

178. The duty to prevent foreseeable human rights harms caused by climate change dovetails with the prevention principle under international environmental law. As the Inter-American Court on Human Rights has noted, because "it is often impossible to restore the status quo that existed before the environmental damage has occurred, prevention must be the main policy regarding the protection of the environment."¹⁵⁰

¹⁴⁵ Joint Statement on "Human Rights and Climate Change," CEDAW, CESC, CMW, CRC, CRPD (Sept. 16, 2019).

¹⁴⁶ *Id*.

¹⁴⁷ Paris Agreement, art. 4(3).

¹⁴⁸ Statement, Committee on Economic, Social, and Cultural Rights, "Climate change and the International Covenant on Economic, Social, and Cultural Rights" (Oct. 8, 2018), www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=23691&LangID=E.

¹⁴⁹ *Id.* (citing art. 2.1 of the Paris Agreement).

¹⁵⁰ State Obligations in Relation to the Environment in the Framework of the Protection and Guarantee of Rights to Life and Personal Integrity—Interpretation and Scope of arts. 4.1 and 5.1, in Relation to arts. 1.1 and 2 of the American Convention of Human Rights, Advisory Opinion OC-23/17 Inter-Am. Ct. H.R., Human Rights and the Environment, ¶ 130 (Nov. 15, 2017) (Bearing in mind that, frequently, it is not possible to restore the situation that existed

179. Once environmental damage occurs, states have a duty to repair the damage and prevent further harm. The Committee recognized these principles in its General Comment 16, observing:

if children are identified as victims of environmental pollution, immediate steps should be taken by all relevant parties to prevent further damage to the health and development of children and repair any damage done.¹⁵¹

180. The prevention principle extends beyond a state's borders. As the OHCHR emphasized: "The negative impacts of climate change on children trigger obligations among *all* duty bearers to take action to protect *all* children from its actual and foreseeable adverse effects." Indeed, the Climate Change Convention, which all respondents have ratified, incorporates the transboundary principle in its preamble—reinforcing that states have extraterritorial responsibility for the adverse effects of their emissions:

... States have, in accordance with the Charter of the United Nations and the principles of international law . . . the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. 153

- 181. Reducing emissions at the highest possible ambition is the only way the respondents and other states can pursue efforts to prevent the domestic and transboundary human rights harms caused by climate change. The Committee's joint statement further explained that in reducing emissions, states:
 - should effectively contribute to phasing out fossil fuels,

before environmental damage occurred, prevention should be the main policy as regards environmental protection.").

¹⁵¹ CRC, General Comment 16, on State obligations regarding the impact of business on children's rights ¶31 (Feb. 2013).

 $^{^{152}}$ Rep. of the Office of the U.N. High Commissioner for Human Rights, Analytical Study on the relationship between climate change and the full and effective enjoyment of the rights of the child – Report of the Office of the United Nations High Commissioner for Human Rights, \P 30 A/HRC/35/13 (2017) (emphasis added).

¹⁵³ UNFCCC, preamble (1992).

- should promot[e] renewable energy and address[] emissions from the land sector, including by combating deforestation,
- must regulate private actors, including by holding them accountable for harm they generate both domestically and extraterritorially, and
- should as a mitigation measure to prevent further damage and risk, discontinue financial incentives or investments in activities and infrastructure which are not consistent with low GHG emissions pathways.¹⁵⁴
- 182. As demonstrated below, in Section IX, each respondent has violated their duty to prevent the foreseeable human rights harms caused by climate change by adopting carbon emission pathways that would lead to catastrophic global warming. Moreover, rather than prevent further harm, each respondent is actively promoting fossil fuel production and consumption, and/or encouraging or tolerating destructive land use such as deforestation.

B. The duty to cooperate internationally in the face of a global climate emergency.

- 183. The universal ratification of the Climate Change Convention confirms that climate change is a "common concern of humankind" and that "the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response." 155
- 184. International cooperation is also required under the Convention. As this Committee has recognized, "implementation of the Convention is a cooperative exercise for the states of the world." ¹⁵⁶ International cooperation is made explicit in Article 4, which provides that states shall implement economic, social, and cultural rights "to the maximum extent of their available resources and, where needed, within the framework of international co-operation."

¹⁵⁴ Joint Statement on "Human Rights and Climate Change" (Sept. 16, 2019).

¹⁵⁵ UNFCCC, preamble (1992).

¹⁵⁶ CRC, General Comment no. 5, General measures of implementation ¶60 (Nov. 27, 2003).

- 185. Confronting the climate crisis requires states to not only reduce their own domestic emissions, including those of non-state actors, 157 but also to cooperate internationally to reduce global emissions. States are thus obligated to "refrain from nullifying or impairing human rights in other countries" 158 and must cooperate internationally to ensure that *other* states are not impairing its ability to mitigate climate change. As Special Rapporteur John Knox pointed out, the "failure of States to effectively address climate change through international cooperation would prevent individual States from meeting their duties under human rights law to protect and fulfill the human rights of those within their own jurisdiction." 159
- 186. The Human Rights Committee has recognized the duty to protect against the life-threatening actions of other states: "States parties must take appropriate measures to protect individuals against deprivation of life by other States, international organizations and foreign corporations operating within their territory or in other areas subject to their jurisdiction." Similarly, the European Court of Human Rights recognized this duty in the landmark case *Ilascu v. Moldova and Russia*, where the Court found that Moldova had breached its positive obligations by failing to take all available measures in its negotiations with Russia to bring about the end the abuse of detainees by forces under Russian control. 161

¹⁵⁷ The Mavromattis Palestine Concessions, (Greece v. Britain), 1924 P.C.I.J., Ser. B, No. 2, 3, at 21 (Aug. 30, 1924) ("It is an elementary principle of international law that a State is entitled to protect its subjects, when injured by acts contrary to international law committed by another State, from whom they have been unable to obtain satisfaction through the ordinary channels. By taking up the case of one of its subjects and by resorting to diplomatic action or international judicial proceedings on his behalf, a State is in reality asserting its own rights - its right to ensure, in the person of its subjects, respect for the rules of international law.").

¹⁵⁸ Commentary on the Maastricht Principles, 14; Case concerning the Gabčíkovo-Nagymaros project (Hungary/Slovakia), I.C.J. 1997, ¶ 142.

¹⁵⁹ Human Rights Council, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, A/HRC/37/58 ¶57 (Feb. 1 2016).

¹⁶⁰ HRC, General Comment 36, on Article 6 of the International Covenant on Civil and Political Rights and on the Right to Life, ¶22 (2008).

¹⁶¹ Ilaşcu and Others v. Moldova and Russia, Judgment ([GC], App. no. 48787/99 2004 Eur. Ct. H.R. 2004§§ 348-352 (July 8, 2004). See also Manoilescu v. Romania, 2005-VI Eur. Ct. H.R. 357, 390, ¶ 101 ("even in the absence of effective control of a territory outside its borders, the State still has a positive obligation under Article 1 of the [European] Convention to take the

187. As demonstrated below in VII, the respondents' actions and omissions violate the duty to cooperate internationally by undermining climate action and failing to use all available legal, diplomatic, and economic means to influence other G20 member states to adopt emission reduction pathways that are in line with limiting warming to well below 1.5°C.

C. The duty to apply the precautionary principle and prevent lifethreatening consequences even in the face of uncertainty.

188. The obligation to respect and ensure the right to life in this context is informed by the precautionary principle, which is the legal expression of the common-sense approach that is it "better to be safe than sorry." The Climate Change Convention enshrines this principle, holding that all states

should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures . . . 162

- 189. The precautionary principle has particular significance for the rights of the child: "The cumulative effects of long-term environmental harm, such as climate change and the loss of biodiversity, increase over time, so that decisions taken today will affect children much more than adults." 163
- 190. Because of the delayed onset of the climate crisis's worst potential consequences, it is critically important that states cannot invoke scientific uncertainty as an excuse for inaction. And yet states can still invoke uncertainty in pernicious ways, despite the fact that there is no longer any scientific doubt as to the causes and effects of climate change. For example, a state may claim that it is impossible to determine with certainty whether its particular emissions have caused or will cause any given injury—since all states' emissions have merged in the atmosphere.

diplomatic, economic, judicial or other measures that it is in its power to take . . . to secure . . . the rights guaranteed by the Convention.").

¹⁶² UNFCCC, art. 3(3) (1992); *see also* UN Conference on Environment and Development, Rio Declaration on Environment and Development, Principle 15 U.N. Doc. A/CONF 151/26 Rev. 1 (Vol. 1) annex 1 (Aug. 12, 1992).

¹⁶³ Human Rights Council, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, A/HRC/37/58 ¶57 (Feb. 1 2016).

- Or, states may argue it is uncertain if any given reduction in its emissions will make a meaningful difference in global levels of CO₂.
- 191. But it is precisely these sorts of excuses, premised on uncertainty, that are disallowed under the Climate Change Convention and must not be permitted under the Convention if the child's inalienable rights are to be protected.

D. The duty to ensure intergenerational equity for children and for posterity.

- 192. Two foundational principles of the Convention are at stake in the climate crisis: non-discrimination and the prioritization of the best interests of the child. Both principles are undermined by delaying climate-change mitigation, because delay shifts the burden onto children and future generations, with irreversible human rights consequences. Costs that could have been minimized through prevention become astronomical once environmental damage is inflicted and must be repaired or adapted to, if adaptation is even possible.
- 193. The Climate Change Convention enshrines the principle of intergenerational equity, which "places a duty on current generations to act as responsible stewards of the planet and ensure the rights of future generations to meet their developmental and environmental needs." ¹⁶⁴ The notion that states are stewards of public commons held in trust for the good of future generations has been recognized by human rights treaty bodies. ¹⁶⁵ And it is deeply rooted in the "public trust" doctrine, which has its origins in Justinian's *Corpus Juris Civilis*, the 6th century codification of Roman law. ¹⁶⁶
- 194. The notion that states must act now to safeguard posterity is incorporated into domestic law around the world. For example, the German

¹⁶⁴ OHCHR, Analytical Study on Climate, ¶35; see UNFCCC, art. 3(1) ("The Parties should protect the climate system for the benefit of present and future generations of humankind . . ."); Paris Agreement, preamble.

¹⁶⁵ See, e.g., CESCR, General Comment 15, The Right to Water (arts. 11, 12), UN ESCOR, CESCR, 29th Sess. Agenda Item 3 U.N Doc. E/C.12/2002/11 at ¶ 11 (directing states to take comprehensive measures to ensure there is safe drinking water for present and future generations).

¹⁶⁶ See Helen Althaus, Public Trust Rights 23 (1978).

Constitution recognizes "responsibility toward future generations." The U.S. Constitution expressly aims to "secure the Blessings of Liberty to ourselves and our Posterity." Indeed, intergenerational equity is the bedrock of sustainable development, as expressed in the Rio Declaration: "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations." Indeed, intergenerations of present and future generations." Indeed, intergenerations are to equitably meet developmental and environmental needs of present and future generations." Indeed, intergenerations are to equitably meet developmental and environmental needs of present and future generations.

VII. Each of the respondents is knowingly causing and perpetuating the climate crisis.

195. Each respondent helped cause the climate crisis, and is still perpetuating it, knowing that it endangers children's inalienable rights. Despite that knowledge, each is undermining the global collective effort to solve the crisis. Each continues to promote fossil fuels and continues to emit hazardous levels of GHG, damaging the environment at home and abroad in defiance of the precautionary principle. And each continues to acquiesce when other major-emitting states and private industries pollute the Earth's atmosphere.

A. The respondents have all known about the deadly and foreseeable consequences of climate change for decades.

Every bit of evidence I've seen persuades me we are on a course leading to tragedy. I don't agree with those who say the status quo is the answer.

—UN Conference on Environment and Development Secretary General Maurice F. Strong, 1992.

¹⁶⁷ See, e.g., Basic Law of the German Federal Republic, art. 20a (added 1994), English trans available at: https://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html ("Mindful also of its responsibility toward future generations, the state shall protect the natural foundations of life and animals by legislation and, in accordance with law and justice, by executive and judicial action, all within the framework of the constitutional order."). Similarly, the New York Appellate Division cited Roman law for the proposition that "conservation of resources is intrinsically good and necessary for the continuation of society" and that environmental regulation of private property meets the government's obligation to protect natural resources for future generations. W.J.F. Realty Corp. v. State, 672 N.Y.S.2d 1007, 1012 (N.Y. App. Div. 1998).

¹⁶⁸ Constitution of the United States, 1789, preamble.

¹⁶⁹ Rio Declaration on Environment and Development (1992), Principle 3.

- 196. Each respondent has known about the threat of anthropogenic climate change—and the need to curb emissions—for decades. 1988 was the watershed year when climate change was recognized as a global threat. The IPCC was established that year. 1988 was also the year the UN General Assembly called for "timely action," noting "with concern that the emerging evidence indicates that continued growth in atmospheric concentrations of 'greenhouse' gases could produce global warming with an eventual rise in sea levels, the effects of which could be disastrous for mankind if timely steps are not taken at all levels." ¹⁷⁰
- 197. Since then, public awareness of the risks climate change poses has only deepened. In 1990, the IPCC's First Assessment Report concluded "with confidence" that "the steady anthropogenic emissions into the atmosphere represent a significant disturbance of the natural carbon cycle."
- 198. Even at this early date, the warnings were clear. In 1990, the IPCC projected global warming of 1°C by 2025—a line already passed. It warned that, among other impacts, climate change could cause increased water shortages, increased vector-borne diseases in higher latitudes, and "in coastal lowlands such as in Bangladesh, China and Egypt, as well as in small island nations, inundation due to sea-level rise and storm surges" leading to "significant movements of people." 172
- 199. Two years later, Brazil hosted the 1992 Rio Earth Summit, where the Climate Change Convention was opened for signature. In over two decades of global accords, protocols, and platforms—Berlin, Kyoto, Copenhagen, and now Paris—the respondents have recognized that climate change threatens children and future generations. ¹⁷³ In 2016, each respondent signed the Paris Agreement and committed to hold global warming well below 2°C by 2100 and to pursue efforts to limit it to 1.5°C. Then on October 8, 2018, when the IPCC issued its Special

¹⁷⁰ Protection of global climate for present and future generations of mankind: resolution / adopted by the General Assembly, UN Doc. A/RES/43/53, 6 December 1988.

¹⁷¹ IPCC, Climate Change: The IPCC 1990 and 1992 Assessments, First Assessment Report, Overview (1990) at 52.

¹⁷² IPCC, First Assessment Report, Policymaker Summary of Working Group II (Potential Impacts of Climate Change) (1990) at 89.

¹⁷³ See *supra* at notes 137-139.

Report on Global Warming of 1.5°C, the respondents learned that hundreds of millions of lives could be saved by limiting warming to no more than 1.5°C—and that even more could be saved by limiting warming further.

- 200. These treaties were important steps in securing recognition from the respondents and other states that the climate crisis is a "common concern of humankind."¹⁷⁴ But none of these efforts has secured the drastic reduction in carbon emissions needed to avert further disaster. In the twenty years after the Kyoto Protocol was signed, the world produced more emissions than in the twenty years before.¹⁷⁵
- 201. The respondents have thus known for decades that every metric ton of CO₂ that they emitted or permitted was adding to a crisis that transcends all national boundaries and threatens the rights of children everywhere.
- B. Despite their decades-long knowledge, each respondent has breached its human rights duties by causing and perpetuating the climate crisis and undermining international cooperation.

We expect more than words on paper and promises. We expect action. Action on a big scale. And we expect action today, not tomorrow.

— Getrude Clement, 16-year-old Tanzanian youth representative at Paris Agreement Signature Ceremony, 2016

- 1. The tragedy of the commons: The pursuit of short-term self-interest is undermining the international cooperation needed to mitigate climate change.
 - 202. The respondents, as parties to the universally ratified Climate Convention, have recognized for decades that "the global nature of climate change calls for the widest possible cooperation of all countries."¹⁷⁶
 - 203. Every country's emissions matter in the race to reverse global warming. To fulfill their human rights duties, states must reduce their domestic emissions *and* cooperate internationally to decarbonize the global economy. For decades, the excuse that no site-specific harm can be traced to any particular emission or country, and thus that no state bears

¹⁷⁴ UNFCCC, preamble.

¹⁷⁵ Uninhabitable Earth, *supra* note 18, at 13.

¹⁷⁶ UNFCCC, preamble.

responsibility, has been used to justify inadequate climate action. This excuse has turned the climate crisis into what economists call a "tragedy of the commons." This is where a common resource, like Earth's life-sustaining atmosphere, is spoiled by individual actors, such as individual states, acting in their individual, short-term economic interests, ruining everyone's long-term collective interest.¹⁷⁷

- 204. Climate change is the ultimate tragedy of the commons. The classic example is where farmers overgraze a common pasture until it can no longer sustain anyone's herd. With climate change the dynamic is the same. The Earth has a finite carbon budget—the amount of GHG that can accumulate in the atmosphere without destabilizing the current climate.¹⁷⁸ If enough states exceed their carbon budget, they spoil the common atmosphere—and undermine the effort to decarbonize it.
- 205. Acting in their self-interest, each state has an incentive to delay decarbonizing and reap the short-term economic and political benefits of preserving the *status quo*.¹⁷⁹ This is particularly true for many developed countries, since the most damaging near-term effects of warming are felt most acutely in developing countries and small island states. Germany, for example, is less incentivized to decarbonize its auto industry when people in the Marshall Islands bear the worst impacts first.
- 206. Germany also has less incentive to decarbonize without delay when it can point to France—who as demonstrated below is decarbonizing with delay. The only way for the world to decarbonize the global economy and limit or reduce atmospheric concentrations of GHG is for each state to stay within its carbon budget and for each to ensure that other states are complying as well. For this collective effort to succeed, the most influential states must not shirk these duties.
- 207. Regional leaders and major economies—like the respondents—have a unique responsibility to mitigate climate change, because they exercise an outsized influence. The G20, to which each respondent is a member,

¹⁷⁷ Garrett Hardin, "The Tragedy of the Commons", 162 Science3859 at 1243–1248 (Dec. 13 1968).

¹⁷⁸ Rogeli Report 2019 at 4.

¹⁷⁹ Jouni Paavola, "Climate Change: The Ultimate Tragedy of the Commons?" in Property in Land and other Resources at 419-20 (2012).

- make up 84% of all global emissions. ¹⁸⁰ If the G20 does not decarbonize at a rate and scale established as necessary by available science, collective climate action will unravel.
- 208. The respondents' cooperation—or defection—shapes the success or failure of climate action. If they meet or exceed climate action targets, they signal to other states that long-term interests in the global commons will be protected. If they fail, they encourage other states to deplete the remaining carbon budget.
- 209. This ability to influence international cooperation makes the respondents' impact on climate change greater than their actual share of emissions. Germany represents only 2% of current global emissions; France 1%. 181 Yet each can influence other states through trade, aid, and diplomacy, amplifying their ability to shape global emissions. This is equally true for Brazil (2.2%), Turkey (1.1%), and Argentina (0.7%).
- 210. Because the respondents play an essential role in building the international cooperation on climate change, they have a duty to use their influence to protect children from environmental threats caused by the world's other major emitters, especially the top four, which account for 58% of all emissions: China (26.3%), the U.S. (13.5%), the E.U. (9.4%), and India (7.3%). 182

Table 1: Overview of current and projected emissions per country or country group, as well as corresponding emission levels in 2030 consistent with limiting global warming to below 1.5°Cor 2°C						
	% share of globe in 2016	Implied warming by 2100 if whole world implements comparable emissions reductions†				
[Unit]	%	Following current policy	Following NDCs‡			
Argentina	0.8%	exceeding 4°C	below 4°C			
Brazil	2.3%	below 3°C	below 3°C			
China	26.3%	below 4°C	below 4°C			
France#	1.0%	below 4°C	below 4°C			
Germany#	1.9%	below 4°C	below 3°C			
India	7.3%	below 2°C	below 2°C			
Turkey	1.1%	exceeding 4°C	exceeding 4°C			
United States*	13.5%	exceeding 4°C	exceeding 4°C			
European Union	9.4%	below 3°C	below 3°C			
G20 (incl. EU)	84.0%	NR	NR			
Marshall Islands	0.0%	NR	NR			
Global	100.0%	See Table 2	See Table 2			

¹⁸⁰ Rogelj Report 2019 at 7, Table 1.

¹⁸¹ *Id*.

¹⁸² *Id*.

Table 1: Excerpt from Rogelj Report Table 1

- 211. To reverse global warming, and prevent a global tragedy of the commons, the respondents, and all other states, must reduce their domestic emissions and contribute to international cooperation. Failing to do either has grave consequences.¹⁸³
- 212. In order to respect, protect, and fulfill children's rights all states—especially leading economies, major carbon emitters, and regional leaders like respondents—must take action on two fronts: reduce emissions and cooperate internationally. To date, however, each of the respondents is failing on both fronts.

2. Each respondent has failed to reduce its emissions at the "highest possible ambition."

213. Each respondent is delaying the steep cuts in carbon emissions needed to protect the lives and welfare of children at home and abroad. NDCs under the Paris Agreement set targets that are expressed in the estimated total annual emission of carbon dioxide equivalents ("CO2e") (*i.e.*, all GHG), measured in megatons ("Mt") meaning a million tons. Climate scientists use statistical models to calculate how certain amounts of GHG emissions will impact the global average temperature. A "fair share" model is used to determine how much global warming is consistent with a single state's emission reduction pathway. This "implied warming" is expressed as the amount of warming that would result if all other governments were to implement comparable reductions given their different circumstances. ¹⁸⁴

¹⁸³ In the context of preventing genocide, the International Court of Justice stressed the importance of each state's cooperation in collective prevention: "It is irrelevant whether the State whose responsibility is in issue claims, or even proves, that even if it had employed all means reasonably at its disposal, they would not have sufficed to prevent the [foreseeable harm]. . . [T]his is irrelevant . . . since the possibility remains that the combined efforts of several States, each complying with its obligation to prevent, might have achieved the result . . . which the efforts of only one State were insufficient to produce." *Case Concerning App. of the Convention on the Prevention and Punishment of the Crime of Genocide Bosnia, Judgement International Court of Justice, Application of the Genocide Convention (Bosnia and Herzegovina v. Serbia and Montenegro)*, Judgment, 2007 I.C.J. Rep. 43,¶ 430 (Feb. 26), https://www.icj-cij.org/files/case-related/91/091-20070226-JUD-01-00-EN.pdf.

¹⁸⁴ The estimate of global warming implied by a single country's emissions is based on an assessment of a broad literature of international fairness approaches carried out by the Climate Action Tracker research consortium (https://climateactiontracker.org/methodology/comparability-of-effort/). By comparing a country's projected emissions with the equity-based range consistent with limiting warming to below 1.5°C, 2°, 3°C or higher levels, an indicative level of global warming can be inferred

- 214. Based on these models, scientists estimate that annual global GHG emissions under current policies will reach 58,983 MtCO₂e (58,983 million tons) in 2030 and this amount corresponds to 3.1-3.5°C of warming by 2100.185
- 215. As demonstrated below, not one of the respondents is on an emissions pathway that is consistent with keeping heating under 3°C much less under 1.5°C, a limit that would still subject millions to poor health and increased mortality. Each respondent has set inadequate emission reduction targets in its Paris Agreement pledges—and then failed to even meet these inadequate goals.
- 216. **ARGENTINA**. Under the Paris Agreement, Argentina submitted an NDC pledging to reduce emissions to 422 million tons by 2030. If all the world's governments implemented comparable reductions, it would lead to 3-4°C of global warming by 2100. Even worse, Argentina's current policies are on a much higher emission pathway than its NDCs, reaching 490 million tons in 2030, with implied warming exceeding 4°C. ¹⁸⁶

Current Policy 2030	Unconditional NDC 2030	<2.0°C	<1.5°C	Implied warming by 2100	
MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	Following current policy	Following NDCs
490	422	256	205	exceeding 4°C	below 4°C

Table 2. Argentina: Projected emissions, emissions required for Paris Agreement targets, and implied warming.

217. Argentina's emissions are the result of deliberate policy choices. The largest share of Argentina's emissions come from the energy sector. Yet Argentina continues to subsidize fossil fuels. In 2018, an estimated 93% of total public energy investments went to coal, oil and gas projects while virtually no financing went to renewable energy projects (such as wind and solar). Argentina has no sectoral plan to decarbonize its economy by 2050; instead, the government intends to further develop the natural gas industry and make this fuel the main energy source in the

assuming all other countries implement emissions reductions that are considered to be similarly ambitious given their different circumstances.; Rogelj Report 2019 at 7, Table 1.

¹⁸⁵ Rogelj Report 2019 at 7, Table 1.

¹⁸⁶ Rogelj Report 2019 at 7, Table 1.

country. At the same time, cattle farming is a sizable driver of emissions, producing methane emissions and stressing forests through the encroachment of grazing lands. Yet Argentina has no policy instruments in place to plan for mitigating livestock emissions.

218. **BRAZIL.** In its NDC, Brazil pledged to reduce annual emissions to 890 million tons by 2030, a pathway consistent with 2-3°C of global warming, if all countries were to make comparable reductions. But Brazil's current policies are projected to produce 1119 million tons of emissions in 2030—an excess of 229 million tons. And those projections were made before President Jair Bolsonaro took office in January 2019 and launched the roll-back of Brazil's once-strict environmental protections, which will likely lead to even higher emissions.

Current Policy 2030	Unconditional NDC 2030	<2.0°C	<1.5°C	Implied warming by 2100	
MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	Following current policy	Following NDCs
1119	890	744	432	below 3°C	below 3°C

Table 3. Brazil: Projected emissions, emissions required for Paris Agreement targets, and implied warming.

219. Brazil has been contributing to global warming through an active campaign of dismantling environmental regulations and enforcement. Brazil's current policies under President Bolsonaro, as well as policies undertaken at the end of the previous administration's term, have increased deforestation and emissions. Those new policies include: cutting 95% of the Ministry of Environment's budget for climate change related activities; transferring the body responsible for certifying indigenous territory from the National Indian Foundation to the Ministry of Agriculture; easing the rules for converting environmental fines into alternative compensations; changing the Forest code to extend deadlines for enforcement measures; and abolishing most committees and commissions for civil participation and social control in the government.¹⁸⁷ At the same time, Brazil's fossil fuel subsidies as of 2016

¹⁸⁷ Climate Action Tracker, https://climateactiontracker.org/countries/brazil/.

- were \$16.2 billion USD, doubling since 2007. 66% of Brazil's energy investments went to fossil fuels, and only 21% to renewable energy.
- 220. Brazil's rollbacks are already starting to have a damaging effect. In 2018, Brazil recorded the loss of 1.3 million hectares of tropical primary rainforests—the highest recorded loss in the world—mostly due to deforestation of the Amazon. And just this year, the Amazon has seen a record number of forest fires, with a detected 83% increase this summer in forest fires from the same time period in 2018. He Amazon acts as a large carbon sink for the entire world, absorbing a quarter of carbon taken up forests around the world annually. Burning the Amazon has a direct transboundary effect on all countries and all children, who depend on its ability to remove carbon from the atmosphere.
- 221. **FRANCE**. Although France has been a vital leader in negotiating international climate action, its domestic emissions tell another story. France's emissions, under current policies, are consistent with 3-4°C of global warming, if all governments made comparable reductions. ¹⁹⁰ If these policies continue, France's projected annual emissions in 2030 (395 million tons) will be **more than 10 times** what its fair share would need to be in a scenario of keeping global warming under 1.5°C (37 million tons). ¹⁹¹

Current Policy 2030	Unconditional NDC 2030	<2.0°C	<1.5°C	Implied war	ming by 2100
MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	Following current policy	Following NDCs
395	403	154	37	below 4°C	below 4°C

Table 4. France: Projected emissions, emissions required for Paris Agreement targets, and implied warming.

222. France set a long-term, domestic decarbonization strategy, aiming to reach carbon neutrality by 2050, but has so far failed to meet its targets.

¹⁸⁸ Climate Analytics Report 2019 at 50-52.

¹⁸⁹ Mahita Gajana, A Record Number of Fires Are Currently Burning Across the Amazon Rainforest, Time (Aug. 21, 2019) https://time.com/5657387/brazil-amazon-forest-fires-surge/.

¹⁹⁰ *Id*.

¹⁹¹ Rogelj Report 2019 at 7, Table 1.

In June 2019, France's independent High Council for the Climate reported that France is not on track to meet its 40% emissions reductions target for 2030, and, without a change in policy, will not meet its carbon neutrality target for 2050. 192 France adopted an annual carbon budget of 442 million tons of CO2e for 2015-2018, but then exceeded that budget by some 72 million tons. 193 Like carried-over interest, that excess amount had to be factored into the carbon budget for 2019-2023. 194 If, as anticipated, France again goes over-budget, it will keep carrying the balance forward, compounding it, and requiring ever more drastic cuts in emissions in the future. In short, France is delaying decarbonization.

- 223. In order to make up for exceeding its carbon budget, France will need to make more drastic emission reductions in the transport sector, France's biggest single source of carbon pollution, representing 38% of energy emissions. France will also need to shift greater investments into renewable energy, energy-efficient construction, and electric transport, among others. Yet on this front, a study commissioned by the French Environment and Energy Management Agency concluded in 2018 that France had massively delayed making the public investments in climate mitigation necessary to achieve its emission reduction targets: "the delay taken between 2016 and 2018 represents 40 to 90 billion euros in missing investments. To make up for this delay in the period 2019 to 2023 and cover initial needs, it will be necessary to invest between 55 and 85 billion euros each year." In short, France's delay in decarbonizing is inconsistent with the 1.5°C goal announced in Paris, and inconsistent with France's international climate leadership.
- 224. **GERMANY**. Like France, Germany has played a leading diplomatic role in international climate action but has failed to lead by example. Even on paper, Germany's emission-reduction targets are inadequate.

¹⁹² Climate Analytics Report 2019 at 195; Haut conseil pour le climat, Agir en cohérence avec les ambitions, Rapport annuel Juin 2019, https://www.hautconseilclimat.fr/wp-content/uploads/2019/06/hcc_rapport_annuel_2019.pdf.

¹⁹³ Projet de SNBC de décembre 2018, at 35., https://www.ecologique-solidaire.gouv.fr/sites/default/files/Projet%20strategie%20nationale%20bas%20carbone.pdf.

¹⁹⁴ Id.

¹⁹⁵ Climate Analytics Report 2019 at 194.

¹⁹⁶ "Panorama des financements climat, Edition 2018", Institute for Climate Economics (I4CE) at 2, https://www.i4ce.org/wp-core/wp-content/uploads/2018/11/I4CE-Panorama-des-financements-climat-résumé-2018-FR.pdf.

Germany's domestic 2030 mitigation target is consistent with warming of 2-3°C, if all countries made comparable commitments, while its current policies exceed that target, and would be in line with 3-4°C. If these policies continue, Germany's projected annual emissions in 2030 (735 million tons) will be nearly 13 times what its fair share would need to be in a scenario of keeping global warming under 1.5°C (57 million tons).

Current Policy 2030	Unconditional NDC 2030	<2.0°C	<1.5°C	Implied warming by 2100	
MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	Following current policy	Following NDCs
735	553	265	57	below 4°C	below 3°C

Table 5. Germany: Projected emissions, emissions required for Paris Agreement targets, and implied warming.

225. Under its domestic targets, Germany aims to cut emissions by 40% by 2020, 55% for 2030, and at least 70% for 2040, compared to 1990 levels. 197 In May 2019, however, the German government announced that it had overshot its 2020 target by 8%, mainly due to the remaining large share of coal in power generation and rising transport emissions. 198 Missing the target results in a massive surplus in emissions, adding an additional 100 million tons of CO2e to an already growing surplus. 199 The balance is carried forward and grows: It is estimated that by 2030, Germany will have emitted an excess 1.1 billion tons beyond its carbon budget. 200 Thus, in order to meet the 2030 and 2050 targets, Germany must not only reduce ongoing emissions, but also compensate for the

¹⁹⁷ Aktionsprogramm Klimaschutz 2020 Kabinettsbeschluss vom 3. Dezember 2014; Klimaschutz- plan 2050 [English Version] Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, Climate Action Plan 2050, Principle and goals of the German government's climate policy, at 28, https://bit.ly/2C8wGAz.

¹⁹⁸ Report, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety of 1 May 2019, https://bit.ly/2kNpaGK at 28; Brown to Green Report, Germany at 9, https://bit.ly/2ksxc7y.

¹⁹⁹ Niklas Höhne, et al., 1,5°C: Was Deutschland tun muss, März 2019, https://newclimate.org/wp-content/uploads/2019/03/Deutschland 1.5 Web.pdf.

²⁰⁰ Id.

- surplus that keeps accruing. Making up for this surplus will require even steeper reductions.
- 226. These reductions must come from the two sectors generating the most emissions: the energy sector, especially power generation, and transport.²⁰¹ Yet the German federal government has not adopted any concrete measures to make up for the surplus. While the government is acting on the German Coal Commission's recommendation to phase out coal power generation by 2038, climate models indicate that delaying the phase-out until then could breach a Paris Agreement-compatible pathway by more than a billion tons of CO₂.²⁰² At the same time, Germany continues to heavily subsidize fossil fuel consumption through, for example, tax relief on diesel (8 billion euros) and exemptions for company cars (3 billions).²⁰³ These actions are inconsistent with holding warming to below 1.5°C.
- 227. TURKEY. Between 2005 and 2016, Turkey's GHG emissions increased by 49%. ²⁰⁴ Turkey signed, but has not ratified, the Paris Agreement and submitted an "Intended" NDC pledging a 21% economy-wide reduction in emissions. That pledge was not kept. Emissions are instead projected to increase continuously by 2030. Under these policies, Turkey's emissions are in line with exceeding 4°C of global warming by 2100, if all countries made comparable reductions.

Current Policy 2030	Unconditional NDC 2030	<2.0°C	<1.5°C	Implied warming by 2100	
MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	MtCO₂e per year	Following current policy	Following NDCs
853	999	434	357	exceeding 4°C	exceeding 4°C

 $^{^{201}}$ Brown to Green Report, Germany, 2018 at 3, https://www.climate-transparency.org/wp-content/uploads/2019/01/BROWN-TO-GREEN_2018_Germany_FINAL.pdf.

²⁰² Carbon Brief, Analysis: How far would Germany's 2038 coal phaseout breach Paris climate goals?, Jan 29, 2019, https://www.carbonbrief.org/analysis-how-far-would-germanys-2038-coal-phaseout-breach-paris-climate-goals.

²⁰³ Ipek Gençsü and Florian Zerzawy, Phase-out 2020: monitoring Europe's fossil fuel subsidies: Germany, Climate Action Network at 2-3 (Sept. 2017), https://www.odi.org/sites/odi.org.uk/files/resource-documents/11778.pdf.

²⁰⁴ OECD, Environmental Performance Reviews: Turkey (2019), 38, https://www.oecd.org/turkey/oecd-environmental-performance-reviews-turkey-2019-9789264309753-en.htm..

228. Coal is a significant driver of these emissions. Far from keeping fossil fuels in the ground, Turkey has implemented a series of subsidies for coal mines and coal-fired power plants. As of 2017, 88% of Turkey's energy supply comes from fossil fuels, and coal accounts for a third of that. Investments in coal mining and coal-fired power plants receive subsidies including VAT exemption, customs duty exemption, lowinterest loans, and social security breaks.²⁰⁵ Coal subsidies also take the form of environmental exemptions: not a single environmental impact assessment of a coal-fired power plant was disapproved between 1999 and 2015. Indeed, there is often a symbiotic relationship between the Turkish government and the coal industry: coal is largely extracted by three state-owned companies and a growing number of private companies, some of which operate through a public-private partnership scheme, in which management is privatized in exchange for royalties to the Turkish government and agreements to provide coal to the stateowned energy company.²⁰⁶

3. Each respondent has failed to protect children from the acts of the major carbon emitters.

229. Avoiding a tragedy of the commons also requires the respondents to ensure that other states are not racing to deplete the carbon budget. This is more than a diplomatic goal; it is a human rights imperative. The respondents cannot fully protect children from the climate crisis without addressing the main carbon polluters: the major emitting states and business entities, all of whom fall within the G20, who are collectively responsible for 84% of global emissions.²⁰⁷ Roughly 58% of global emissions come from four G20 members: China, the U.S., the E.U., and India.²⁰⁸

²⁰⁵ Sevil Acar, Lucy Kitson, & Richard Bridle, Subsidies to Coal and Renewable Energy in Turkey, Inst. Int'l for Sustainable Redevelopment at 8 (March 2015), https://www.iisd.org/gsi/sites/default/files/ffsandrens_turkey_coal_eng.pdf.

²⁰⁶ See, Eurocoal, the Voice of Coal in Europe, https://euracoal.eu/info/country-profiles/turkey/.

²⁰⁷ Rogelj Report 2019 at 7, Table 1.

²⁰⁸ UNEP Gap Report 2018 at 6-7.

- 230. The influence G20 members exert over the climate crisis can also be measured by the carbon footprint of the private industries over which they exercise jurisdiction. Just 90 fossil-fuel and cement producers are responsible for 63% of all GHG emitted from 1751 to 2010: 914 billion tons. ²⁰⁹ Of these, the top 50 investor-owned entities are all nationals of G20 member states. ²¹⁰
- 231. The G20 states and the industries they control have the power to decarbonize the global economy by shifting to sustainable energy and keeping fossil-fuels in the ground. As G20 members, the respondents have diplomatic, legal, and economic tools at their disposal. Yet none of the respondents have used, much less exhausted, all reasonable measures to protect children's rights from the major emitters.
- 232. The G20 is a starting point. The 2019 G20 Summit in Osaka offered a political forum where the world's major economies could exercise international cooperation to confront climate change. The petitioners acknowledge that among the respondents, France pushed for more ambitious climate action at the summit,²¹¹ but the U.S. and other countries quashed France's effort. In the end, the summit failed to secure a commitment from all members to reduce emissions to net-zero by 2050. Indeed, the G20 is ramping up coal finance, spending some \$63.9 billion annually on coal, despite committing a decade ago to phase out fossil fuel subsidies.²¹²
- 233. Failure at the G20 summit only highlights the need for each of the respondents to take enforceable measures under international and domestic law to confront the major emitters. For example, international arbitration is a classic inter-state complaint mechanism for transboundary environmental damage. Yet none of the respondents have

²⁰⁹ Richard Heede, *Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010*, 122 Climatic Change at 122:229–241 (2014); Richard Heede, Carbon Majors: Accounting for carbon and methane emissions 1854-2010, Methods & Results Report (2014), https://bit.ly/2kgH4RJ.

²¹⁰ Heede, *Tracing anthropogenic carbon dioxide*, at Supplemetary Materials, Table 4, https://bit.ly/2lW71q7.

²¹¹ Adam Nossiter, *Macron Calls Climate Change a 'Red Line' Issue at G20, Rebuking Trump*, N.Y. Times (Jun. 26, 2019), https://nyti.ms/2mgJoZM.

²¹² Han Chen, *Japan G20 Lacked Ambition on Climate Change & Coal Phaseout*, National Resources Defense Council Blog (Jul. 15, 2019), https://on.nrdc.org/2miwDhl.

- sought to arbitrate claims against any major emitter, or exercise other forms of diplomatic protection.²¹³
- 234. The U.S.' reversal on climate mitigation is a stark example of the global threat to children's rights and lives. The U.S. is the world's second largest emitter of GHG, contributing 13.5% of global emissions in 2016.²¹⁴ Those emissions will only get worse. The Trump Administration has disregarded scientific consensus and instead has taken actions which raise the amount of deadly carbon pollution emitted by the U.S. across international borders. Since 2017, the U.S. government has announced its withdrawal from the Paris Agreement and the rollback of six federal environmental rules essential for mitigating climate change. 215 At the same time, the U.S. government is ramping up fossil-fuel subsidies, opening Alaska's Arctic National Wildlife Refuge to oil and gas development, and giving \$25 billion in direct one-time benefits to oil and gas companies through tax reforms.²¹⁶ The regulation rollbacks alone would lead to an estimated annual increase of more than 400 million metric tons of CO₂e emissions²¹⁷ and represent a significant threat to children's rights inside and outside the United States, triggering an obligation among the respondents, and other states, to protect children's lives from these third-party harms.
- 235. In sum, each of the respondents are undermining international cooperation on climate change through emissions gaps and accountability gaps. They are failing to lead by example in their emissions reductions. And they are failing to use all reasonable means

²¹³ In contrast, state and local governments in the United States have brought legal challenges against the federal government's climate rollbacks. Lisa Friedman, "States Sue Trump Administration Over Rollback of Obama-era Climate Rule," NY Times (Aug. 13, 2019), https://www.nytimes.com/2019/08/13/climate/states-lawsuit-clean-power-ace.html.

²¹⁴ Climate Analytics Report 2019 at 163.

²¹⁵ Climate & Health Showdown in the Courts: State Attorneys General Prepare to Fight, NYU School of Law, State Energy & Environmental Impact Center, Special Report, (March 2019), https://www.law.nyu.edu/sites/default/files/climate-and-health-showdown-in-the-courts.pdf.

²¹⁶ Coady et al., "Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates, IMF Working Paper, WP/19/89, at 23 (May 2019), https://www.imf.org/~/media/Files/Publications/WP/2019/WPIEA2019089.ashx; Antonia Juhasz, "Inside the Tax Bill's \$25 billion oil company bonanza," Mar. 27, 2018, https://psmag.com/economics/tax-bill-oil-company-bonanza.

²¹⁷ Climate Analytics Report 2019 at 163-65.

to engage the major emitters in international efforts to mitigate climate change. Meanwhile, the carbon budget is being depleted, like a pasture overgrazed. This tragedy of the commons has real victims: children like the petitioners, who suffer the life-long consequences of the respondents' decisions to value short-term gain over long-term sustainability.

4. Each respondent's contributions to climate change has caused and continues to cause the petitioners' injuries.

- 236. Each of the respondents has contributed to causing the climate crisis through their past and present emissions. The cumulative sum of the respondents' historical emissions show that they are major emitters, responsible for a significant share of today's concentration of GHG in the atmosphere. Each of the respondents ranks in the top 50 historical emitters since 1850, based on fossil fuel emissions: Germany ranks 5th, France 8th, Brazil 22nd, Argentina 29th, and Turkey 31st. When landuse, such as deforestation, is factored in, Brazil surpasses France in its historical share. ²¹⁹
- 237. These emissions continue to grow. A global scientific consensus—reflected in years of IPCC reports—establishes that the respondents are currently emitting at levels that are damaging the climate, harming children's health, and jeopardizing their lives.
- 238. The injuries the petitioners have incurred, and the life-long threats they face, are foreseeable harms that each respondent has known about for decades. In 1990, the IPCC's first-assessment report warned that global warming "may produce adverse impacts on air quality such as increases in ground-level ozone in some polluted urban areas." It stated the same with "very high confidence" in 2014. Twenty nine years after the first IPCC report, Petitioner Debby Adegbile is repeatedly hospitalized in

²¹⁸ Baumert, et al., Navigating the Numbers Greenhouse Gas Data and International Climate Policy, World Resources Institute at 32 (2005), http://pdf.wri.org/navigating_numbers.pdf.

²¹⁹ Id. at 33.

²²⁰ IPCC, Policymaker Summary of Working Group II (Potential Impacts of Climate Change) (1990) at 88.

²²¹ IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, p. 16.

Lagos with asthma attacks from air pollution aggravated by heat. While it is true that no molecule of CO₂ can be traced from Lagos to a coal-fired plant in Germany, the fact remains that Debby suffers from the precise injuries, and under the precise environmental conditions that were identified in the IPCC's climate impact assessments. The same is true for Ranton Anjain, who contracted dengue fever during the 2019 dengue emergency in the Marshall Islands—29 years after the IPCC forecast that climate change had the "potential for increase and reintroduction of vector-borne diseases," singling out dengue.²²²

- 239. The same is true for each petitioner—the injuries they suffer today were predicted years ago as likely outcomes of the global warming created by the respondents and other states. The respondents were aware of these risks then, and they are aware now that the foreseeable risks to the petitioners' human rights will worsen as the world gets warmer. The petitioners' injuries are documented in Appendix A. The impacts on the petitioners' countries and regions are documented in Appendices C and D. And the conduct of the respondents that caused these impacts and injuries is documented in Appendices B and C.
- 240. Human rights law holds states responsible for jointly causing a violation of rights—joint responsibility is, for example, inherent in the concept of complicity and the duty to protect individuals against third-party harms.²²³ The respondents have individually and jointly caused and perpetuated climate change. And they have individually and jointly caused, and are perpetuating, the petitioners' injuries.

VIII. The petitioners are within each respondent's jurisdiction as victims of the foreseeable consequences of respondents' domestic and cross-border contributions to climate change.

241. Article 2 of the Convention provides that "States parties shall respect and ensure the rights" of "each child within their jurisdiction."²²⁴ Certain

²²² IPCC, Policymaker Summary of Working Group II (Potential Impacts of Climate Change) (1990) at 102, 105.

²²³ See HRC, General Comment 36, ¶ 22.

²²⁴ The Convention, art. 2. It should be noted that there are two significant differences between the scope of application provisions of the ICCPR and the Convention that lend support to giving the Convention's obligations a broader scope. First, Article 2 of the Convention does not mention the word "territory". Second, rather than referring to each individual state party's jurisdiction, as with Article 2 of the ICCPR's reference to "its jurisdiction", the Convention

of the petitioners are within the jurisdiction of certain respondents by virtue of their nationality or residence: Chiara Sacchi is a citizen of Argentina; Catarina Lorenzo is a citizen of Brazil; Iris Duquesne is a citizen of France; and Raina Ivanova is a resident of Germany. All petitioners, however, are within the jurisdiction of each respondent because the petitioners are all victims of the foreseeable consequences of the carbon pollution knowingly emitted, permitted, or promoted by each respondent from within their respective territory.

242. It is well established under international human rights law that a state's jurisdiction extends beyond its territorial boundaries to territories and persons within its power or over which it has control.²²⁵ A state's jurisdiction also follows when its acts or omissions within its territory cause foreseeable cross-border effects.²²⁶ This flows from the foundational rule that a state has sovereign, territorial jurisdiction over acts occurring in its territory.²²⁷ Indeed, under the subjective territoriality

refers to "their jurisdiction", a collective possessive that suggests Convention obligations are applicable vis-a-vis all children within any state party's jurisdiction. This notion of collective jurisdiction accords with the purposes of the Convention, its guiding principle of the best interests of the child, and with the near universal participation in the treaty. J. Cerone, "Jurisdiction and Power: The Intersection of Human Rights Law & the Law of Non-International Armed Conflict in a Extraterritorial Context," Israel Law Review, vol. 40, no. 2 (2007), at 449.

²²⁵ See HRC, General Comment No. 31, Nature of the General Legal Obligation on States Parties to the Covenant, ¶1010 (2004), https://www.unhcr.org/4963237716.pdf ("a State party must respect and ensure the rights laid down in the Covenant to anyone within the power or effective control of that State Party, even if not situated within the territory of the State Party' Case Concerning Armed Activities on the Territory of the Congo (DRC v. Uganda), Judgment, 2005 I.C.J. 116, Rep. 168, ¶216 (Dec. 19) (recalling that in its Wall opinion the Court had "concluded that international human rights instruments are applicable 'in respect of acts done by a State in the exercise of its jurisdiction outside its own territory,' particularly in occupied territories"); Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, 2004, I.C.J. 136, at ¶ 109 (9 July), https://www.icjcij.org/files/case-related/131/131-20040709-ADV-01-00-EN.pdf; Case of Al-Skeini v. United Kingdom, App. No. 55721/07, 2011, Eur.Ct. H.R. (2011), ¶ 133137, http://hudoc.echr.coe.int/eng?i=001-105606 ("whenever the State through its agents exercises control and authority over an individual, and thus jurisdiction, the State is under an obligation under Article 1 to secure to that individual");"); Victor Saldaño v. Argentina, Petition, Inter-Am. C.H.R., Report No. 38/99, OEA/Ser.L/V/II.95 doc. 7 rev. 289, ¶ 19 (1998) (jurisdiction with respect to human rights obligations "is linked to authority and effective control, and not merely to territorial boundaries.").

²²⁶ See Maastricht Principle 9, ¶ b.

²²⁷ See Int'l Law Comm'n, Survey of International Law, Extract from the Yearbook of the Int'l L. Comm'n (1949), U.N. Doc. A/CN.4/1/Rev.1 (1949), at ¶ 58 (addressing State responsibility for transboundary harm as an "obligation of territorial jurisdiction").

- principle, a state has prescriptive jurisdiction over an act "commenced within the state even if consummated or completed abroad."²²⁸
- 243. Thus, while some early human rights jurisprudence focused on cases of territorial control, it is now established that control over the individual is sufficient to establish the requisite jurisdictional link, and that a sufficient degree of control may be found in the conduct constituting the violation itself, be it environmental damage, cross-border shootings, or pushbacks of asylum-seekers on land or at sea. This approach does not render the jurisdictional requirement superfluous, as causation must still be established (*i.e.*, that the state's wrongful conduct caused or contributed to the violation).²²⁹
- 244. The Committee made clear in its General Comment 16 that the Convention "does not limit a State's jurisdiction to territory." ²³⁰ Rather, "State obligations under the Convention and the Optional Protocols thereto apply to each child within a State's territory and to all children subject to a State's jurisdiction." ²³¹ The Committee has recognized that:

State parties have obligations, including extra-territorial obligations, to respect, protect and fulfil all human rights of all peoples. Failure to take measures to prevent foreseeable human rights harm caused by climate change, or to regulate activities contributing to such harm, could constitute a violation of States' human rights obligations.²³²

245. The Committee also noted that "Home States also have obligations . . . to respect, protect and fulfil children's rights in the context of

²²⁸ Brownlie's Principles of Public International Law, 9th ed., (James Crawford, ed., 2019) at 442. Regional human rights mechanisms have recognized that jurisdiction under the Inter-American and European conventions encompasses the textbook example of subjective territoriality: cross-border shootings. See, e.g., Bastidas Meneses v. Ecuador, Petition 189-03, Inter-Am. Comm'n H.R., Report No. 153/11, ¶ 18 (2011); Andreou v. Turkey, App. No. 45653/99 (Eur. Ct. H.R. June 3, 2008), (admissibility decision).

²²⁹ See Communication No. 1539/2006 (Munaf v. Rom.), adopted 30 July 2009, U.N. GAOR, Hum. Rts. Comm., 96th Sess., Annex ¶ 14.2, U.N. Doc. CCPR/C/96/D/1539/2006 (2009).

²³⁰ CRC, General comment No. 16 (2013) on State obligations regarding the impact of the business sector on children's rights, CRC/C/GC/16, ¶ 39. (Apr. 17, 2013).

²³¹ *Id*.

²³² Joint Statement on "Human Rights and Climate Change" (Sept. 16, 2019).

- businesses' extraterritorial activities and operations, provided that there is a reasonable link between the State and the conduct concerned."²³³
- 246. The Committee's understanding of jurisdiction is buttressed by recent jurisprudence of regional courts and other human rights bodies that monitor compliance with treaties that have similar jurisdictional language as the Convention.
- 247. The leading opinion on state responsibility for transboundary environmental threats to human rights is the Inter-American Court of Human Rights' Advisory Opinion on Environment and Human Rights, which dovetails with the Committee's interpretation of the jurisdictional scope of the Convention. ²³⁴ At issue was whether a state party to the American Convention on Human Rights had jurisdiction over a person situated outside that state's territory whose rights were violated, or at risk of violation, as a result of cross-border environmental pollution caused or permitted by that state party. ²³⁵ The American Convention on Human Rights, like the Convention, contains language that limits a state's human rights obligations to people subject to its "jurisdiction." Reaffirming that the enjoyment of virtually all human rights depends on a healthy environment, the Court concluded that states have jurisdiction over individuals outside their territory who are harmed or at risk of harm from foreseeable transboundary environmental damage:

As regards transboundary harms, a person is under the jurisdiction of the State of origin if there is a causal relationship between the event that occurred in its territory and the violation of the human rights of persons outside its territory. The exercise of jurisdiction arises when the State of origin exercises effective control over the activities that

²³³ CRC, General comment No. 16 (2013), at ¶¶ 39, 41; The CEDAW Committee has adopted a similar approach. See General recommendation No. 30 (2013) on women in conflict prevention, conflict and post-conflict situations, CEDAW/C/GC/30, ¶¶ 8-10. (Oct. 18, 2013).

²³⁴ Advisory Opinion on the Environment and Human Rights (State Obligations in Relation to the Environment in the Context of the Protection and Guarantee of the Rights to Life and to Personal Integrity – Interpretation and Scope of Articles 4(1) and 5(1) of the American Convention on Human Rights), OC- 23/17, Inter-Am. Ct. H.R. (ser. A) No. 23 (Nov. 15, 2017) [hereinafter Advisory Opinion on the Environment and Human Rights], http://www.corteidh.or.cr/docs/opiniones/seriea 23 ing.pdf.

²³⁵ Advisory Opinion on the Environment and Human Rights, ¶ 37.

caused the harm and consequent violation of human rights.²³⁶

. . .

The exercise of jurisdiction by a State of origin in relation to transboundary damage is based on the understanding that it is the State in whose territory or in whose jurisdiction these activities are undertaken, who has effective control over them and is in a position to prevent the causation of transboundary damage that may affect the enjoyment of human rights of individuals outside its territory. The potential victims of the negative consequences of these activities should be deemed to be within the jurisdiction of state of origin for the purposes of any potential state responsibilities for failure to prevent transboundary damage.²³⁷

248. Similarly, the United Nations Human Rights Committee (HRC) applied an interpretation of the term "jurisdiction" in Article 2(1) of the ICCPR that recognized transboundary damage gives rise to cross-border human rights obligations. In its General Comment 36 on the right to life under the International Covenant on Civil and Political Rights, the HRC observed that states are under a duty:

to ensure that all activities taking place in whole or in part within their territory and in other places subject to their jurisdiction, but having a direct and reasonably foreseeable impact on the right to life of individuals outside their territory, including activities taken by corporate entities based in their territory or subject to their jurisdiction, are consistent with [the right to life]. 238

²³⁶ *Id*. ¶ 104(h).

 $^{^{237}}$ *Id.* ¶ 102.

²³⁸ U.N. Human Rights Comm., General comment No. 36 (2018) on article 6 of the International Covenant on Civil and Political Rights, on the right to life, ¶ 22, U.N. Doc CCPR/C/GC/36 (October 30, 2018);; see also CESCR, General Comment 15, E/C.12/2002/11, ¶ 31 (recognizing that "[i]nternational cooperation requires States parties to refrain from" interfering directly or indirectly with access to water in other countries).

- 249. Likewise, the European Court of Human Rights held in *Andreou v. Turkey*, where Turkish forces shot a Cypriot national on territory beyond Turkey's control, ²³⁹ that the victim was within Turkey's jurisdiction because the shooting was "the direct and immediate cause" of his injuries: "acts... which produce effects outside [a State's] territory... may amount to the exercise by them of jurisdiction." The Court applied this same principle in *Ilascu v. Moldova and Russia*, stating: "[a] State's responsibility may [...] be engaged on account of acts which have sufficiently proximate repercussions on rights guaranteed by the Convention, even if those repercussions occur outside its [territorial] jurisdiction."²⁴¹
- 250. Critically for this case, responsibility for extraterritorial harm is also a pillar of international environmental law. All states have a duty under customary international law to ensure that "activities within their jurisdiction and control" do not cause significant transboundary damage to "the environment of other States or areas beyond national control". As discussed above, this tenet of international environmental law informs the scope of human rights obligations in the context of rights violations caused by environmental harm. ²⁴³
- 251. Based on this body of authority, the Committee should recognize that, in the context of human rights violations caused by climate change, a

²³⁹ Andreou v. Turkey, App. No. 45653/99 (Eur. Ct. H.R. June 3, 2008), (admissibility decision); Bastidas Meneses v. Ecuador, Petition 189-03, Inter-Am. Comm'n H.R., Report No. 153/11, ¶ 18 (2011).

²⁴⁰ Andreou v. Turkey, App. No. 45653/99, 10–11.

 $^{^{241}}$ Ilascu and Others v. Moldova and Russia, Appl. No. 48787/99 (Eur. Ct. H.R. July 8, 2004), at \P 317.

²⁴² Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. Reports 226, ¶ 29 (underscoring that states have a general obligation "to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control."); *see also* Trail Smelter Case (United States v. Canada), 3 R.I.A.A. 1905 (1941); Gabcikovo-Nagymaros Project (Hungary v. Slovakia), 1997) I.C.J. Reports 7 (1997), https://www.icj-cij.org/files/case-related/92/092-19970925-JUD-01-00-EN.pdf; Ilascu and Others v. Moldova and Russia, Appl. No. 48787/99 (Eur. Ct. H.R. July 8, 2004), http://legal.un.org/ilc/texts/instruments/english/commentaries/9_7_2001.pdf ¶ 317.

²⁴³ See U.N. Human Rights Comm., General comment No. 36 (2018) on article 6 of the International Covenant on Civil and Political Rights, on the right to life, ¶ 62, U.N. Doc CCPR/C/GC/36 (October 30, 2018) ("Obligations of States parties under international environmental law should thus inform the contents of article 6 of the Covenant, and the obligation of States parties to respect and ensure the right to life should also inform their relevant obligations under international environmental law.").

- child is within the jurisdiction of a state party when (1) that state's acts or omissions contribute to a polluting activity originating in its territory and (2) that polluting activity directly and foreseeably impacts the rights of children within or outside that state's territory.
- 252. As demonstrated above, these are exactly the facts in this petition. The respondents are causing and perpetuating climate change through their historic and current carbon pollution. They do so despite their decades-old knowledge that by contributing to climate change, they risk the lives and welfare of children within and outside their territory. The petitioners are the foreseeable victims of that pollution; their present injuries and exposure to risks are precisely the life-threatening harms that the respondents knew would happen if they failed to use all available means to reduce emissions and cooperate internationally to prevent global warming. As a result, each and every petitioner is within the jurisdiction of each respondent.

IX. Each respondent's actions are causing and perpetuating the climate crisis and violate the petitioners' rights.

- 253. There is no need for guesswork about the threat of climate change. A scientific consensus holds that climate change is already here. The world is already on average 1.1°C warmer than pre-industrial levels, which already results in more extreme and frequent heat waves, droughts, storms, and flooding, sea-level rise, ocean warming, and many other impacts. The changes are causing life-threatening and adverse impacts to millions of children around the world, including the petitioners by harming human health, threatening water and food security, damaging infrastructure, buildings and homes, and destroying the environment.
- 254. Each of the respondents has known that global heating has threatened lives for decades. Since 1992, when they signed the Climate Change Convention, Argentina, Brazil, France, Germany, and Turkey have undertaken to protect children such as the petitioners from the foreseeable threats of climate change. It was clear then that every metric ton of CO₂ that they emitted, or permitted, was adding to a life-threatening situation. In signing the 2016 Paris Agreement, each respondent further acknowledged the "urgent threat" of climate change in its Preamble.²⁴⁴ Two years later, in 2018, the respondents learned that keeping heating

²⁴⁴ Paris Agreement, Preamble, U.N. Doc. FCCC/CP/2015/10/Add.1 (Jan. 29, 2016).

under 1.5°C would save hundreds of millions of people this century from premature deaths associated with extreme heat, air pollution, devastating storms, sea-level rise, severe drought, water stress, and increased disease, among other things.²⁴⁵ Every day of delay depletes the remaining carbon budget.

- 255. Knowing these consequences, each of the respondents has endangered and continues to endanger the lives of the petitioners by perpetuating and exacerbating climate change. Not one of the respondents is on an emissions pathway that is consistent with safe levels established by the best available scientific evidence and none have used all available means to prevent excess emissions from the four major emitters, other G20 member states, or the main carbon-producing business entities.
- 256. These actions are the product of deliberate policy choices, and they directly harm children all around the world. Each excess emission adds more dangerous carbon to the atmosphere, helps lock in irreversible climate change, and exacerbates the foreseeable risks to the petitioners' human rights and future generations.²⁴⁶
- 257. As global heating accelerates, due in part to the respondents' acts and omissions, children and future generations will continue to be exposed to foreseeable catastrophic consequences, threatening children's lives, health, and development. In a joint statement on climate change with other treaty bodies, the Committee has stated:

The adverse impacts [of climate change], threaten, among others, the right to life, the right to adequate food, the right to adequate housing, the right to health, the right to water and cultural rights. These negative impacts are also illustrated in the damage suffered by the ecosystems which in turn affect the enjoyment of human rights. The risk of harm is particularly high for those segments of the population already marginalised or in vulnerable situations or that, due to discrimination and pre-existing inequalities, have limited access to

²⁴⁵ See supra section V; "The 1.5 Health Report: Synthesis on Health & Climate Science in the IPCC SR 1.5," World Health Organization, at 12, https://www.who.int/globalchange/181008_the_1_5_healthreport.pdf; IPCC, "Special Report: Global Warming of 1.5 °C," 2018, https://www.ipcc.ch/sr15/pp. 447, 452, 464.

²⁴⁶ Rogelj Report 2019 at 5-7, Table 1.

decision-making or resources, such as women, children, persons with disabilities, indigenous peoples and persons living in rural areas. Children are particularly at heightened risk of harm to their health, due to the immaturity of their body systems.²⁴⁷

258. Any delay in meaningful and adequate emissions reductions will cause irreversible and high-risk consequences that future generations must contend with. The Committee and other treaty bodies have recognized "that to avoid the risk of irreversible and large-scale systemic impacts, urgent and decisive climate action is required."²⁴⁸ By recklessly causing and perpetuating excessive levels of carbon emissions, the respondents are failing to prevent the deadly and harmful impacts of climate change, and are violating the petitioners' rights to life, health, and culture, and failing to have the best interest of the child be a primary consideration in their climate actions.

A. Each respondent is exacerbating the deadly and foreseeable consequences of climate change, violating the petitioners' right to life (Art. 6).

- 259. Article 6(1) of the Convention provides: "States Parties recognize that every child has the inherent right to life." The right to life is the "supreme right" from which other rights flow.²⁴⁹ States have a negative duty to refrain from conduct that results in the arbitrary deprivation of life.²⁵⁰ They also have a positive duty to protect against deprivation of life by "private persons or entities" or by "other States."²⁵¹
- 260. The right to life is meant to protect against potentially lethal risk-taking. As the UN Human Rights Committee explained, these obligations extend to "reasonably foreseeable threats and life-threatening situations that can

²⁴⁷ Committee on the Elimination of Discrimination Against Women, Committee on Economic, Social and Cultural Rights, Committee on the Protection of the Rights of All Migrant Workers and Members of their Families, Committee on the Rights of the Child, Committee on the Rights of Persons, with Disabilities, Joint Statement on "Human Rights and Climate Change" (September 16, 2019),

https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24998&LangID=E.

²⁴⁸ *Id*.

 $^{^{249}}$ UNHRC, General Comment No. 36, CCPR/C/GC/36, \P 2.

 $^{^{250}}$ *Id.* at ¶ 7.

 $^{^{251}}$ Id. at ¶¶7, 21, 22.

- result in loss of life."²⁵² States violate the right to life by exposing victims to a real risk of the deprivation of life, even if "such threats and situations do not result in loss of life."²⁵³ A deprivation of this right "goes beyond injury to bodily or mental integrity or threat thereto."²⁵⁴
- 261. The duty to protect life also implies that "States parties should take appropriate measures to address the general conditions in society that may give rise to direct threats to life or prevent individuals from enjoying their right to life with dignity."²⁵⁵ These general conditions may include "degradation of the environment," and "deprivation of land, territories and resources of indigenous peoples."²⁵⁶
- 262. In *Portillo Cáceres v. Paraguay*, the Human Rights Committee held that the government violated the right to life of the victims by failing to protect them from the toxic environmental effects of large-scale agrochemical spraying in the region.²⁵⁷ The Committee found that Paraguay did not exercise adequate controls over illegal polluting activities, which it found constituted foreseeable threats to the life of the victims.
- 263. The Human Rights Committee has also noted that climate change is one "of the most pressing and serious threats to the ability of present and

 $^{^{252}}$ *Id.* at ¶¶7.

²⁵³ *Id.*; see also UNHCR, Communication No. 821/1998, Chongwe v. Zambia, Views adopted on 25 Nov. 2000, ¶ 5.2; Cf. Ilhan v. Turkey, Judgment, App. No. 22277/93ECHR (ECHR June 27, 2000), ¶ 75-76; Rochela Massacre v. Colombia, Judgment (InterInt-Am. Ct. H.R. May 11, 2007), ¶ 127.

²⁵⁴ UNHRC, General Comment No. 36, CCPR/C/GC/36, ¶ 7.

²⁵⁵ UNHRC, General Comment No. 36, CCPR/C/GC/36, ¶ 26.

²⁵⁶ *Id.* The Inter-American Commission on Human Rights has also recognized that indigenous peoples' "special relationship [to their territories] is fundamental ... for the[ir] material subsistence," and that such subsistence is related to the right to life. Inter-Am. C.H.R, *Indigenous and Tribal Peoples' Rights over their Ancestral Lands and Natural Resources: Norms and Jurisprudence of the Inter-American Human Rights System* (Inter-Am. C.H.R, *Indigenous and Tribal Peoples' Rights*) (Dec. 30, 2009), ¶ 56. In *Yakye Axa*, the Court found that Paraguay's failure to legally recognize and protect traditional lands of indigenous peoples "has had a negative effect on the right of the ... [Yakye Axa] Community to a decent life, because it has deprived them of the possibility of access to their traditional means of subsistence." *Case of the Yakye Axa Indigenous Community v. Paraguay*, 2005 Inter-Am. Ct. H.R. (ser. C) No. 125 (June 17, 2005), ¶ 168.

²⁵⁷ Portillo Cáceres v. Paraguay, Human Rights Committee, CCPR/C/126/D/2751/2016 (August 8, 2019), ¶ 7.5.

future generations to enjoy the right to life."258 It implicates both negative and positive duties, both of which have been breached by each of the respondents. The Human Rights Committee has further found that,

Implementation of the obligation to respect and ensure the right to life, and in particular life with dignity, depends, *inter alia*, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors. States parties should therefore ... pay due regard to the precautionary approach.²⁵⁹

- As discussed, the precautionary principle prevents a state from invoking scientific uncertainty to justify its failure to take all available measures to prevent the life-threatening effects of climate change on its own children and on others. A state cannot gamble with children's lives. When a state takes dangerous actions with uncertain but foreseeable fatal consequences and accepts the risks of those foreseeable consequences, that constitutes in many jurisdictions "depraved indifference," "reckless endangerment", or *dolus eventualis*. ²⁶⁰ And it is a violation of the right to life under Article 6.
- 265. The respondents' acts and omissions causing and perpetuating the climate crisis have already exposed the petitioners throughout their childhood to the life-threatening risks of human-caused climate change, be it heat, floods, storms, droughts, disease, or polluted air.
- 266. The more frequent, extreme heat caused by climate change have already harmed many of the petitioners. For example, Petitioners Iris Duquesne and Raina Ivanova have been exposed to frequent heatwaves in France and Germany that have killed tens and thousands of people across Europe. For indigenous Petitioners Carl Smith of Akiak, Alaska and those in the Sapmi region of Sweden, increasingly hot temperatures are

²⁵⁸ UNHRC, General Comment No. 36, CCPR/C/GC/36, ¶ 62.

²⁵⁹ Id.

²⁶⁰ See, e.g., Model Penal Code, §§ 2.02, 211.2 (U.S.); Code Pénal, art. 223-1 (France); Prosecutor v. Stakic, ICTY, Appeals, 22 March 2006. See generally Greg Taylor, Concepts of Intention in German Criminal Law, 24 Oxford J. Legal Stud. 99-127 (2004).

²⁶¹ See, Appendix A.

- threatening their thousand year-old subsistence traditions, which are intimately connected to their livelihoods and well-being.
- 267. Drier and hotter weather contribute to more intense wildfires, which have threatened Petitioners Alexandria Villaseñor and Raslen Jbeili. The deadly smoke from the Paradise Wildfire in California quickly aggravated Alexandria's asthma, forced her to flee her hometown, stay bedridden for weeks, and go to the emergency room. In Tabarka, Raslen's family narrowly escaped a wildfire in 2018, but many of his neighbors did not.
- 268. Dirty air exacerbated by the increased heat is worsening Petitioners Debby Adegbile's and Alexandria's asthma. For example, worsening deadly air in Lagos sends Debby to the hospital several times a year to treat her asthma attacks, forcing her to miss school and putting a financial strain on her family.
- 269. Increasingly intense storms are putting many of the petitioners in life-threatening situations, including in Palau, the Marshall Islands, Nigeria, Tunisia, Brazil, and Argentina. In Tabarka, for example, extreme rains regularly submerge Raslen's school, sometimes up to four feet. One flooding event swept away and killed some of Raslen's schoolmates as they were fleeing a storm. Recent storms have battered Petitioners Chiara Sacchi and Iris Duquesne with golf-ball sized hail, something they never had experienced before. One recent tropical storm ripped the roof off Ranton's home in Ebeye, the Marshall Islands, forcing him and his family to evacuate.
- 270. Drought is threatening the water security of many of the petitioners, including in South Africa, Brazil, Tunisia, Palau, and the Marshall Islands. For example, in Cape Town, Petitioner Ayakha Melithafa, along with the other residents of Cape Town, faced the imminent shutdown of their water supply, threatening the water security of over 3.7 million residents. Petitioners Catarina Lorenzo and Raslan are experiencing frequent water shortages in Salvador and Tabarka, respectively.
- 271. Some of the petitioners are exposed to increased disease due to more flooding and warmer temperatures. For example, Petitioners David Ackley III and Ranton Anjain are seeing an increase in Dengue Fever, a deadly disease that use to be rare on Ebeye and Majuro. Ranton caught dengue in 2019, and his father Jelton caught dengue in 2018.
- 272. Sea level rise and warmer oceans are already harming the petitioners from the Marshall Islands by reducing their ability to fish and grow gardens,

and damaging their homes and businesses. Rising oceans will decimate the entire Marshall Islands and much of Palau in the not so distant future if the world continues to warm.

- 273. The petitioners have also experienced mental stress from their fears of future catastrophic climate change; some have questioned whether to have children in a world riven by extreme climate change.
- 274. In summary, by recklessly causing and perpetuating life-threatening climate change, respondents have failed to take necessary preventive and precautionary measures to guarantee the petitioners' right to life and are thus violating Article 6(1) of the Convention.

B. Each respondent is exacerbating the deadly and foreseeable consequences of climate change, violating the petitioners' right to health (Art. 24).

- 275. Article 24 requires states to "pursue full implementation" of the "right of the child to the enjoyment of the highest attainable standard of health." ²⁶² In particular, states are obligated to "take appropriate measures" to "diminish infant and child morality" and "combat disease and malnutrition" by, inter alia, protecting against the "dangers and risks of environmental pollution." ²⁶³ The Committee views health "as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." ²⁶⁴
- 276. The Committee has recognized that climate change is "one of the biggest threats to children's health." As a key determinant of children's health, climate change must be addressed through "evidence-based interventions." Accordingly, states must "put children's health concerns at the centre of their climate change adaptation and mitigation strategies." 267

²⁶² The Convention, art. 24(1).

²⁶³ *Id.* art. 24(2)(a), 24(2)(c).

²⁶⁴ CRC, General Comment 15, ¶ 4.

 $^{^{265}}$ *Id.* at ¶ 50.

 $^{^{266}}$ *Id.* at ¶ 16.

 $^{^{267}}$ *Id.* at ¶ 50.

- 277. For many of the petitioners—and other children around the world—the climate crisis has already physically harmed them and poses an imminent and foreseeable physical threat.
- 278. For example, the smoke from the Paradise wildfires caused Petitioner Alexandria Villaseñor's asthma to dangerously flare up, sending her to the hospital. Heat-related pollution in Lagos has led to Petitioner Debby Adegbile being hospitalized regularly due to asthma attacks.
- 279. The spread and intensification of vector-borne diseases has already impacted the petitioners. In Lagos, Debby now catches malaria multiple times a year. On the Marshall Islands, Ranton Anjain contracted dengue fever in 2019; David Ackley III contracted chikungunya, a new disease in the islands as of 2015.
- 280. Extreme heat waves that have increased in frequency because of climate change have been a serious threat to health of many of the petitioners. High temperatures are not only deadly, they can cause a wide range of health impacts, including heat cramps, heatstroke, hyperthermia, and exhaustion, and quickly worsen existing health conditions.²⁶⁸ Extreme heat causes death and hospitalization.²⁶⁹
- 281. Drought is also threatening water security for many petitioners, like Catarina Lorenzo, Raslan Jbeili, and Ayakha Melithafa.
- 282. Hotter temperatures, sea-level rise and warming oceans are also threatening the indigenous petitioners' subsistence way of life, forcing some of them to shift their diet to more expensive, less nutritious store-bought food. For example, Petitioner Carl Smith's family have been catching substantially less fish, moose and caribou, requiring his family to rely on store-bought processed meats as a substitute.
- 283. The climate crisis is also triggering fear, anger, feelings of powerlessness and betrayal.²⁷⁰ The petitioners have suffered and will continue to suffer from climate-related emotional trauma. For example, Petitioner Iris Duquesne thinks about climate change every day. She often feels powerless and fears what the future will bring. The wildfires in California caused Alexandria anxiety, mental trauma, and sleep deprivation. The

²⁶⁸ World Health Organization, Information and public health advice: heat and health, https://www.who.int/globalchange/publications/heat-and-health/en/.

²⁶⁹ *Id*.

²⁷⁰ See Appendix A.

climate changes Ayakha is experiencing in Cape Town make her sad and angry, and she envisions a "miserable future." In Argentina, Chiara Sacchi cannot imagine a future with climate change and feels desperate. These are just a few examples of the mental trauma that the petitioners are already experiencing.

284. In summary, by recklessly causing and perpetuating life-threatening climate change, the respondents have failed to take necessary preventive and precautionary measures to guarantee the petitioners' right to health and are thus violating Article 24 of the Convention.

C. Each respondent's actions perpetuating the climate crisis are violating the indigenous petitioners' right to their culture (Art. 30).

285. Article 30 of the Convention guarantees indigenous children the right to enjoy their culture. It states:

In those States in which ethnic, religious or linguistic minorities or persons of indigenous origin exist, a child belonging to such a minority or who is indigenous shall not be denied the right, in community with other members of his or her group, to enjoy his or her own culture

- 286. This right applies to any individual or community that self-identifies as indigenous peoples, and there is no requirement of state recognition for indigenous peoples to exercise their rights.²⁷¹
- 287. The Committee has recognized that this right "may be closely associated with the use of traditional territory and the use of its resources."²⁷² It has noted that:

In the case of indigenous children whose communities retain a traditional lifestyle, the use of traditional land is of significant importance to their development and enjoyment of culture. States parties should closely consider the cultural significance of traditional land and the quality of the natural environment while ensuring the children's right

²⁷¹ CRC, General Comment No. 11 (2009) Indigenous children and their rights under the Convention, U.N.Doc. CRC/C/GC/11, February 12, 2019, ¶ 19.

 $^{^{272}}$ *Id.* at ¶ 16.

to life, survival and development to the maximum extent possible.²⁷³

- 288. Other International human rights bodies have recognized the special relationship that indigenous peoples have with their land and resources, and its connection to their right to culture. For instance, the UN Human Rights Committee acknowledged the importance of natural resources to the right to the benefits of culture in *Bernard Ominayak and the Lubicon Lake Band v. Canada*. In that case, the petitioners alleged that the government of the province of Alberta had deprived the Band of their means of subsistence and their right to self-determination by selling oil and gas concessions on their lands. The Human Rights Committee characterized the claim as being based on the right to enjoy culture under Article 27 of the ICCPR. It found that oil and gas exploitation, in conjunction with historic inequities, threatened the way of life and culture of the Band and that Canada had thus violated Article 27. The end of the special relationship is the special relationship in the special relationship is the special relationship is the special relationship in the special relationship is the special relationship in the special relationship is
- 289. The UN Human Rights Committee has explained that degradation of natural resources may violate the ICCPR's right to enjoy culture:

²⁷³ *Id.* at ¶ 35 (emphasis added).

²⁷⁴ See, e.g., Centre for Minority Rights Development v. Kenya, Case 276/2003, Afr. Comm'n on Human and Peoples' Rights, ¶ 156 (2009) (citing extensively the Inter-American Court's jurisprudence in *Awas Tingni*, *Moiwana*, and *Saramaka* in observing that indigenous peoples' "culture, religion, and traditional way of life are intimately intertwined with their ancestral lands [] and the surrounding area" and that "without access to their ancestral land, [they] are unable to fully exercise their cultural and religious rights, and feel disconnected from their land and ancestors.").

²⁷⁵ UN Human Rights Committee, *Bernard Ominayak and the Lubicon Lake Band v. Canada*, Communication No. 167/1984, U.N. Doc. CCPR/C/38/D/167/1984 (Mar. 26, 1990) (*Lubicon Lake Band*).

²⁷⁶ *Id.*; see International Covenant on Civil and Political Rights, art. 27, Dec. 16, 1966, 6 I.L.M. 368, 999 U.N.T.S. 171 (Members of minority groups "shall not be denied the right, in community with other members of their group, to enjoy their own culture, to profess and practice their own religion, or to use their own language."). See also UN Human Rights Committee, *Apirana Mahuika et al. v. New Zealand*, Communication No. 547/1993, ¶ 9.5, U.N. Doc. CCPR/C/70/D/547/1993 (Nov. 16, 2000) (noting that, according to general comment to Article 27, "especially in the case of indigenous peoples, the enjoyment of the right to one's own culture may require positive legal measures of protection by a State party and measures to ensure the effective participation of members of minority communities in decisions which affect them.").

²⁷⁷ Lubicon Lake Band, supra note 275, ¶ 33.

[C]ulture manifests itself in many forms, including a particular way of life associated with the use of land resources, especially in the case of indigenous peoples. That right may include such traditional activities as fishing or hunting and the right to live in reserves protected by law. ... The protection of these rights is directed towards ensuring the survival and continued development of the cultural, religious and social identity of the minorities concerned, thus enriching the fabric of society as a whole.²⁷⁸

- 290. In addition, the UN Committee on Economic and Social Rights in 2009 recognized that "[i]ndigenous peoples' cultural values and rights associated with their ancestral lands and their relationship with nature should be regarded with respect and protected, in order to prevent the degradation of their particular way of life, including their means of subsistence, the loss of their natural resources and, ultimately, their cultural identity."²⁷⁹
- 291. The Inter-American system also recognizes that the right to culture has particular importance for indigenous peoples, including in particular, the vital connection of their lands and natural resources to this right. For example, in *Case of the Mayagna (Sumo) Awas Tingni Community*, the Inter-American Court has emphasized the importance of this connection:

[T]he close ties of indigenous people with the land must be recognized and understood as the fundamental basis of their cultures, their spiritual life, their integrity, and their economic survival. For indigenous communities, relations to the land are not merely a matter of possession and production but a material and spiritual element which they

²⁷⁸ OHCHR, Gen. Comment No. 23, ¶¶ 7, 9.

²⁷⁹ CESCR, General Comment No. 21, *Right of everyone to take part in cultural life*, (art. 15, para. 1 (a), of the International Covenant on Economic, Social and Cultural Rights, ¶ 36, E/C.12/GC/21 (Dec. 21, 2009) (CESCR, Gen. Comment No. 21) (citing International Labour Organization, Convention concerning Indigenous and Tribal Peoples in Independent Countries, June 27, 1989, arts. 13-16); International Covenant on Economic, Social and Cultural Rights (ICESCR), art. 15(1), Dec. 16, 1966, 6 I.L.M. 360, 365, 993 U.N.T.S. 3 ("The States Parties to the present Covenant recognize the right of everyone[] [t]o take part in cultural life.").

must fully enjoy, even to preserve their cultural legacy and transmit it to future generations.²⁸⁰

- 292. The respondents' acts and omissions perpetuating the climate crisis has already jeopardized thousands years old subsistence practices of the indigenous petitioners from Alaska and the Sapmi, which are not just the main source of their livelihoods, but directly relate to a specific way of being, seeing, and acting in the world, and form part of their cultural identity. If the respondents continue their current emissions pathways, the world would warm enough to decimate indigenous cultures throughout the world, including those of the indigenous petitioners here.
- 293. As described above, subsistence hunting, fishing, and gathering have been primary sources of food and livelihood among the Yupiaq of Akiak, Alaska, for millennia, including for Petitioner Carl Smith. These subsistence practices are inextricably linked to the Yupiaq's culture and traditions, allowing Carl and others in his community to engage in communal gift-giving, sharing of stories, bonding with their own tribes, and ceremonies, practices they have passed on for generations.
- 294. Extreme heat in Akiak has reduced the amount of time that the Kuskokwim River is frozen, preventing Carl and others in his community from accessing traditional hunting grounds for caribou, moose, and other animals and making it more difficult and dangerous to set fish traps in the winter. The Kuskokwim has also warmed to unprecedented temperatures in the summer, killing salmon, a staple food for the Yupiaq. Akiak also faces increasing threats from erosion and flooding due to flash floods in the Kuskokwim.
- 295. In the Sapmi, generations of Sami have passed on the reindeer herding tradition that is essential to Sami culture and spiritual practices. Reindeer herding has been integral to the livelihood, economy, and way of life for the Sami for generations. Sami children are closely connected to the life of living with the reindeers, and they learn this culture from their parents and elders from a very young age.
- 296. The increasing heat in the Sapmi is making it impossible for reindeer, which are wild animals, to forage for the food that has sustained them for centuries. The reindeer are forced to alter their migration patterns to find food, a change that threatens and increases the cost of the traditional

²⁸⁰ Mayagna (Sumo) Awas Tingni Community v. Nicaragua, Merits, Reparations and Costs, Judgment, Inter-Am. Ct. H.R. (ser. C) No. 79, ¶ 149 (Aug. 31, 2001) (Awas Tingni).

- practice of reindeer herding, requiring the herders to work harder and longer. imperiling its future existence.
- 297. The Marshallese culture has evolved over millennia and is intimately connected with the ocean and the islands. The ocean provides food and connects Petitioners David, Litokne, and Ranton with their families on outer islands. The Marshallese grow traditional foods, make traditional medicines and practice ancient cultural ceremonies, like *Kemen*, the baby naming ceremony, that have been passed down over centuries. Risings seas, a warming and acidifying ocean, drought, and more severe storms have already harmed the Marshallese petitioners' fishing and other traditions.
- 298. Increasingly worsening climate change perpetuated by the respondents and other countries threatens to decimate these ancient subsistence and cultural traditions practiced by Petitioners Carl, Litokne, David, and Ranton. The heating path that the respondents are exacerbating will make it impossible for the Sami and Yupiaq to practice their long-standing subsistence traditions that are so closely connected to their way of life and being. Rising oceans would wipe out the islands that the Marshallese have called home for millennia.
- 299. In summary, unabated climate change carried out by each of the respondents' acts and omissions would permanently undermine the ability of the indigenous petitioners to engage in their subsistence way of life and culture practices. By recklessly perpetuating life-threatening climate change, the respondents have failed to take necessary preventive and precautionary measures to guarantee the indigenous petitioners' right to their culture, and thus violating Article 30 of the Convention.

D. Each respondent has failed to make the best interests of children a primary consideration in their climate actions (Art. 3).

300. Article 3, paragraph 1 of the Convention gives children the right to have their best interests be given priority in any action or decision that affects them:

In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.

301. The child's best interest is a substantive right. In any governmental decision that involves weighing competing interests, and assessing costs and benefits, the interests of "a child, a group of children, or children in

general", must be made a priority over other competing interests.²⁸¹ As the Committee observed, a "child's best interests may not be considered on the same level as other considerations."²⁸²

- 302. The child's best interest parallels the principle of intergenerational equity under the Climate Change Convention, which "places a duty on current generations to act as responsible stewards of the planet and ensure the rights of future generations to meet their developmental and environmental needs." ²⁸³
- 303. By delaying decarbonization, despite all scientific evidence, the respondents' climate policies have under-valued children's lives and treated their present and future interests as lesser considerations.
- 304. Every day of delay depletes the remaining carbon budget, and if states fail to sufficiently reduce emissions in the next decade, children will bear the brunt of the consequences.
- 305. Delaying meaningful and adequate emissions reductions means exposing children to more likely and more severe threats to their lives, health, culture, and livelihoods. Delay also means denying children lost mitigation opportunities. ²⁸⁴ Every time the respondents and other states fail to meet their reduction targets, their excess emissions commit children and "future generations to steeper and more challenging emissions reductions in the decades thereafter to stay within the same carbon budget." ²⁸⁵ Ultimately delay "creates an imminent risk that it will be impossible to 'make up' for lost mitigation opportunities and will undermine the sustainable and safe livelihood of future generations." ²⁸⁶
- 306. No state acting rationally in the best interests of the child would ever impose this burden by choosing such delay. The only cost-benefit analysis that would justify any of the respondents' policies is one that

²⁸¹ CRC General Comment 14 at ¶ 6, 37.

 $^{^{282}}$ *Id.* at ¶ 6.

²⁸³ OHCHR, Analytical Study on Climate at ¶ 35. See UNFCCC, art. 3(1) ("The Parties should protect the climate system for the benefit of present and future generations of humankind . . .").

²⁸⁴ Rogelj Report 2019 at 4.

²⁸⁵ *Id.* at 1.

²⁸⁶ *Id*.

- discounts children's lives and prioritizes short-term economic interests over the rights of the child.
- 307. Placing a lesser value on the best interests of the petitioners and other children in the respondents' climate actions is in direct violation of Article 3(1). By doing so, the respondents have breached their duties to ensure intergenerational equity and to respect, protect, and fulfill the enjoyment of children's rights for posterity.

X. Admissibility

A. Exception to exhaustion of domestic remedies

308. Article 7(e) of the OPIC makes communications inadmissible when:

All available domestic remedies have not been exhausted. This shall not be the rule where the application of the remedies is unreasonably prolonged or unlikely to bring effective relief.

This Committee has noted that "Children's special and dependent status creates real difficulties for them in pursuing remedies for breaches of their rights." UNICEF and the High Commissioner for Human Rights have documented major obstacles to children accessing justice to enforce their rights. For example, the justice system is complex and difficult for children to understand. UNICEF has noted, "Children have less knowledge, fewer financial resources and are generally less well equipped to deal with the complexity of the justice system, in all its forms." In addition, children's ability to access justice usually requires support from adults, who themselves may not be aware of children's rights or know how to best support their children. UNICEF documented

²⁸⁷ CRC, General Comment No. 5, U.N. Doc. CRC/GC/2003/5 (27 Nov. 2003), ¶ 24.

²⁸⁸ See, e.g., UNICEF, Children's Equitable Access to Justice: Central and Eastern Europe and Central Asia at 9-11 (May 2015); United Nations High Commissioner for Human Rights, Access to justice for children, U.N. Doc. A/HRC/25/35 (Dec. 16, 2013), ¶¶ 13-16; UNICEF Bulgaria, Access to justice for children, https://www.unicef.org/bulgaria/en/access-justice-children-0.

²⁸⁹ Id.

²⁹⁰ UNICEF, Children's Equitable Access to Justice at 9.

²⁹¹ *Id.*; UNHCHR, Access to justice for children at ¶ 13-16.

- situations in several countries of a "poor understanding among children and their families, both of children's rights and how to seek help in specific situations."²⁹²
- 310. In addition to these challenges facing children when trying to vindicate their rights, the petitioners face unique obstacles in exhausting domestic remedies in all five of the respondents' jurisdictions would be (1) unduly burdensome for the petitioners, (2) unlikely to bring effective relief, and (3) unreasonably prolonged.
- 311. First, pursuing remedies at the respondents' domestic level would be unduly burdensome. This case turns on the global scope and nature of injuries to sixteen children worldwide and the breaches of the five respondents through their individual and collective actions, raising claims that implicate foreign sovereign immunity. Each respondent recognizes in its domestic law that foreign states enjoy jurisdictional immunity for sovereign acts, but not for private or commercial acts.²⁹³ Setting emission reduction targets and engaging in international cooperation are sovereign, not commercial activities. This means, for example, that a French court could not hear claims by French petitioner Iris Duquesne against Brazil concerning Brazil's climate policies. In essence, no single court could provide the same remedy sought in this petition against these five sovereigns. To compel even this small number of major emitters to abide by international climate change targets, lawsuits would have to be issued in five jurisdictions. Attempting to exhaust remedies in Argentina, Brazil, France, Germany, and Turkey would be so costly and unduly burdensome for the petitioners as to make any potentially available legal remedies an impossibility.

²⁹² UNICEF, Children's Equitable Access to Justice at 9.

²⁹³ Under customary international law, immunized sovereign acts are deemed "acta de jure imperii", while private or commercial acts, which are not immunized, are deemed "acta de jure gestionis." All five Respondents apply this principle. *E.g.*, CSJN, "Manauta, Juan J. y otros c/ Embajada de la Federación Rusa," Fallos 93485 of Dec. 22, 1994, La Ley (LL), Sept. 1, 1995 (Argentina); Arraci Barreto v. Germany, 9.7.2008 (Brazil) (recognizing immunity of Germany from claims arising from World War II because, despite their unlawful nature, they were nevertheless sovereign acts); Cour de la cassation, Rapport annuel 36, *L'évolution de l'immunité de juridiction des Etats étrangers (par M. Régis de Gouttes, premier avocat général*) (2003) (France), https://bit.ly/2N9MZnU (noting State immunity for acts having "*le caractère d'un acte 'jure imperii' accompli dans un but d'intérêt public et participant à l'exercice de la souveraineté de l'Etat étranger.*"); *Empire of Iran*, German Federal Constitutional Court, 45 ILR 57 (1963) (GERMANY) (recognizing exception to immunity for commercial or private acts); Act on Private International and Procedural Law (Act No. 5718), art. 49 ("A foreign state may not claim immunity from jurisdiction in legal disputes arising out of private law relations." (Turkey).

- Take for example the petitioners from the Marshall Islands. In order to protect their human rights on the same scale as submitted in this petition, they would need to initiate lawsuits in all five respondent states with legal teams in each of these jurisdictions. The cost of retaining five legal teams and litigating five simultaneous cases through trial and appeal would be prohibitively expensive. And while certain petitioners might have access to more private or state funding than others, dividing petitioners would prevent them from acting as a group of rights-bearers with common interests and would substantially narrow the scope of their claims: it simply could not be the same case.
- 313. The high cost of accessing courts has been recognized by human rights bodies as an exception to exhaustion of remedies. For example, in *Hul'Qumi'Num Treaty Group v. Canada*, the Inter-American Commission on Human Rights recognized that "access to Canadian courts is very costly for [the indigenous petitioners] and makes it impossible to lodge the legal remedies mentioned by the State." For similar reasons, the multinational character of the petitioners' claims render the cost of pursuing domestic remedies through five or more lawsuits unduly burdensome.
- Second, the respondents' courts are unable to effectively remedy the violations in this case because they involve legal questions that raise, with respect to diplomatic relations, non-justiciable issues in their domestic tribunals. The petitioners' claims against their own states (here the petitioners from Brazil, France, Germany, and Argentina) cannot be fully reviewed by their domestic tribunals, because they address diplomatic decision-making. The petitioners allege that the respondent states have failed to use legal, economic, and diplomatic means to confront emissions from other G20 member-states and fossil-fuel industries. This claim implicates a state's obligations of international cooperation and its duty to protect under the Convention. But the petitioners are not aware of any domestic legal avenue in the respondent states permitting judicial review of a state's diplomatic relations, nor are the petitioners aware of any domestic mechanism to compel a state to initiate an inter-state complaint before the International Court of Justice or other available forum. While Petitioner Chiara Sacchi could potentially challenge Argentina's climate policies in an Argentine court, she could not challenge Argentina's failure

²⁹⁴ IACHR, Report No 105/09, P592-07, Admissibility, *Hul'Qumi'Num Treaty Group v. Canada*, October 30, 2009 at ¶ 33.

- to use diplomatic means to protect her from U.S. emissions, or challenge the climate actions of the other respondents.
- 315. While the petitioners recognize that important climate cases are proceeding in the Netherlands, France, Germany, Belgium, India and other countries, these cases are focused on climate policies in each respective country. ²⁹⁵ For the reasons of immunity and justiciability stated above, they do not and could not address the climate policies of foreign states or states' failure to cooperate internationally.
- 316. *Finally*, not only would exhausting remedies in multiple jurisdictions at the same time would be unduly burdensome and not provide the multijurisdictional relief petitioners are seeking here, it would cause unreasonable delay. Defenses are consistently raised by states to delay or prevent youth from accessing justice in domestic tribunals and the judicial process itself has inherent delays in reaching trial, judgment, and enforcement of remedies.²⁹⁶
- 317. For the above reasons, the petitioners respectfully submit that no effective remedies could be exhausted domestically.

B. Timeliness

- 318. The Communication is timely because to this date the respondents continue to perpetuate climate change through their acts or omissions—even if their excess emissions commenced long before the OPIC entered into force on April 14, 2014.
- 319. Under Article 20 of the OPIC, the Committee is only competent to hear violations by a state party that occurred after the OPIC entered into force for that state.²⁹⁷ This requirement is waived, however, under Article

²⁹⁵ Urgenda Foundation v. The State of the Netherlands (2015), HAZA C/09/00456689; *Greenpeace and Others v. France* (2019), Tribunal administratif de Paris; *Greenpeace v. Federal Republic of Germany*,

https://www.greenpeace.de/sites/www.greenpeace.de/files/20181101-greenpeace-legal-summary-climate-case-english.pdf (2018); *Armando Ferrão Carvalho and Others v. The European Parliament and the Council* (2018) Case T-330/18 (Germany); *Juliana v. United States*, 339 F. Supp. 3d 1062, 1071 (D. Or. 2018); *VZW Klimaatzaak v. The Kingdom of Belgium, et al.* (2015) (Court of First Instance, Brussels).

²⁹⁶ For example, two of the cases noted above have been pending for four and seven years. *VZW Klimaatzaak v. The Kingdom of Belgium, et al.* (2015) (Court of First Instance, Brussels); Urgenda letter to the State of the Netherlands, 12 November 2012, available at https://www.urgenda.nl/wp-content/uploads/Letter to the government.pdf

²⁹⁷ Argentina ratified the Protocol on April 14, 2015; France ratified the Protocol on January 7, 2016; Brazil ratified the Protocol on September 29, 2017; and Turkey ratified the Protocol on

- 7(7), which permits the Committee hear violations that commenced prior to the OPIC's entry into force, so long as the "facts continued after that date" (the "continuing violations exception").
- 320. Human rights treaty bodies routinely apply this exception to the non-retroactivity of treaties when either the conduct or its effects are continuing. Where the effects of a state party's acts are permanent and irreversible, such acts are considered to be "continuous in nature" and "admissibility *ratione temporis* is thereby justified." Environmental damage has been recognized as one such permanent effect, continuous in nature. 300
- 321. Here, both the respondents' actions and the petitioners' injuries are ongoing. As shown above, the respondents are continuing to perpetuate the climate crisis by promoting the fossil-fuel energy system and by permitting the emission of GHG at rates that far exceed scientifically established safe limits.
- 322. Further, the effects of respondents' pre-2014 GHG emissions will continue to affect the petitioners for decades. The respondents' emissions have contributed to permanent and irreversible adverse

December 26, 2017. Germany ratified the Protocol on February 28, 2013, but because this was before the Protocol itself entered into force, the effective date for Germany is April 14, 2014.

²⁹⁸ Compare Millan Sequeira v. Uruguay, HRC Comm. No. 6/1977, U.N. Doc. A/35/40, at 127 (HRC 1980) (finding that Uruguay's violations were continuing when a victim was arrested prior to entry-in-force but was still arbitrarily detained after that date) with Lovelace v. Canada, HRC Comm. No. 24/1977, U.N. Doc. A/36/40 (HRC 1981) (finding that a woman stripped of First Nations status by marrying a non-native man, in accordance with Canada's Indian Act and before entry-into-force, was a continuing violation because she continued to be barred from residing on a reserve).

²⁹⁹ Szijiarto v. Hungary, Comm. No. 4/2004, U.N. Doc. A/61/38 (CEDAW 2006); see also Kayhan v. Turkey, Comm. No. 8/2005, U.N. Doc. A/61/38 (CEDAW 2006) (petitioner was dismissed from her post as a teacher prior to Turkey's entry into force of the Convention in 2002; the "effects" of petitioner's "loss of her status", such as loss of pension, salary and income, education grant, and health insurance, continued after entry into force).

³⁰⁰ In Marangopoulos Foundation for Human Rights v. Greece, Complaint No. 20/2005, the European Committee of Social Rights found that Greece violated the "right to a healthy environment" afforded to all Europeans under the European Social Charter because Greece failed to counteract air pollution. Id. Notably, on the issue of ratione temporis, the Committee acknowledged the principle of nonretroactivity of treaties, but instead relied on the notion of a "continuing violation", underscoring that if an event occurring before entry into force of a treaty continues to produce effects after that date, then the state's obligations under the treaty are triggered. *See id.* (citing Papamichalopoulos and others v. Greece, 260B Eur. Ct. H.R. (ser. A), ¶ 40)).

impacts on the climate that impair and threaten to impair the petitioners' rights to life and health. Since the effects of climate change will continue to harm the petitioners for the foreseeable future, the continuing violations exception applies to Article 20.

C. Absence of parallel international proceedings

323. The subject of this Communication—Argentina, Brazil, France, Germany, and Turkey's violations of the petitioners' rights through their contributions to climate change—is not pending in any other international proceeding or settlement, nor does it duplicate, to the petitioners' knowledge, any Communication pending before or already examined by the Committee.

XI. Request for Relief

- 324. The petitioners respectfully request that the Committee adopt the following as proposed recommendations for relief: ³⁰¹
- 325. Finds that climate change is a children's rights crisis.
- 326. Finds that each respondent, along with other states, has caused and is perpetuating the climate crisis by knowingly acting in disregard of the available scientific evidence regarding the measures needed to prevent and mitigate climate change.
- 327. Finds that by recklessly perpetuating life-threatening climate change, each respondent is violating petitioners' rights to life, health, and the prioritization of the child's best interests, as well as the cultural rights of the petitioners from indigenous communities.
- 328. Recommends that the respondents review, and where necessary, amend their national and subnational laws and policies to ensure that mitigation and adaptation efforts are being accelerated to the maximum extent of available resources and on the basis of the best available scientific evidence to (i) protect the petitioners' rights and (ii) make the best interests of the child a primary consideration, particularly in allocating the costs and burdens of climate change mitigation and adaption.
- 329. Recommends that each respondent initiate cooperative international action—and increase its efforts with respect to existing cooperative initiatives—to establish binding and enforceable measures to mitigate

³⁰¹ The Petitioners reserve the right to request interim measures.

- the climate crisis, prevent further harm to the petitioners and other children, and secure their inalienable rights.
- 330. Recommends that pursuant to Article 12, the respondents shall ensure the child's right to be heard and to express their views freely, in all international, national, and subnational efforts to mitigate or adapt to the climate crisis and in all efforts taken in response to this Communication.