To: The Independent Planning Commission of New South Wales

Re: Santos Pillaga Forest Coal Seam Gas Project

Submission by Gill H. Boehringer

Dear Panel Members

I strongly object to the Pillaga Forest Coal Seam Gas (CSG) project. There are many high risks and inherent dangers in this form of extracting gas that far outweigh any benefits. I respectfully ask you to reject this project.

I also believe the exploratory operations should be shut down immediately. Those operations have already shown the dangers implicated in CSG extraction, more poetically known as "fracking".

I am happy to have my name and my submission placed on your website.

Background to my submission

My interest in this matter comes from a deep concern that in Australia, not least in New South Wales, we have not protected our ecosystems adequately. There seems to be a willingness to risk irremediable damage to our environment for short term speculative gains. This is not just a subjective opinion. I have served as a judge on numerous inquiries into the impact of various human processes on the environment, including two Rights of Nature Tribunals, organized by the Australian Earth Laws Association, one of which dealt with threats to the Great Artesian Basin and more recently a Citizen's Inquiry into the state of the Darling River Basin in 2019. In all of these inquiries we sought and received expert opinion from scientific researchers, and from other disciplines, as well as from communities affected.

In relation to Coal Seam Gas operations as here under consideration, I have had significant relevant opportunity to assess the potential impact of such operations. Several years ago I was privileged to be invited to join a panel of experts from a number of different disciplines and countries to study this industry in its global presence. We formed the panel of judges of the venerable Permanent People's Tribunal based in Rome (PPT). The session lasted for almost a week, with many submissions from 4 different continents including Australia.

I attach the Advisory Opinion of the PPT. The findings and final advice were based on scientific evidence, critiques by academics and others, reports of various organizations-institutes and civil society groups- and substantial amounts of first hand evidence of the experience of local communities negatively, and seriously, affected by CSG operations.

The unanimous finding of the panel was that the processes associated with CSG extraction, pipelines included, are inherently dangerous to the health and safety of nearby communities, to the flora and fauna in the area, to both underground and surface water, to the air and, in general, to the ecosystem within which it is conducted and to those through which the product is transported by pipeline.

In view of that finding, it was the Opinion of the PPT judges that unconventional gas extraction should be banned, noting that it has been banned in a number of national and sub-state jurisdictions around the globe.

Main Concerns

I list here my main specific concerns that cause me to object to the Santos CSG project in the Pillaga Forest:

1. The threat to this great forest is obvious. Hundreds of fracking wells across nearly 100,000 hectares represents a significant actual disturbance of the forest ecosystem, affecting all who live within it, human and non-human. Further, the threat of fire represents a risk of further degradation, or even destruction, of much of the forest.
2. Chemicals used in CSG operations threaten the lives of those who are employed in the processes of CSG mining, those humans in the local community and bird, animal and other creatures as well as plant life. These negative impacts will flow from the normal processes of the operation, but also from accidents and spills (as have already occurred during the exploratory operations).
3. The depth of drilling is a danger to the ecosystem below ground. Pollution of groundwater, depressurization of the southern recharge of the Great Artesian Basin are likely consequential impacts.
4. The greenhouse emissions from the project will be substantial and therefore will make Australia's commitments to reduce emissions even more difficult.
5. Residents of the many families living in the forest will suffer negative effects, as is the case around the world. Air pollution, noise pollution and water pollution are all likely to have serious mental and physical impacts. It is likely that some, if not all, will be forced to abandon their properties.

Broader concerns:

1. If the voice of the people is to have any meaning in determining the kind of environment we wish to have and to leave to out children and their children, then much more weight must be given to the views of the people on this project than is generally the case. Environmental laws and planning have too often failed to protect the environment and the communities of this state As a lawyer with a long experience of historical legal analysis, I take the general view that state regulation does not really protect the environment but in general operate to limit the negative impact of human activities on it. In the present case, it is my hope that the substantial number of objections to the project (about 98% of the nearly 23,000 submissions, including 63% from the local area) will not be outweighed by the very speculative economic benefits claimed to result from the Santos project going on stream.
2. Further concern arises from the failure of the NSW government to fully implement most of the recommendations by the Chief Scientist (2014) in order to eliminate and/or mitigate the dangers presented by CSG mining.
3. Despite the lack of resolution of a number of important issues, the government seems satisfied to allow the project to go ahead, trusting Santos "to do the right thing". I believe that is entirely inappropriate. Corporations are not charities. they are duty bound to secure profits if at all possible. And their record for trustworthiness when it comes to the environment is not enviable. (Our Citizen's Inquiry found this to be the case with regard to the Darling River Basin; as did Commissioner Keelty in his Compliance Report on the Northern Basin; as did Commissioner Walker in his Report of the South Australian Royal Commission).

Especially left unresolved, inter alia, were the issue of insurance and sufficient funds for clean up/remediation; disposal of waste; surveys and protection of First Nations Cultural Heritage Sites.

4. The questionable modelling used by Santos concerning Aquifer interference also raises the gravest concerns.

Yours respectfully,

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PERMANENT PEOPLES' TRIBUNAL

Founder: LELIO BASSO (ITALY)

Session on Human Rights, Fracking and Climate Change

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ADVISORY OPINION

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1. Terms of reference of the request submitted to the PPT

The Permanent Peoples' Tribunal (PPT) has been requested to formulate an Advisory Opinion (AO) on the activities included under the label of fracking and other unconventional oil and gas extraction techniques with respect to their impact on the fundamental rights of affected populations and on the rights of nature. The request (Annex 1) had been promoted, formulated and signed by qualified representatives of academic groups and community organizations (Annex 2).

The document received by the PPT was the result of a long investigatory phase conducted over two years according to the terms of reference of the Statute of the PPT. These investigations surveyed:

- The existing technical and juridical knowledge as presented in the international scientific literature, as well as in the institutional/ normative sources and documents;
- Real-life experience in many representative localities, which have been the object of public hearings and assessments (see Annex 2).

Collecting direct testimonies and reports from interested communities is a key component of the methodology of the PPT, which recognizes peoples as subjects of fundamental rights and as those who are the best-qualified and -informed interpreters of the violations associated with fracking and other unconventional oil and gas extraction techniques. The evaluations expressed by the independent panels of judges who presided at the hearings constitute complementary contributions to the international panel selected and nominated by the PPT to preside at the concluding event, which took place via a virtual platform (Zoom) on 14-18 May 2018.

The members of the PPT panel who participated in this Session are:

Alberto Acosta Espinosa (Ecuador)
Ecuadorian economist and the country's former Minister of Energy and Mining. Acosta was the driving force behind the ground-breaking Yasuní-ITT Initiative, an offer by Ecuador to fight climate change by forgoing oil exploration and production in a large tract of untouched rainforest. Acosta is also the ex-president of the Constituent Assembly responsible for drawing up the Montecristi Constitution, which took effect in 2008 and established protection for the rights of nature. Acosta is currently a researcher at FLASCO-Ecuador (Latin American Faculty of Social Sciences) and member of the advisory council of the International Rights of Nature Tribunal.

Lilia América Albert Palacios (Mexico)
Mexican scientist, Albert has distinguished herself for her concern regarding the degradation and environmental contamination of her country. Albert is the founder of the Mexican Society of Toxicology, has twice been vice president of Alatox, and is a consultant for the World Health Organization (WHO). She was the first Mexican scientist to carry out studies on the possible

effects of pesticide residues. Thanks to the preparation of her article, "Persistent Pesticides in Mexico", the United States and Canada were induced to stop using DDT. She is author of numerous studies and books, among which are *Pesticides, Health and Environments*, *Dictionary of Pollution* and *México Tóxico*.

Andrés Barreda (Mexico)
Professor at the Faculty of Economics of UNAM, Mexico. Barreda coordinates the Center for Social Analysis, Information and Popular Training (Casifop A.C.). He is founding member of the National Assembly of Environmental Affected and of the Union of Scientists Committed to Society (UCCS). He participated in the organizing nucleus and the guarantors committee of the Session on Mexico of the Permanent Tribunal of the Peoples (2010-2014). Barreda is a member of Oilwatch and also on the advisory boards of the National Support Center for Indigenous Missions and the ETC Group.

Upendra Baxi (India)
Legal scholar and Professor of Law in Development at the University of Warwick, United Kingdom. Baxi has been the Vice-Chancellor of the University of Delhi (1990–1994), prior to which he held the position of Professor of Law at the same University for 23 years (1973–1996). He also served as the Vice-Chancellor of the University of South Gujarat, Surat, India (1982–1985). Professor Baxi's current areas of teaching and research include comparative constitutionalism, social theory of human rights, human rights responsibilities in corporate governance and business conduct, materiality of globalization, climate change justice and environmental justice. He is member of the Permanent Peoples' Tribunal.

Gill H. Boehringer (Australia)
Former Head of Law School, Macquarie University, Sydney Australia. Boehringer has also taught and researched in universities in the USA, Northern Ireland, England and Tanzania. He has taught many subjects in law as well as sociology of education, sociology of deviance, anthropology, criminology. Has served as a panel member on Permanent People's Tribunals in Cambodia, Indonesia and Sri Lanka inquiring into the garment industry, in Mexico inquiring into globalization and the social crisis, and Kuala Lumpur on the Rohingya genocide. Current research includes corporate crime and regulatory capture in the Philippines; the "war on drugs" in the Philippines; worldwide attacks on lawyers; alternative justice systems (Kurdistan and Brazil); people's lawyers and people's struggles (Turkey and the Philippines); local people's tribunals and social movements. He has also served as an international election observer in the Philippines in 2007, 2010 and 2013.

Maria Fernanda Campa (Mexico)
Mexican geologist, Campa was the first Mexican graduate in geological engineering. She has worked at Petróleo Mexicanos (PEMEX), was part of the Mexican Petroleum Institute, and founded the reservoir geology laboratory. A member of the group of engineers Constitution of 17, she and other colleagues defend the public and inalienable nature of the subsoil and advocate reform of the company away from liberal practices.

Louis Kotzé (South Africa)
Research Professor of Law at the Faculty of Law, North-West University (Potchefstroom Campus), South Africa, where he also teaches in the post-graduate LLM programme in Environmental Law and Governance. Kotzé is serving a concurrent term as Visiting Professor of Environmental Law at the University of Lincoln, UK. His research focuses on the anthropocene,

environmental constitutionalism, human rights, and global environmental governance and he has published over 100 publications on these themes. His recent books include: *Research Handbook on Human Rights and the Environment* (with Anna Grear-Edward Elgar, 2015); *Global Environmental Constitutionalism in the Anthropocene* (Hart, 2016); and *Environmental Law and Governance for the Anthropocene* (Hart, 2017). He is co-editor of the *Journal of Human Rights and the Environment*. In 2016 he obtained a second Ph.D. at Tilburg University and has recently been awarded the prestigious European Commission Horizon 2020 Marie Curie Fellowship to conduct research for two years in the UK and the Netherlands.

Larry Lohmann (UK)
Scholar and activist who works with the Corner House, a research and solidarity NGO in the UK that supports democratic and community movements for environmental and social justice. Lohmann has contributed to numerous scholarly books as well as to journals on land and forest conflicts, globalization, Southeast Asian environmental movements, racism, commons, climate change and the discourses of development, population and economics. He is a founding member of the Durban Group for Climate Justice.

Francesco Martone (Italy)
Spokeperson for the Italian network In Difesa Di that works in support of human rights defenders. Martone's areas of work and interest concern migrants, globalization, peace and disarmament, human rights and enviromental justice. As a member of the Italian Senate for two terms (2001-2008), he sat on the Senate's Foreign Affairs Committee and was secretary of its Human Rights Committee. From 1988 to 1995 he worked for Greenpeace International, and was then Chair of Greenpeace Italy for 3 years. He founded and coordinated the Reform the World Bank campaign (now Re:Common) from 1995 to 2001. Martone worked from 2008 to 2016 for the British NGO Forest Peoples Programme on issues related to indigenous peoples' rights and climate change and is currently a consultant for the Tebtebba Foundation. He is a member of the board of Un Ponte Per and is a member of the Permanent Peoples' Tribunal.

Antoni Pigrau Solé (Spain)
Professor of Public International Law at the Universitat Rovira i Virgili, in Tarragona. Solé has been the director of the Centro de Estudios de Derecho Ambiental de Tarragona (CEDAT) since December 2007 and director of the Revista Catalana de Dret Ambiental since 2009. He is a member of the Board of Governors of the International Catalan Institute for Peace (ICIP). His research is on matters of human rights, international criminal law and environmental law. He is a member of the Permanent Peoples' Tribunal.

While a formal preliminary Statement (on the documentation submitted to the PPT and on a general qualification of the evidences presented) was issued in the immediate follow up of the public session (Annex 3), this Advisory Opinion is intended to respond to the following questions:

1. *First, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, breach substantive and procedural human rights protected by international law as a matter of treaty or custom?*
2. *Second, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, warrant the issuance of either provisional measures, a judgment enjoining*

further activity, remediation relief, or damages for causing environmental harm?

3. *Third, what is the extent of responsibility and liability of States and non-state actors for violations of human rights and environmental and climate harm caused by these oil and gas extraction techniques?*
4. *Fourth, what is the extent of responsibility and liability of States and non-state actors, both legal and moral, for violations of the rights of nature related to environmental and climate harm caused by these unconventional oil and gas extraction techniques?*

Our presentation attempts to do the following:

a) Show how fracking and other unconventional oil and gas extraction techniques are components of more general extractive strategies and policies.

b) Review the extensive documentation made available to this Tribunal.

c) Evaluate the evidence presented, using the doctrines developed by the PPT over its long history of considering similar or related cases.

d) Link this evidence with evolving cultural and juridical doctrine and discussion regarding the rights of peoples and of nature.

e) Justify the juridical terms of reference to be taken into account in assigning responsibility for the violations of the rights of individuals, communities, living contexts, and local and global environments.

f) Recommend steps to be adopted to counter the current state of impunity of corporations and states and to recognize properly the rights and dignity of affected subjects (who represent a wide spectrum of communities and environments).

The work of this Tribunal has been coordinated in Rome by Simona Fraudatario, who also took responsibility for collecting the collaborative written contributions to this Advisory Opinion.

2. The general framework of fracking: shale gas in today's world market

2.1 The importance of shale gas production in the USA

Shale or slate gas extraction begins to develop in the USA in 1997, when the government – given the growing deficit of natural gas in the country – was looking for ways to extract new resources. To do this, it invests in research and development, creating national laboratories dedicated to the subject, while entrepreneurs join in by investing in the exploitation of the resource. During the last twenty years, the production of shale gas has been vigorously extended in such country, since it has already settled in 23 States of the American Union.

In the year 2000, the original US shale gas production was 0.39 trillion cubic feet and in 2010 it reached 4.87 trillion cubic feet. From 2002 to 2012 the production of unconventional gas in the US – which includes shale gas, tight gas and CBM – grew to contribute 50% of all gas. This has led to the granting of export permits for liquefied natural gas as of 2014 and 2015; a fact unthinkable just in 2013. According to the International Energy Agency (IEA), since mid-2010, the US became the world's leading exporter of unconventional liquefied gas, while in 2018 it has become the world's second largest natural gas exporter. It is also scheduled to become a net exporter of crude by 2020.

The US agency Energy Information Administration (AIE) projects that the US will be completely self-sufficient in natural gas by 2035. Permanently displacing the previous consumption of coal from the country's energy matrix, it is conjectured that, for that year, 49% of the gas will come from the shale and only 1% will be imported, causing the decrease of its net imports from 11% to 1%.

According to a representative of the Energy Resources Department of the State Department, "in 2012, in the US, gas was paid at less than $ 3 per million BTU (British Thermal Unit), a price much lower than was paid in Europe (US $ 9) or in Japan (US $ 15)." The official explained that said extractive and commercial paradise was achieved by guaranteeing an appropriate investment climate: price deregulation, early fiscal incentives, a predictable regulatory process and funds for research and development to the private sector.

To get an idea of the current American export power, one should take into account that only the Texas basin is currently producing more oil than Venezuela, as well as twice the current Mexican extraction. As a result of the above, USA is trying to flood the European market, beginning to displace the production of oils from the North Sea, from Africa and the Caspian Sea, while Donald Trump tries to intimidate Angela Merkel so that Germany stops importing conventional gas from Russia. [1]

1 Even so, it is necessary to remember that the US in fact continues to import a lot of crude, since it extracts from its own subsoil only 10.5 million barrels, for a refining complex that by itself consumes 17

2.2 The shale gas fever and its technological package

The historical origin of the production of shale gas was the natural response to the stagnation of production observed in 2005, as well as the increasing prices of gasoline suffered since the 2000s. But it was also the result of the surprising technical advances that occurred in the terrain of directional drilling and hydraulic fracturing. Originally developed by a marginal mining company in Texas, it was actually in the exploitation of the Marcellus deposit – the second largest in the world of its kind –, in the northeastern US, where this technique has been able to achieve an enormous scale of its extractive processes.

Most of the shale deposits in Texas are characterized by short longevity and by a relatively low demographic occupation of the exploited space, while the Marcellus basin not only has a huge extension, but also greater gas wealth and longevity. At a depth between 1,500 and 3,000 meters, Marcellus is located mainly in the States of Pennsylvania, West Virginia and Ohio, which implies environmental and demographic impacts much higher than those of Texas, since Marcellus is on or near the region where the first US oil exploitations occurred in the mid-nineteenth century, the permanent exploitation of coal deposits in the Appalachian region and the locations of the aggressive petrochemical industries around Lake Ontario. It thus falls on a series of regions that historically have severely punished the health of the population.

This has made it the focus of attraction for a real swarm of aggressive energy services companies. Surface spills and backflow of hydraulic fracturing fluids and problems with lining and slurry seals, which allow the migration of gas to freshwater aquifers, represent the greatest threats to water resources, although not the only ones. All of which allows us to understand why it is in those rural regions where the worthy American movement of resistance against fracking was born.

2.3 The shale gas fight within the world market and the US commercial strategy with gas shale in the world

The United States influences a number of national States by pointing out that the world has deposits of 345,000 million barrels of unconventional oil (the equivalent of 65 supergiant deposits), 10% of the total crude reserves of the globe. As well as 7,300 trillion cubic feet of unconventional natural gas, which is already assumed to be 32% of the total world gas reserves. Reserves of which the USA has 862 trillion cubic feet.

In international propaganda, the current promotion of shale gas as an energy source borders on euphoria, as it did with oil 150 years ago, when General Drake drilled the first wells in Titusville, Pennsylvania. The new extractive activity has spread not only to 23 States of the American Union, but also in a network of related nations or in some way

million barrels per day (the largest in the world). Which forces them to import crude oil amounting to 7 million barrels. Although, at the end of the day, they end up exporting crude oil, unconventional gas, gasoline and all kinds of lubricants.

subject to the hegemon's energy policies, as is the case of its neighbors in North America: Mexico and Canada; the block of English-speaking countries such as England, Scotland, New Zealand, Australia and South Africa; the block of some European neighbors of Russia: Poland, Ukraine and Romania, and finally another block of South American nations: Argentina, Colombia and Brazil.

When the first generation of American shale gas extractors made their first massive supply of fossil fuels on the world market, OPEC producers, between 2014 and 2016, sought to fight back by oversupplying conventional oils and gas, thus causing the price of the barrel crude oil to go from 100 to 30 dollars in less than two years, which was originally a death threat for producers of unconventional fuels, due to their high production costs. This measure effectively bankrupted more than 100 North American companies. But the protection of the producers on behalf of their State under the U.S. Bankruptcy Code made it possible for the US companies from Barnett, Marcellus, etc., not to liquidate or evaporate, but to restructure, with the result that they re-emerged from this crisis without owing money to banks. And although the clash with OPEC caused the bankruptcy of many companies and the loss of many jobs in the US, the surviving companies were in a position to improve their extractive capacity.[2]

On the other hand, by November 2017, the OPEC countries – heavily indebted by the self-imposed austerity regime – gave up and finally allowed the global recovery of oil prices. The American economy came out as victorious, not only because it subsidized and rescued its producers, but also because, before the crisis, the price of the equivalent barrel was US $ 80, while afterwards it was only US $ 55. The good average productivity guaranteed to those who exploit the slate ensures their permanence within the global energy formula. In March 2017, the US ended up positioned as the third world producer of crude, only behind Saudi Arabia and Russia.

At a press conference in 2014, in Texas, Ben Bernanke pointed out that the shale gas industry was the most positive event that had happened to the American economy after the 2008 crisis. To the point that during 2018 speeches continued to be heard with great confidence and aggressiveness about the future of such nation. In 2020, we are assured, the old hegemon will once again become the world's leading producer of hydrocarbons.

2.4 World production and consumption of shale gas in the context of a geo-economic war for hegemony

When reviewing the global figures of the global energy market we find that, in reality, the largest international gas market is in Asia (81.2 billion dollars), while the second region is Europe (63.2 billion dollars), because the huge Siberian gas fields of Russia are counted as part of Europe (16 billion dollars), which makes up 70% of world gas exports. Thus, the main exporting countries are, in order of importance: Qatar (which dominates

2 Of the 20 days that were originally required to drill a well in 2005, by 2017 only eight days were needed.

14% of exports), Norway (10%) and Russia (7.6%), with the United States in the fourth position (6.8%).

World gas consumption, on the other hand, is even more focused on the Asian and European region, which in this case concentrates 86.3% of all imports of this energy source. Although the main importing nations are just the most industrialized nations in the world: Japan (15%), China (11%), South Korea (6.8%), France (6%), Italy (5.4%), India (4.5 %), the United Kingdom (4.3%), the United States (4.2%), Germany (4.1%) and Belgium-Luxembourg (3.7%).

All this shows us that the bulk of the international gas market, is concentrated primarily within the Asian continent and secondarily in Europe, or between Asia and Europe. So the technical and geopolitical deployments that the US is currently carrying out, with its wide spectrum of unconventional fossil fuels and biologically or organically originated energy sources, is a huge effort that seeks to derail the international market of fossil fuels away from OPEC (Venezuela and Iran), the two Russian Siberias, Kazakhstan, etc. It is a bold geoeconomic operation that participates in a major struggle to prevent the transfer of the center of the world economy and the oil-based economy to the central region (or hertzland) of Asia-Europe. Although the measure also seeks that the shift in the technical pattern does not leave the new techno-scientific world completely outside of the Americanized oil civilization.

Not in vain is the outbreak of Trump's current trade war against China, Europe, Mexico and Canada, which is aimed at dissolving the old gas pact that has been slowly growing for fifty or sixty years between the Soviet Union, first, Russia, then, and Germany (and therewith between Russia and Europe), while the US price war progresses towards the EU and against China. Meanwhile, China and Russia are increasingly getting rid of their reserves of US Treasury bonds, exchanging them for cold hard gold, and, in the case of Russia, forcing anyone who wants to buy their fossil fuels to pay, not in dollars, but directly in gold rubles.

According to the new energy narrative of the hegemon, in the next decade the United States will become the most efficient and economical oil and gas producer in the world and will pump its hydrocarbons at a lower price than Saudi Arabia itself, prolonging the life of the border of the existing fossil reserves for at least another 30 years. Therefore, it is expected that by 2020 65% of the resources will come from the "methane bed gas" (coal bed methane or CBM), also known as coal seam gas or CSM. By itself, it is estimated that the current reserves of natural gas in the United States (482 trillion $feet^3$), if the current consumption rates remain constant (25.18 billion $feet^3$ per day used to produce electricity), could reach 52 more years of domestic electricity generation.

2.5 NAFTA/ASPAN becomes an "unconventional" energy relationship, but a strategic one

As long as the USA does not have direct military control of the large deposits of Venezuela, its main energy business occurs thanks to NAFTA, as the US imports 39% of its oil and 88% of gas from Canada. But it also turns out that it exports large amounts of natural gas, LPG and gasoline to Mexico and, to a lesser extent, to the backyards of South America, Central America and the Caribbean.

Regarding gas, during 2016, the USA exported to the world 14.4 billion dollars and imported 8.8 billion dollars, making it a net exporter for an amount equivalent to 5.6 billion dollars. It is surprising then that the bulk of its gas exports is concentrated in its relationship with Mexico, since that 30% of these exports are sent, that is, 4.37 billion dollars, so it is understood that it is with Mexico that it performs almost 80% of its exports and gas revenues.[3]

Natural gas is a fossil energy source that, as the world's climate crisis worsens, is positioned ideologically as a supposed "salvation" (semi-green) or as the best possible transition from the oil and coal economy to a definitely sustainable energy. Natural gas, by the magnitude of its international sales (over 211 billion dollars) has become the ninth commodity in the world (after automobiles, crude oil, integrated circuits, refined petroleum, auto parts, packed medicines and gold). This increase in importance directly expresses the growing weight that the United States has conferred on the technical package of so-called unconventional crudes and gases. However, when a review is performed over the US fossils sales matrix and how they accomplish it, some issues come to light that do not have to do with technical, financial or commercial skills, but rather with a relationship of subjection and commercial, political and military slavery.

Mexico is the consumer of 30% of the US gas surplus, which makes it its main gas customer.[4] At the same time, gas is the second energy business of the Americans with Mexico. No one in the world buys so much gas from the United States. It is understood then that this operation is tried to be ideologically justified as a "transition" towards a new energy matrix that supposedly goes out of step with global warming. But the truth is that, at the same time, the purchase of gasoline from the United States makes up 73% of what Mexico consumes, with gas and gasoline purchases accounting for 11% of everything that this country imports from the United States (21 billion dollars).

Outside of the high circles of power in North America, the world has be given little information about Mexico as one of the regions of the world with the most possibilities to obtain high energies based on sustainable and renewable sources, because the characteristics of its territory are particularly favorable in the world to obtain wind, solar, geothermal and tidal energy. So the forced purchase of 30% of American gas exports is

3 The US sells 13% of its gas to Canada (1.81 billion dollars), 9.5% to Japan (1.37 billion dollars), 8.2% to China (1.17 billion dollars), 7.6% to South Korea (1.09 billion dollars), and 3.7% to the Netherlands (529 million dollars).

4 These exports to Mexico are superior to everything that was exported from gas in that same year to China, Japan, South Korea and India combined.

not something that favors the development of the transition towards a de-fossilized world. Rather, it has involved the development of a network of gas pipelines throughout the country that serves the "successful" sale of that 30%. This gas pipeline network has accompanied the sale of hundreds of thousands of cars using gas, the construction of gas stations for such cars, but, above all, the reform and privatization of the national electricity system to favor the construction of gas-electric power plants. On the other hand, having dismantled the Mexican petrochemical industry, Mexico also had to import all kinds of products such as polymers, plastics and rubber (18.2 billion dollars). Mexico being an oil-producing country with a once-highly developed industry, these types of imports are as absurd as the current Mexican imports of corn, soy, wheat, rice and fruit from the United States.

The "success" of the US has been rather to force Mexico to do the bidding of the great monopoly of the highest fossil groups in the US, preventing Mexico from autonomously financing its energy transition programs according to its own resources and its own economic, technical, environmental and social possibilities. By importing these huge quantities of gas and gasoline, the sovereign progress of an effective transition towards the balanced production of alternative energies has been impeded. Such a transition would favor not only the "general" production of energy for all of Mexico, but also the regional and local production that allows for economic and political autonomy in all areas with alternative energy potential. Instead, what the country has witnessed is a dismantling war against public companies such as *Pemex*, *Luz y Fuerza del Centro* and *Comisión Federal de Electricidad*, the invasion of a myriad of American companies prospecting for shale rock formations, as well as European companies, especially Spanish, that have distributed electricity production. And finally the development of a public-private criminal network dedicated to the very dangerous milking (*huachicoleo*) of the pipeline networks in the country.

Free trade between Mexico and the United States, only through a systematic social and institutional decomposition, has been able to develop an absurd relationship between two facts that are absurd in themselves: 1) the current export of US gas to Mexico, which in reality is destined to prepare the moment in which it is possible that 2) Mexico, already under the control of American energy companies, can export its potential shale to the United States.

3. The impacts of fracking and other unconventional oil and gas extraction techniques based on the evidences presented

Far and away the most fundamental threat of fracking to ecosystems identified in the testimonies and briefs to this Tribunal is the fracking system's violation of the right to informed participation in the *definitions* of:

- Fracking itself;
- The ecosystems on the fracking frontier, including their human components; and
- The deleterious effects of fracking on those ecosystems.

The burden of the testimonies is that because the fracking system is organized around the violation of this right, it is impossible for it to respect other rights of humans or nonhumans, including those of land and water as well as that of humans to health, life, free expression, or a clean environment; or for there to be proper acknowledgement, recognition, identification, measurement, surveying, testing, monitoring or regulation of fracking's deleterious effects on ecosystems. That impossibility in turn precludes the possibility of eliminating or even meaningfully controlling those impacts in the absence of a ban on fracking.

The remainder of this section takes each of the three bullet points above in turn.

3.1 The definition of fracking

As a 2016 survey of the scientific literature observed, the oil and gas industry, together with many members of the scientific community, generally use the term "fracking" as "shorthand for one particular type of well stimulation method".[5] When other phenomena are mentioned, even if they are merely (for example) the new networks of high-pressure pipelines to which the wells are connected, they are often treated as external to fracking or as relatively trivial extensions of technologies already in place.

Many witnesses reported having to engage in a continuing battle against this attempt to restructure and limit the definition of fracking, arguing that to let it pass would preclude responsible analysis and action. As an amicus curiae brief from New York stressed, fracking should denote "*all* the processes involved in exploring, developing, extracting, disposing, storing, and distributing shale gas (so-called "natural" gas) via unconventional drilling, and all related industrial activities," as well as the "'fracturing' of our health,

5 Hays J. and Shonkoff, S.B.C. (2016) "Toward an Understanding of the Environmental and Public Health Impacts of Unconventional Natural Gas Development: A Categorical Assessment of the Peer-Reviewed Scientific Literature, 2009-2015", PloS ONE 11 (4), p. 4. As Andy Gheorghiu and Scott Edwards note in their Amicus Brief to our Tribunal, "some states, like Germany and the United Kingdom (as well as the EU Commission), have tried to re-define the definition of fracking in order to avoid stronger regulation or fracking bans for the industry. The UK and EU Commission limit their definition of fracking to 'high volume hydraulic fracturing' [which] means injecting 1,000 m^3 or more of water per fracturing stage or 10,000 m^3 as more of water during the entire fracturing process into a well" (p. 2).

environment, properties, communities, legislatures, media, justice system, rights, relationships, and way of life by those who would usurp and abrogate our rights".[6] "You have compressor stations because you have pipelines," observed a witness from Ohio: "you have pipelines because you have fracked gas. It's a package deal: they come together."[7] Other mutually-entangled physical aspects of the fracking system include increased diesel transport; rampant land and forest clearance; increased water extraction and use; new networks of wastewater ponds and treatment facilities; underground infrastructure of unprecedented dimensions that poisons, impoverishes and destabilizes the subterranean environment; increased production, transport, storage and regasification of liquid natural gas via a dedicated technological infrastructure; ocean acidification; and much more as well.

All this is supplemented by coupled phenomena that are neither "only physical" nor "only social", but both at the same time. Thus fracking and the sunk costs connected with it militate against innovation in renewable energy; retarded renewables development leads to increased dependence on fracking; and so on. Fracking leases on public lands may make investment in adjacent private lands more attractive, or degrade the environment to the degree that nearby private owners are forced to sell up, facilitating further incursions of fracking and further degradation.[8] Low-cost gas subsidized by fracking's physical infrastructure encourages increased use of gas, which locks in even more infrastructure. And so on.

It is clear from the testimonies, amicus briefs and academic references provided to this Tribunal that fracking cannot but be defined as a wide-scale, distributed frontier operation that divides society and nature into two parts at hundreds of thousands of separate locations worldwide. In the "sacrifice zones" on one side of the fracking frontier, human and nonhuman nature is made as cheap as possible for the use of the fossil fuel economy whose centers of power lie on the other side. One Virginia country-dweller summed up the logic neatly: "Both the government and the pipeline company save money in rural areas. They sacrifice us."[9]

In addition to infrastructure typically described in physical terms, this surplus-producing frontier requires – and is partly constituted by – a system of frontier law. On both west and east coasts of the United States, for example, eminent domain, including easements obtained through trickery, is widely applied in order to debilitate and lower the costs of local resistance to the appropriation of individual, community and public lands and water

6 Stephens, M., Bartholomew, K., Couchon, D., Ek, B., Ossont, J. and Walczak, D. (2018), *Brief of Amicus Curiae,* Coalition to Protect New York, p. 13, emphasis added.

7 Testimony of Barbara Gottlieb, national director for environment and health of Physicians for Social Responsibility, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 24. See also *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), p. 3.

8 Testimony of Heather Cantino, in *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), lines 1370-79.

9 Testimony of Irene Leech, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 10. See also p. 13.

for private fracking and pipeline interests.[10] Little trace now remains of eminent domain's traditional "public benefit" justification,[11] and pipeline owners' "use and enjoyment" of the appropriated land regularly takes precedence over the interest of communities in maintaining clean environments.[12] Nor would fracking be economically possible without environmental laws that, as a brief from Pennsylvania argued, are today "largely written and lobbied for by the very corporations that 'legalize harm'"[13] even as they purport to regulate and limit them; or decrees that put caps on corporate financial responsibility for damages to the environment, such as those signed by various governors of US states.[14]

This system of frontier law is underpinned, accompanied and permeated by racism and colonialism. The frontiers that make fracked gas cheap are constituted, in part, by frontiers of injustice dividing black and white, indigenous and nonindigenous, "hillbilly" and privileged urban dweller.

These lines were not created by the fracking industry.[15] But, as numerous witnesses testified, they are exploited, sustained and strengthened by it as contributions to its productivity. Thus in Appalachia, on one side are the "dumb hillbillies"[16] whose land, springs, streams, trees, jobs, culture and self-defined needs can safely be overlooked in the interest of cost savings and export opportunities for distant industries on the other side of the frontier. On one side are red and black communities, whether in Alaska, North Carolina or Australia, whose ways of interacting with land are legally disvalued and whose history is ignored in the course of making fracking economically feasible; on the other side is the "white" (or "green") energy that their expropriation and oppression makes possible.

It is clear from the bulk of the testimony heard by this Tribunal that fracking could not be made "nonracist" or "noncolonialist" without incurring costs that the industry is unable to tolerate. Hence to follow standard corporate and state practice and leave racism and colonialism out of the definition of fracking – and thereby occlude from view the forced, unpaid contributions of black, indigenous, and poor white rural communities dependent on the land – would be both economically inaccurate and unconstructive as a basis for the defense of the rights of humans and nonhumans in the fracking context.

10 Leech, I. and Fjord, L., *Report to the Permanent Peoples' Tribunal Session on Human Rights, Fracking and Climate Change*, Charlottesville, VA (2018), pp. 42, 83-84, 98; McCaffree, J., Amicus Brief in the Matter of Session on Human Rights, Fracking and Climate Change, North Bend, OR (2018), pp. 14, 23.
11 Leech and Fjord, *op. cit. supra* note 6, pp. 43-45, 97.
12 *Op. cit.*, p. 42.
13 Margil, M., Community Environmental Legal Defense Fund, Brief of *Amicus Curiae on Petition for an Advisory Opinion on the Question of the Impacts of Fracking and Climate Change in the Permanent Peoples' Tribunal Session on Human Rights, Fracking and Climate Change*, Mercersburg, PA (2018), p. 5.
14 Leech and Fjord, *op. cit. supra* note 6, p. 45.
15 See, e.g., testimony of Anita Puckett in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), pp. 86-87.
16 *Ibid*., p. 92.

3.2 The definition of ecosystems affected by fracking

A second fundamental threat to ecosystems from fracking that has been exposed during this Tribunal is the widespread denial of communities' right to have a say in defining what ecosystems are. Indeed, it is evident that the fracking system's damaging effects on ecosystems stem partly from the undemocratic powers it exercises to limit both the scope of the definition of nature and the procedures used to define it.

Under most of the jurisdictions in which fracking is taking place, an ecosystem is "viewed legally as a 'thing', rather than as a rights-bearing entity".[17] This understanding is at odds with that of many rural residents whose land and water are threatened or damaged by fracking. Maury Johnson of West Virginia, whose farm lies in the path of the Mountain Valley Pipeline, testified, for example, that "the land is as important as a family member."[18] Lisa Lefferts of Virginia, who emphasized that she viewed local land and waters as "sacred", asked why she should not "have a right … not to have what I hold as sacred violated".[19]

If fracking victims tend not to be permitted to have a say in defining what land and water are, neither are they allowed to have a say in defining the human persons who, in the view of many, also form part of local ecosystems and guarantee their protection. Fracking regimes and the frontier law that governs them tend not to recognize that, for many rural people who "identify with the landscape",[20] "our land is a part of who we are"[21]. Tree-cutting plans, for example, can in some cases threaten not only forests, but also local people's "right to be an eco-community and express and maintain our environmental values".[22] Many testimonies and documents made available to the Tribunal questioned whether justice can be achieved as long as the defense of humans and of nonhumans, and of the homes of each, are legally separated.[23]

A definition of legal persons that abstracts from their place in local ecosystems is automatically discriminatory against many communities affected by fracking. In many jurisdictions, lower environmental standards apply in the rural areas most targeted by fracking or pipeline schemes because of lower population concentrations. For example, a "rural" designation allows the US's Atlantic Coast Pipeline to save money on construction costs.[24] But the head-counts that the State performs as part of its utilitarian

17 Margil, M., *op. cit. supra* note 9, p. 7.
18 Testimony of Maury Johnson, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 45.
19 Testimony of Lisa Lefferts, in *Ibid.*, p. 117.
20 Testimony of Richard Shingles, in *Ibid.*, p. 93.
21 Testimony of Irene Leech, in *Ibid.*, p. 10.
22 Testimony of Lisa Lefferts, in *Ibid.*, p. 117. See also Stewart, M. R., Center for Earth Jurisprudence, *Brief of Amicus Curiae on Petition for an Advisory Opinion on the Question of the Impacts of Fracking and Climate Change in the Permanent Peoples' Tribunal Session on Human Rights, Fracking and Climate Change*, Orlando, FL (2018), p. 15.
23 See, e.g., testimony of Mary Greer, in *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), lines 2856-2904.
24 Leech and Fjord, *op. cit. supra* note 6, p. 33.

calculations of where to set up such "sacrifice zones" – even where, as is not always the case,[25] those head-counts reflect actual population distributions near fracking or pipeline sites – recognize only part of each rural "head" insofar as they fail to recognize the land that is "inside" that head. In addition, by ignoring the greater role that rural residents tend to play in protecting land and water, and by taking human-nonhuman relations in urban areas as a baseline, this mode of head-counting endangers the well-being of "heads" outside the sacrifice zones.

Discrimination is also inherent in the practice of permitting more contamination from fracking in rural than in urban areas on the ground that, since rural areas are cleaner, they can absorb more.[26] When, in 1991, the then chief economist of the World Bank, Lawrence Summers, was quoted as advocating dumping toxic industries on poor countries on the ground that regions such as Africa were "underpolluted", his action was widely condemned as racist and colonialist; it would be ironic if the legal practices underpinning the fracking system in the global North were not seen in a similar light.

One objection to the dominant definition of ecosystems that was heard by this Tribunal centered on its inability to recognize the importance of the long-term presence of human homes within them. It is not merely that information about the threats to homes and farm buildings of pipelines, compressor stations and so forth is regularly suppressed, distorted or left out of environmental impact studies,[27] nor merely that laboratory-derived data about the effects of toxins is typically not put in the context of their tendency to concentrate in particular locales or of local incapacity to monitor them. It is also that environmental studies are not normally designed to take into account the long-term environmental effects of the harrassment and *de facto* eviction of defenders of land and water near pipeline or other fracking-related installations – a lacuna that becomes particularly important in times of deregulation and growing regulatory capture, when there is "no one looking out for those living next to … industrialized operations" or "monitoring toxic chemicals released into the air".[28] One incredulous witness asked, "How can an environmental impact statement completely ignore the psychological and emotional impacts of the human inhabitants of the affected areas?"[29] By the same token, environmental legislation governing fracking is failing to take account of the effects of fracking infrastructure on rights of way, both those used by local residents and those, like the Appalachian Trail, used by people from around the world.[30]

The imposition of ecosystem definitions by fracking interests is also contested due to a deeply inadequate, biased, and often corrupt system of data collection, classification and

25 Leech and Fjord, *op. cit. supra* note 6, p. 32.
26 *Ibid.*, pp. 33-34.
27 See, e.g., testimony of Cletus Bohon, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 101.
28 Testimony of Jill Antares Hunkler, in *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), lines 1114-1117.
29 Testimony of Susan Hastings, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 127.
30 See, e.g., testimony of Andrew Downs, in *ibid*., pp. 140-42; testimony of Maury Johnson in *ibid*., p. 106.

analysis. Many witnesses testified that the state regularly fails to collect environmental data – including baseline data on the state of ecosystems prior to the arrival of fracking – and suppresses ecosystem information supplied by landowners and concerned citizens and experts. In the US, authorities often fail to identify and map water bodies affected by fracking-related installations or take account of karst soils;[31] often do not take earthquake or climate risks into account; and routinely and calculatedly prevent local knowledge from being incorporated into environmental studies. In Alaska, crucial baseline information concerning permafrost, sea ice, and other aspects of the local environment is lacking. In Queensland, water contaminated by fracking is legally classified as not being "water" and thus not subject to environmental restrictions nor even proper investigation.[32] Because debate about land-use is "largely non-existent",[33] even the most rudimentary discussion of ecosystems in terms other than those favored by the fracking industry is prevented.

The next section will lay out in detail why it would be exceptionally misleading to describe the impacts of fracking on ecosystems merely in terms of the introduction of this or that toxin into the water table, the emission of this or that set of molecular compounds into the air, the cutting of this or that stand of trees, the elevation of noise or vibration levels in this or that locality, and so forth. But one of the reasons why this is so is already clear: to do so would be to imply not only that ecosystem impacts might some day be alleviated by programs addressing each individual item on such a list in turn, but also that the fracking system has a just or scientifically defensible process for defining, identifying and describing the ecosystems being affected as well as sufficient means and incentive to protect them.

The evidence presented to this Tribunal demonstrates that all three of these propositions are false. The fracking system is procedurally incapable not only of defending the ecosystems that it affects in ways that would respect the rights of affected communities, but also, far more fundamentally, of tolerating the institution of nonprejudicial and rights-respecting methods for understanding what those ecosystems are. Revealingly, in the Ohio Tribunal, approximately 85% of the testimonies that mentioned terms such as "ecosystems," "environment" and "ecology" concerned themselves primarily not with details of biology, hydrology, chemistry, geology or environmental medicine, but with procedural injustices centering on the ways that the fracking system is able to dictate a biased definition of ecosystems themselves. The figure for the Charlottesville Tribunal was closer to 95%.[34]

31See, e.g., testimonies in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018) at pp. 42, 65, 86, 90, 93, 100, 102, 107, 110-11, 125 and 128-9.

32 Interview with Joe Hill, Queensland, http://mpegmedia.abc.net.au/rn/podcast/2015/05/bst_20150514_0839.mp3.

33 Hamman, E., Pointon, R., Kennedy, A., *Amicus Brief to the Permanent Peoples' Tribunal (PPT) Session on the Human Rights Impacts of Fracking*, May 14-18, 2018, Oregon State University, p. 13.

34 *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017) and *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018).

3.3 The definition of the threats to ecosystems from fracking

The fracking frontier is unusual in two respects. First, physically and technologically speaking, it is even more "extreme" than many other frontiers. Fracking targets sprawling, widely-distributed mineral formations that have never previously been subject to such thoroughgoing devastation, using new, extraordinarily resource-intensive forms of physical, chemical, hydrological, legal and cultural engineering.[35]

Second, the fracking frontier is often more "granular" than linear, and can impinge on almost any type of landscape or ownership regime, urban and suburban as well as rural. One community may be disrupted by it, while an adjacent community partly escapes. Yet each point on this gigantic, scattered frontier must be connected to many other locations via pipelines, compressor stations, liquefaction plants, container ships and so forth. In the United States alone, there are already more than one million frack wells across the country from New York to California, occupying at the surface alone a land area more than three times the size of Yellowstone National Park,[36] together with thousands of kilometers of new pipeline corridors. In Australia, too, the industry constitutes a vast "footprint rolling across groundwater-dependent ecosystems, agricultural land and peoples homes" alike.[37]

Taken together, these characteristics entail that fracking's ecosystem impacts will always be enormous in scale, varied in type, very widely spread, and manifested as a package across entire regions. For example, tens of millions of litres of water and hundreds of dangerous chemicals necessary for releasing and extracting gas trapped in rock layers must be used in each of millions of locations. Vast, economical pipeline networks must be constructed regardless of how many streams they cross or homesteads they bisect. Strategies for cheating, undermining and expropriating affected communities developed via legal, scientific and public relations expertocracies must be coordinated in a cost-effective way across large land areas. The technical requirements for mass ruthlessness across the fracking frontier create incentives for the development and maintenance of extensive institutions for control of thought and other action that themselves constitute part of the threat of fracking.

Accordingly, although it requires little effort to compile disaggregated lists of the biophysical impacts of various isolated components of the fracking system from the scientific research that witnesses and other researchers have painstakingly summarized for this Tribunal, such information must be handled cautiously lest the way it is presented imposes an overly-narrow format on our recommendations.

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35 For a more detailed description of some of the techniques used, see Gheorghiu, A. and Edwards, S., *Amicus Brief for the Permanent Peoples Tribunal Session on Human Rights, Fracking and Climate Change*, Food & Water, Brussels and Food & Water Watch, Washington (2018).

36 Permanent Peoples' Tribunal, Session on Human Rights, Fracking and Climate Change, *Appendix 1 to Violations of Nature's Rights: Evidence of environmental and climate harm caused by unconventional oil and gas extraction* (2018), pp. 14-15.

37 Permanent Peoples' Tribunal, Session on Human Rights, Fracking and Climate Change, *Summary and Submission of Australian Evidence*, Oregon State University (2018), p. 20.

For example, regarding the release of poisons into water, air, soil and geological formations, it is known that of the 240 chemicals used or created during the fracking process whose biological effects on humans have been studied, 157, or 65 per cent, are reproductive or developmental toxins. Substances universally used in the fracking system, such as benzene, toluene, ethylbenzene, xylenes, polycyclic aromatic hydrocarbons and endocrine-disrupting chemicals, are uncontroversially associated with developmental problems in infants, children and young adults.[38] Another 781 chemicals used in fracking lack toxicity data entirely.[39] Through its explosive disruption of subsurface geological layers, fracking also unavoidably spreads heavy metals and radioactive substances into water sources and other locations. Compressor stations along pipelines add contamination that includes nitrogen oxides, particulate matter, sulfur dioxides, volatile organic compounds and, of course, greenhouse gases. And so on.

The testimonies heard by the Tribunal strongly suggest the inadvisability of responding to such data with proposals for replacement or better regulation of the toxins associated with fracking. In the relevant political and technical context, such proposals would merely expand the scope for the deadly, large-scale experiments in poisoning humans and nonhumans that the fracking industry is currently conducting in violation of the Nuremberg Code.[40] This is because the fundamental threats to ecosystems and the humans that form part of them come not just from cocktails of dangerous compounds themselves, but from an integrated frontier strategy that necessitates wide-scale contamination with *whatever* substances are required for, or are produced by, fracked gas extraction, while systematically precluding sufficient regard for or even official discussion of their impacts. Indeed, this strategy – combined with certain inherent technical features of fracking, such as the breaching of geological boundaries – makes inevitable not only widespread, catastrophic toxic contamination but also devastation of hydrological systems, increased earthquake damage, erosion, land subsidence, sedimentation, aquifer damage, decimation of wildlife and biodiversity, crop and livestock damage, loss of fertility, and other ecosystem impacts. Witness testimony has amply demonstrated how, in region after region, this strategy has already assimilated, captured or simply swamped attempts at regulation and monitoring. Recommendations that do not address this strategy are simply not addressing the ecosystem issue.

Among the elements of this strategy identified by witnesses and amicus briefs are the following:

Systematic use of the law to suppress information about potential or actual ecosystem effects. Witness after witness testified that "we don't even have a right to know what is

38 See, e.g., Currie, J., Greenstone, M. and Meckel, K., "Hydraulic Fracturing And Infant Health: New Evidence from Pennsylvania", *Science Advances Journal*, 13 December 2017.
39 Elliot, E. G., Ettinger, A. S., Leaderer, B. P., Bracken, M. B., Deziel, N. (2016), "A Systematic Evaluation of Chemicals in Hydraulic-Fracturing Fluids and Wastewater for Reproductive and Developmental Toxicity", advance online publication in *Journal of Exposure Science & Environmental Epidemiology*.
40 https://history.nih.gov/research/downloads/nuremberg.pdf.

being forced into the ground"[41] at fracking wells, and that associated pipeline schemes consistently omit "key environmental and socio-cultural information necessary for public information".[42] Because the "human right to information" over chemical risks to "human and non-human life" (as the Mercy Centre for Ecology and Justice of Labrador, Newfoundland terms it) is being violated,[43] communities are being prevented from having a say even in defining what the threats to their ecosystems are.

This is neither an oversight nor a conspiracy on the part of maleficient officials and corporate executives, but is integrated into the frontier law mentioned above. In Ohio, for example, Senate Bill 315 of 2012 – drafted by the American Legislative Exchange Council, a private body that works in legislatures on behalf of the corporate sector – ensures that the identity of compounds used in fracking fluids can be withheld from the public and even from officials on the ground that they are "trade secrets".[44] Even when wellpad fires break out or "produced water" containing radium and other compounds is spilled into reservoirs or streams, emergency services cannot get immediate access to a list of the relevant contaminants.[45] Also in Ohio, the US law that stipulates that the act of leasing public lands for fracking is not itself a "federal action affecting the human environment" has allowed the Bureau of Land Management and the Forestry Service to reject summarily thousands of public comments and 685 peer-reviewed papers submitted for consideration in the environmental assessment of fracking in the Wayne National Forest. The assessment duly concluded that there would be "no significant impact" on nearby communities.[46] Fracking fluids are meanwhile legally, but misleadingly, labeled "brine", even though they typically contain not just salt but also formaldehyde, benzene, toluene, biocides, ethylene glycol, and hydrochloric acid and also, often toxins released from deep geological layers including arsenic, barium, lead and mercury.[47] In Pennsylvania, meanwhile, law forbids doctors and nurses, including emergency room professionals, from sharing information with patients who have been exposed to "proprietary" toxic fracking chemicals.[48] Gag orders, non-disclosure agreements and strategic lawsuits against public participation are also routine across the fracking frontier.[49]

41Testimony of Annie Burke, in *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), lines 2003-2004.

42 Leech and Fjord, *op. cit. supra* note 6, p. 17.

43 Mercy Centre for Ecology and Justice, Presentation to the Permanent People's Tribunal on Human Rights, Fracking and Climate Change, Labrador, Newfoundland (2018), p. 9.

44 *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), pp. 6-7.

45 Testimony of Dr. Julie Weatherington-Rice, in *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), lines 706-14 and 749-848; testimony of Sandra Keevert, in *ibid*., lines 3221-3246.

46 Testimony of Roxanne Groff, in *ibid*., lines 176-204.

47 See, e.g., Hunter, M. M., Freshwater Accountability Project, Grand Rapids, Ohio, *Brief Amicus Curiae to this Tribunal*, Oregon State University (2018), pp. 5-6.

48 Stephens, M., Bartholomew, K., Couchon, D., Ek, B., Ossont, J. and Walczak, D. (2018) Brief of Amicus Curiae, Coalition to Protect New York, p. 11.

49 See, e.g., testimony of Ray Kemble, *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 86; testimony of Craig Stevens, in *ibid.*, p. 114.

Systematic extralegal suppression of information about ecosystem impacts. Less formal means of biasing or preventing the public discussion of information about fracking's ecosystem effects include physical intimidation, informal censorship of information presented by fracking critics, false advertising, deliberate failure to investigate complaints, and the subversion, manipulation and marginalization of those procedures for public participation in decision-making that are still required by law. Also significant is an entrenched pattern of intellectual bullying that discounts the views of normal "adults who live in human bodies, possess consciences, and can relate to our fellows" to discern when "the danger is real"[50] in favor of the opinions of formally-credentialed experts enlisted by the fracking system. The resulting sense produced in many communities affected by fracking that "nothing I could do would allow me to object to environmental destruction"[51] has itself become ecologically damaging.

Nor, by and large, do state agencies along the fracking frontier appear willing or capable of providing social spaces free of abuses of the necessary rights to free speech. Testimony from Australia argued that the state breaches the Framework Principles on Human Rights and the Environment formulated by the Office of the United Nations' High Commisioner for Human Rights (2018) by failing to "provide a safe and enabling environment in which individuals, groups and organs of society that work on environmental issues can operate free from threats, harassment, intimidation and violence", can enjoy "freedom of expression, association and peaceful assembly in relation to environmental matters", and can have effective and timely "access to environmental information".[52]

Attrition of environmental monitoring capacity under neoliberalism. At the same time that fracking is multiplying the number and complexity of environmental threats, many regulatory agencies, suffering from personnel and budget cuts, lack even basic capacities to monitor environmental conditions and respond to public enquiries. This is one reason state agencies often rely on data provided by fracking interests themselves, making balanced definition and understanding of ecosystem impacts impossible.

Systematic segmentation of ecosystem issues by both business and the state in a way that impedes recognition of cumulative and synergistic effects, downplays the magnitude of impacts, obscures fundamental causes, and prevents coherent responses. The fracking system's frontier strategy works partly by pretending that impacted localities have no neighbors, that toxic chemicals' effects will never be magnified by the presence of other contaminants, that erosion, sedimentation and water quality have nothing to do with one another, and so forth.

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50 Stephens, M., Bartholomew, K., Couchon, D., Ek, B., Ossont, J. and Walczak, D. (2018), *Brief of Amicus Curiae,* Coalition to Protect New York, p. 5.

51 Testimony of Maury Johnson, *supra* note 14, p. 105.

52 Permanent Peoples' Tribunal, Session on Human Rights, Fracking and Climate Change, *Summary and Submission of Australian Evidence*, Oregon State University (2018); United Nations General Assembly, Report of the Independent Expert on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, John H. Knox, A/HRC/25/53, New York (2013); Hamman, E., Pointon, R., Kennedy, A., *Amicus Brief to the Permanent Peoples' Tribunal, Session on the Human Rights Impacts of Fracking* (2018), Oregon State University.

Hence rather than reviewing the combined impact on West Virginia and Virginia of the the Mountain Valley and Atlantic Coast Pipelines, as requested by affected communities, the Federal Energy Regulatory Commission insisted on "viewing each in a vacuum", facilitating their approval.[53] Virginia's Department of Environmental Quality (DEQ) "broke the Storm Water Management and Erosion and Sedimentation issues apart from the water quality permitting process as if E&S and Storm Water Management have no bearing on water quality."[54] A proposed compressor station was placed under regulation of the DEQ on the ground it was a "minor" pollution source unconnected with the "major" pollution effects of the pipeline and fracking system as a whole, which would have justified placing it under federal Environmental Protection Agency rules. In Australia, similarly, there is "no satisfactory standard to address the cumulative impacts of multiple company activities and impacts from nearby landholder and low frequency noise".[55] Worldwide, official environmental assessments tend to be "limited in coverage of cumulative environmental effects" and to ignore the reality that the "aggregate of environmental effects may be greater than the sum of the individual effects."[56] In addition, such studies are methodologically barred from considering the knock-on ecosystem effects of the increased fossil fuel consumption that cheap fracked gas encourages, as well as the associated "lock-in" of nonrenewable energy infrastructure.

An unscientific and undemocratic approach to uncertainty. Closely connected to the fracking system's commitment to a piecemeal approach to licensing, monitoring and remediation is an inability to recognize the importance of the unpredictability of ecosystem impacts of an industry that creates complex cumulating effects on such a large scale. Instead of seeing uncertainty as a reason for precaution, the fracking system treats it as a license for expansion. Thus instead of the industry having to prove that (say) the three-quarters of chemicals used in the fracking process that have not even been studied for their toxicity are ecologically benign, fracking's critics are called on to prove that they might be harmful. This stance collides head-on with the insistence of various affected communities that fracking should not (to quote an amicus brief from Newfoundland) "be considered for implementation in this province without definite proof and full assurance that it will cause no harm", including a "listing of all chemicals to be used in the process … and specific information provided regarding all possible risks from the use of these chemicals to all life, human and non-human, including water, air and soil".[57]

Regulatory capture. Numerous witnesses testified to the corrupting influence of the fracking system on State regulators and indeed the structure of regulation itself. It is not only that regulators often do the bidding of fracking businesses to the detriment of affected communities, nor even just that "environmental laws, including oil and gas laws," are themselves "largely written and lobbied for by the very corporations that the

53 Leech and Fjord, *op. cit. supra* note 6, p. 79.
54 Testimony of Sharon Ponton, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 137.
55 Permanent Peoples' Tribunal, Session on Human Rights, Fracking and Climate Change, *Summary and Submission of Australian Evidence*, Oregon State University (2018), p. 19.
56 *Ibid.*
57 Mercy Centre for Ecology and Justice, *Presentation to the Permanent People's Tribunal on Human Rights, Fracking and Climate Change*, Labrador, Newfoundland (2018), p. 10.

laws are ostensibly to regulate".[58] It is also, as Mari Margil of Pennsylvania's Community Environmental Legal Defense Fund submits, that standard regulation is itself arguably a form of industry capture of state means for guaranteeing the welfare of the public, insofar as it legalizes and normalizes harm and forces courts to see natural systems on the model of slaves, as "things" damage to which is conceptualized mainly in terms of the financial harm suffered by their owners.[59] This understanding of ecosystem impacts is strongly at odds with that of many communities affected by fracking.

Fracking and climate change, together with its consequences for present and future generations and for other living beings

One of the ways in which fracking affects the "entire Earth community to which humans belong"[60] is through its contribution to climate change. Fracking is an important component of the growing threats to global agriculture, ocean and coastal ecosystems, and human and nonhuman health and welfare that stem from global warming. Accordingly, the climate effects of fracking are routinely left out of industry and official assessments of its negative effects, which typically do not include even such unsatisfactory surrogate descriptions of climate impacts as "social costs of carbon" and, again, treat "uncertain" as equivalent to "having no effect".

Often, fracking's contribution to climate change is analyzed merely in terms of estimated emissions of carbon dioxide from end-use combustion of methane or "natural gas". Because methane is technically a cleaner-burning fuel than coal or oil, this analysis is used by the fracking industry to give the impression that replacing coal or oil with fracked gas could give the world a "breathing space" during which more climate-friendly energy could be developed, and thus that fracking has a comparatively positive effect on global warming.

This limited frame of reference hides the full extent of the increased momentum toward climate disaster inherent in the fracking system, and is another example of the misleading "segmentation" strategy discussed in the previous section.

First, greenhouse gas emissions attributable to fracking are not confined to carbon dioxide releases from end-use combustion. Methane, which is a much more powerful greenhouse gas than carbon dioxide, leaks from well pads, pipelines, compressor stations, storage and transport facilities, liquefaction and regasification stations, and the petrochemical facilities for which it serves as feedstock. Evidence presented to this Tribunal strongly suggests that the scale of these emissions is drastically and chronically underestimated. For example, standard predictions that only 3% of fracked methane will escape from fracking sites – which, if true, would already put fracking alongside coal extraction in terms of magnitude of climate effects – may be as much as three times too

58 Margil, M., *op. cit. supra* note 9, p. 7.
59 *Ibid.*, p. 7.
60 Stewart, M., *op. cit. supra* note 18, p. 14.

low.[61]

Nor will it ever be easy to call industry or the state to account for methane releases that are larger than claimed. As one witness pointed out, methane is "colorless, odorless, really difficult to detect," and can easily weave unnoticed through (for example) "the Swiss cheese of limestone karst" to locations far from monitoring instruments.[62] Such monitoring is often not conducted anyway: for example, it is only through activists' determined deployment of their own optical gas imaging thermography that something like the real extent of methane releases from hundreds of compressor stations has recently come to light in the US, Mexico, Canada and Argentina.[63]

Adding to the problem of underreported methane releases is the fact that methane's potency as a greenhouse gas has been partly concealed by arbitrary, oversimplified and scientifically-corrupt equations deployed by the fracking system. One environmental assessment, for example, assumed that methane is only 25 times as damaging a greenhouse gas as carbon dioxide, ignoring recent updates of methane's 100-year global warming potential by the Intergovernmental Panel on Climate Change that puts the figure at 36 (and, more significantly, its 20-year potency at 84).[64]

In addition to methane and end-use carbon dioxide, the fracking system also emits extra carbon dioxide and other greenhouse gases from engines used to supply transport, water, chemicals and other services and materials to the industry – for example, heavy diesel engines that must be run 24 hours a day at many fracking installations.

Not least, the expansion of fracking tends to discourage investment in renewable energy and to lock in fossil-fuel dependence. This is an additional and huge – though unquantifiable – source of greenhouse gases indirectly attributable to the fracking system.

Finally, it betrays a misunderstanding of the role of fossil energy in the capitalist economy to claim that fracked gas would be used as a replacement for, rather than a supplement to, other fossil fuels. Energy corporations such as the US's Dominion Resources, for example, do not plan any decrease in their total emissions as a result of their investment in fracked gas.[65] It is likely in part due to fracking that total greenhouse gas emissions from fossil fuel use in the US rose between 2009 and 2013, despite a decrease in carbon dioxide emissions. Given projections for continued expansion in

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61Howarth, R.W., Santoro, R., Ingraffea, A., (2011), "Methane and the Greenhouse-Gas Footprint of Natural Gas from Shale Formations, *Climatic Change*, DOI 10.1007/s10584-011-0061-5; Miller, S.M, et al., "Anthropogenic Emissions of Methane in the USA," *Proceedings of the National Academy of Sciences,* 25 November 2013, cited in Mead, L. J. and Maloney, M., *Submission of Petitioners Representing Nature's Rights to this Tribunal* (2018), p. 3.

62 Testimony of Kimberly Dilts, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 128.

63 Earthworks, *Brief as Amicus Curiae in the Hearing of the People's Permanent Tribunal on Human rights, Fracking and Climate Change* (2018).

64 Testimony of Heather Cantino, in *Report of the Ohio Citizens Tribunal on the Human Rights Impacts of Fracking* (2017), lines 1360-63.

65 Testimony of Glenn Besa, in *People's Tribunal on Human Rights and Environmental Justice Impacts of Fracked Gas Infrastructure: Testimonies*, Charlottesville, VA (2018), p. 122.

fracking, this trend is predicted to continue through 2040.[66] Thus the argument that fracked gas could constitute a "bridge fuel" toward a more climate-friendly energy system has been discredited. "The greenhouse gas footprint of shale gas is significantly larger than that of conventional natural gas, coal, and oil," concludes one author from Cornell University.[67]

In conclusion, as much testimony to this Tribunal has suggested, fracking is structurally incompatible with the steps that urgently need to be taken to avoid or minimize dangerous climate change. It is unsurprising that this reality is much more visible to communities who are suffering damage from both the climate change and the toxic pollutants associated with fracking – such as indigenous settlements in Alaska – than it is to most national states.

3.4 Health impact of fracking

A few technical and historical remarks may be useful to link the reporting on the direct impact of fracking activities on human health to the previous paragraphs dedicated to the overall consequences of fracking on the environmental and human rights.

The risks of important impacts on human health of unfavorable contexts of life have been almost by definition a classical component of the medical, social, economic attention and concerns. Two critical characteristics, however, have been associated with this attention:

a) a structural fragmentation of the competences and methodologies utilized to investigate the causal links between the great variability of the exposures (from occupational, to infectious, to accidental, etc.), and the parallel variability of the suspected, acute or chronic, effects or diseases found in exposed individuals or wider populations;

b) a background bias or prejudice (most of the time in the face of evidence that does not admit of any reasonable doubt) against recognition of both the avoidability of the causal links, and even more of the accountability of the processes suspected or documented in the various contexts.

Health has been always a sensitive indicator of the power relations in a society, and even more explicitly its present form of organization, as health care systems have been under the control of ruling elites, with two consequences which are specifically relevant for the analysis of the scenarios of fracking:

a) anything which appears, and even more which is simply proposed as a technological-economic advance or progress, is a priori considered as a benefit to be supported and

66 Howarth, R. W. (2015), "Methane Emissions and Climatic Warming Risk from Hydraulic Fracturing and Shale Gas Development: Implications for Policy," in *Energy and Emission Control Technologies*.
67 *Ibid*.; see also Howarth, R. W. (2014), "A Bridge to Nowhere: Methane Emissions and the Greenhouse Gas Footprint of Natural Gas", (2014), in *Energy Science and Engineering* and Jaramillo, P. Griffin, W. M. and Matthews, H. S. (2007), "Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG, and SNG for Electricity Generation", Civil and Environmental Engineering Department, Tepper School of Business, and Department of Engineering and Public Policy, Carnegie Mellon University.

developed: the risks are considered as a "dependent" variable, side effects which must be documented by those who claim they could exist, and/or who denounce they are occurring or had occurred;

b) the downgrading or even denial of the health risks/damages imposed on the life of real populations in terms of violation of fundamental rights reproduces closely the dramatic asymmetry typical of national and international laws between actors which violate human rights in the name of promised/projected economic benefits, and the individual and collective victims, who are in a clear situation of powerlessness and are re-victimized when they request the recognition of their identity as subjects and not as objects of intervention based on legal contracts, that are illegitimate from the point of view of fundamental rights.

The above points are absolutely central in the context of this Advisory Opinion, as they are part of the broader scenario of what happens with increasing impact of inequalities on the access to the human right to health in most societies. The inequities which are the direct consequence of a discrimination based on economic interest (the intolerably high costs of lifesaving drugs are only the most conspicuous example) are clearly declared in the most qualified scientific literature, but they are considered un-accountable components of development models which must be only economically sustainable. Human health is less and less considered in concrete national and international legislation as one of the key fundamental rights. Its violations, along the chain from prevention, to precaution, to diagnosis mot treatment, to reparation, to re-habilitation, are very rarely (if ever, in the special situations where the hierarchy of human rights prevails over the rights of the market) the object of effective normative decisions and of binding juridical rulings. Consistently with the above trend, and most significantly for the above general scenarios of violations produced by fracking, the "evidence" which is required to provide a medical epidemiological support to the reasons of the victims is far more stringent than the one that is required to approve whatever new drug or device is approved to enter the medical market.

The wider scenarios proposed in the previous presentation and analysis of the evidence produced on fracking have consistently documented why and how human health cannot be seen as a separate issue, but as an integral component and indicator of its significance in a framework of respect versus the violation of fundamental human and nature rights.

The variability and at the same time the complementarity of the hazards, and on the other side of the populations who are involved could not be better defined: local contexts are directly and heavily affected, and at the same time their overall contribution to the global dramatic deterioration of the environment and of the climate have further shown how many public and private actors must be considered accountable.

To specifically integrate what is known as the direct impact on human health, the Tribunal has requested and received ad hoc reports and documentation by two of the most active experts in the field, Prof. Andrew Waterson and Dr. Will Dinan.

The thorough review of the information and data which have become available (most consistently over the last ten years, based in the scientific specialized literature as well as in official country and international reports and debates) has been presented to the Tribunal and summarized in the following points.

1) The permanent and planned diversification of the development of the fracking practices and of corresponding normative behaviours at country and international levels seems best expressed by the "undefining" definition of those strategies as un-conventional. Inevitably the experts' reports document well the existence of contradictory data, which correspond to strategies of investigation which hardly meet the accepted standards of comparability: for the size of the populations and of the territories which are considered, for the highly variable degree of in-dependence of the authors, for the markers and variables which are adopted to describe, and even more importantly to monitor the evolution of the sites where fracking practices are implemented.

2) It is all too easy to pretend that the absence of solid and univocally quantitative information on risks is synonymous with the absence of information on risks, that have been recognized both by international bodies, by States within the USA and by other national authorities which have prohibited or stopped fracking policies.

3) The most recent report commissioned and published by the Scottish authorities (the most comprehensive and independent among all those produced so far) is in this sense very explicit, in documenting how and why a situation of objective quantitative uncertainty (for example in the estimates of what could be expected in terms of increases of mortality and morbidity indicators) must correspond to mandatory application of the fundamental juridical principle and right to precautionary policies.

4) The documentation of the high degree of conflict of interests among the authors who have produced many of the published reports further indicates the doubtful independence of monitoring programs, suggesting that the monitoring programs are strongly biased in favour of a denial or minimisation of risks.

5) The dramatic scarcity of well designed and publicly debated "health impact assessment" (HIAs) corresponds, beyond any reasonable doubt, to public and private policies which violate the obligation to the due and timely transparency for all interventions which directly affect the life conditions of human groups.

6) Some of the technical reasons for considering the enormous uncontrolled diffusion of fracking practices, a "mostly unknown" risk, are clearly indicated in the general reports of UN agencies on fracking and by the specialized health agency WHO which recalls the number of carcinogens which are used, the massive water usage, the waste water toxicity and the silica threat to workers.

A similarly clear precautionary approach has been adopted by Doctors for the Environment of Australia and the American Public Health Association.

7) Possibly the most consistent finding of all the presentations of cases during the various pre-hearings of the Tribunal and through the other cases made available in written, oral

and visual testimonies in the general Session has been the generalized planned exclusion of the human communities involved from any information and adequate discussions on the planned and ongoing fracking activities. Besides the immediate implications in terms of anxiety, emotional and somatic distress, unavailability of medical support and explanations in facing acute and prolonged symptoms, it is all too well-known and documented in the medical field that the experience of expulsion and powerlessness is a common denominator and cause of the "disease of fragility" that is increasingly seen in life contexts already characterized by unfavorable living conditions.

Fracking policies and practices systematically violate the right to adequate information upon which to give informed consent as well as the right to be informed of the risks and the possibilities of prevention regarding all aspects of bodily and mental health".

While information is an indispensable instrument for guaranteeing the right to a life of dignity, the denial of information on health becomes a further indication of the violation of the rights of citizenship.

Besides the direct documentation and analysis presented in the Session (with very extensive and detailed references made to the corresponding publications), the Tribunal has conducted an *ad hoc* of the health impacts that are feared and are now documented as the most likely consequences of the environmental and climate changes that are also clearly associated with fracking.

Over the last several years one of the leading scientific journals in the area of global health, *The Lancet*, has systematically published epidemiological reports and dossiers in this field, stressing both the direct and indirect impact on the frequency of chronic diseases and the not less worrying implications for the behavioral disturbances which threaten the exposed populations, who coincide most of the time with those who belong to the most at social risk for their socio-economic conditions and the impoverished contexts of life.

Coinciding with the Session on fracking, a special issue of PLOS-Medicine was published providing a further important overview of the present and foreseeable impact of environmental and climate changes that are affecting specific populations already at a higher health risk and which are the target of uncontrolled extraction and energy policies. This is another leading expression by the international community of medical and epidemiological research.

3.5 The transversal, direct and indirect, impact on human rights

On the top and beyond the violations considered so far, fracking is trasversally impacting the full spectrum of human, social, economic, civil, political cultural rights. A detailed documentation and analysis of all these aspects was provided in two reports, whose contents and conclusions are recognized as fully pertinent and relevant by the PPT.

A report, "A Human Rights Assessment of Hydraulic Fracturing for Natural Gas", dated December 12, 2011, was prepared by the Environment an Humans Rights Advisory, for the New York State Department of Environmental Conservation and Earthworks' Oil and

Gas Accountability Project. This report details twenty-six human rights norms of concern, including: the right to security of person and bodily integrity; the family's right to protection; the right of motherhood and childhood to special care and protections; the right of the child to the highest standard of health, and the right to prior, free and informed consent[68].

Another report, "A Human Rights Assessment of Hydraulic Fracturing and Other Unconventional Gas Development in the United Kingdom"[69], available on October 30, 2014 by the Global Network for the Study of Human Rights and the Environment (GNHRE), Environment and Human Rights Advisory, and Human Rights Consortium, was directed to various governamental authorities and The Bianca Jagger Human Rights Foundation. The conclusion, fully shared by the PPT, reads:

> "This preliminary assessment of directly relevant UK and ECHR human rights law and common law suggests that for the UK Government to proceed with fracking without adequate assessment of the human rights position would amount to a serious failure of responsibility. In particular, the profound nature of the core rights at stake: the rights to life, to respect for home and private life, to the peaceful enjoyment of possessions, in combination with the existing evidence of extremely deleterious health impacts of fracking around the world suggests the urgency of considering human rights properly before 'the dash for gas' produces irreversible, potentially serious and irreversible, health, human and environmental impacts."

What is clear here as in many other cases submitted to the attention of the PPT, the resistance and open protest generate new waves of violations, this time of civil and political rights: "emerging evidence from the front line of fracking protests in the UK suggests that there may also be cause for concern in relation to key civil and political rights: to liberty and security, to a fair trial, to freedom of expression and assembly and association"[70].

In the framework of this Advisory Opinion it is certainly important to underline that the composite of indirect expressions and consecuencies of fracking can be traced back to the impact of climatic changes on human rights. Various coherent and convincing reports have become available on these aspects[71]. "Climate change and human rights" provided a detailed description of the impact on the ecosystems and natural resources, impacts on physical infrastructure and human settlements, and impacts on livelihoods, health, and security, which are then linked to the pertinent States responsibilities, both those substantial (adaptation obligations: protecting human rights from climate related harms; domestic mitigation obligations; international cooperation obligations; obligations to address transboundary harm, and safeguarding human rights in mitigation and adaptation activities) and those which are strictly procedural (ensuring access to information and

[68] https://www.tribunalonfracking.org/wp-content/uploads/2014/12/EHRA-frac-rpt-111212-1-final1.pdf.
[69] https://www.tribunalonfracking.org/wp-content/uploads/2014/12/UK-HRIA-wo-appdx-hi-res.pdf.
[70] *Ibid*., note 124.
[71] "Climate Change and Human Rights"; UNEP/Sabin Center for Climate Change Law at Columbia University, Nairobi, December 2015.

conducting environmental assessments; public participation in environmental decision-making, and access to administrative, judicial, and other remedies).Another well developed issue touches the obligations which are specifically related to human groups who are particularly vulnerable (women, children, indigenous people) and the State obligation to protect human rights against abuses by third parties, as well as an obligation to provide access to an adequate remedy, judicial or non-judicial, when human rights are violated by non-state actors.

Another critically important contribution in the same direction are the "Oslo Principles on Global Climate Change Obligations"[72], a report elaborated by an international group of people from the academy, lawyers and magistrates. Made available in 2015, the document deals with obligations of the State but also provides also an innovative elaboration of the obligations of corporations.

The report "Understanding Human Rights and Climate Change"[73] indicates the human rights which are most affected by climate change: the right to life, the right to self-determination, the right to development, the right to food, the right to water and sanitation, the right to health, the right to housing, the right to education, the right to meaningful and informed participation, the rights of those most affected by climate change and the rights of future generations.

The evidence of the direct connection with the new generations was clearly underlined during the hearing of the PPT. One especially powerful testimony by a human rights attorney has detailed exactly how native coastal communities in Alaska are already being dramatically impacted by climate change.
Overall, the PPT fully acknowledges the contribution of the Declaration on human rights and climate change[74] formulated by the Global Network for the Study of Human Rights and Environment. The Declaration proposes 24 principles which include rights and duties of human persons as well as of other living entities, but also duties of governments and corporations. Those which appear most pertinent and relevant for the best appreciation of the testimony of witnesess and of the documentation made available to the PPT are reproduced in the following:

> "[…] 4. All human beings have the right to a planetary climate suitable to meet equitably the ecologically responsible needs of present generations without impairing the rights of future generations to meet equitably their ecologically responsible needs.
> 5. All human beings, animals and living systems have the right to the highest attainable standard of health, free from environmental pollution, degradation and harmful emissions and to be free from dangerous anthropogenic interference with the climate system such that rising global temperatures are kept well below 2

[72] https://globaljustice.yale.edu/oslo-principles-global-climate-change-obligations.
[73] Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change; 26 November 2015, https://www.ohchr.org/Documents/Issues/ClimateChange/COP21.pdf.
[74] https://www.tribunalonfracking.org/wp-content/uploads/2015/06/DHRCC-letter-size.pdf.

degrees centigrade above preindustrial levels. […]
9. All human beings have the right to information about, and to participate in, decision-making processes related to alterations made to the physical environments they rely upon for their health and survival.
13. All human beings have the right to active, free, and meaningful participation in planning and decision-making activities and processes that may have an impact on the climate. This particularly includes the rights of indigenous peoples, women and other under-represented groups to equality of meaningful participation. This includes the right to a prior assessment of the climate and human rights consequences of proposed actions. This includes the right to equality of hearing and the right for processes to be free of domination by powerful economic actors. This includes the rights of indigenous peoples to participate in the protection of their rights to their lands, territories, natural resources, tenure rights and cultural heritage.
14. All human beings have the right to associate freely and peacefully with others, and to gather peacefully in public spaces, for purposes of protecting the climate or the rights of those affected by climate harm.
15. All human beings have the right to effective remedies and redress in administrative or judicial proceedings for climate harm or the threat or risk of such harm, including modes of compensation, monetary or otherwise.
17. All States and business enterprises have a duty to protect the climate and to respect the rights set out in this Declaration. […]
21. All States shall respect and ensure the right to a secure, healthy and ecologically sound environment and to a stable climate, and ensure the rights outlined in Parts I - III of this Declaration. Accordingly, they shall adopt the administrative, legislative and other measures necessary to effectively implement the rights in this Declaration. […]
24. All States, international organizations, business enterprises and individuals acting to reduce climate harms shall respect and recognize the rights of any affected human beings and other living beings and systems to be free from climate change-related harm."

4. The juridical context and legal framework

4.1 Introduction

The PPT was established in 1979 on the basis of the Universal Declaration of the Rights of Peoples (the Algiers Charter) adopted in Algiers on the 4th of July 1976 by an international group of jurists and representatives of social movements from several countries. The PPT was also created consequent and based on the authority of numerous international human rights instruments from which it garners its legitimacy. It is further constituted institutionally and operationalised through its own statute.[75]

In a 2000 Session dedicated to the analysis and determination of the responsibilities of global corporations, the PPT defined the unique foundation of its legitimacy, and thus its institutional nature, as follows:

> "The PPT stands as a deviant 'institution' within the institutional landscape of dominant law. For good reason, it would be anathema for dominant law to countenance the usurpation of its assumed role of public judgement by an institution and process of legality which does not abide by its structures, scriptures and disciplines. But it is precisely this deviance which provides the PPT with the claim to an alternative legitimacy that may derive its sustenance from the communities that have been expelled from the embrace of dominant law's 'protection'. Here, therefore, lies the challenge: how might attempts to initiate a peoples' legality move towards securing spaces for the voices of the victimised to emerge into the public conscience."[76]

The PPT's foundational quasi-juridical legitimacy was further expanded on in 2014; in this case specifically in the context of the assessment of the political, social, and economic situation of alleged human rights violations by the State of Mexico in the context of that state's pursuit of neoliberal economic growth at all cost:

> "Because the PPT, by definition, has no power to translate its rulings into practical punitive decisions, it derives its legitimacy from two complementary qualities: a) its ability to guarantee effective representation for 'peoples' orphaned of their rights and victims lacking any hope of recognition or remedy; b) the fact that it uses the existing law with a vision [of] guaranteeing and promoting interpretations and rulings which recognize victims as rights holders, which take up the challenge of treating the rights of individuals and of peoples as having inviolable hierarchical priority over the treaty law governing market commodities."[77]

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75 http://permanentpeoplestribunal.org/wp-content/uploads/2016/06/statute.pdf.

76 Permanent Peoples' Tribunal. *Global Corporations and Human Wrongs*. Warwick University, 22 - 25 March, 2000, Judgment.

77 Permanent Peoples' Tribunal, *Free Trade, Violence, Impunity and Peoples' Rights in Mexico* (2011-2014), Final Hearing, Mexico City, 12-15 November 2014, Judgment.

In its own words then, the PPT has formulated the nature, extent and depth of its legitimacy and the rationale for its existence, including those considerations mandating its existence, around the duty to utilize a rights-based approach which it deems superior to any other form of law. The PPT is therefore undeniably a human-rights institution in a broad sense, specifically focused on highlighting alleged human rights abuses of victims around the globe.

4.2 Human rights, fracking and the environment

In addition to its more general focus on human rights, the PPT has repeatedly addressed issues and scenarios where the core of the problem is nestled within the intimate relationship between human rights and the environment;[78] itself now a burgeoning discourse and area of global normative development as evidenced, among others, by the far-reaching activities of the United Nations Special Rapporteur on Human Rights and the Environment, John Knox and his recent successor, David Boyd.[79] While it could be said that the majority of the human rights cases that has served in front of the Tribunal are to some greater or lesser extent connected to environmental concerns (in the sense that the environment provides the living basis for all life on Earth and thus the potential to be human, and to live and to enjoy other human rights entitlements); the present case that serves before the PPT specifically focused on environmental concerns, i.e., the extent to which it could be said that hydraulic fracturing impacts human rights.

Within this broader context, the questions submitted to the consideration of the PPT in the present Session were as follows:

> *1. First, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, breach substantive and procedural human rights protected by international law as a matter of treaty or custom?*
> *2. Second, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, warrant the issuance of either provisional measures, a judgment enjoining further activity, remediation relief, or damages for causing environmental harm?*

78 See for a comprehensive treatment, Grear, A. and Kotzé, L. (2015), *Research Handbook on Human Rights and the Environment* (eds), Edward Elgar; Anderson, M.R., "Human rights approaches to environmental protection: An overview", in Boyle, A. and Anderson, M.R. (2003), *Human rights approaches to environmental protection* (eds) OUP, 3; Knox ,J.H., "Human rights, environmental protection and the sustainable development goals", 2015 (24)3, *Washington International Law Journal Association*, pp. 417- 536; Shelton, D., "Human rights, environmental rights, and the right to the environment" (1991), in *Stanford Journal of International Law*, pp. 103-138; Lewis, B., "Environmental rights or a right to the environment? Exploring the nexus between human rights and environmental protection", 2012 (8)1, in *Macquarie Journal of International and Comparative Environmental Law*, pp. 36-47; Principle 1 of the United Nations Conference on the Human Environment of 1972 (Stockholm).
79 https://www.ohchr.org/en/issues/environment/srenvironment/pages/annualreports.aspx.

3. Third, what is the extent of responsibility and liability of States and non-state actors for violations of human rights and environmental and climate harm caused by these oil and gas extraction techniques?
4. Fourth, what is the extent of responsibility and liability of States and non-state actors, both legal and moral, for violations of the rights of nature related to environmental and climate harm caused by these unconventional oil and gas extraction techniques?

The present case on the human rights impacts of hydraulic fracturing (or fracking) has several specific, and in some instances, unique, features.[80]

First, the request for adjudication is to provide a generalized consultative opinion, which will be based on and benefit from evidence documented in relation to several detailed and concrete cases. Yet, specific individualized findings targeting specific individual actors are not foreseen. The opinion is thus a more broadly framed and generalized one instead of focusing on specific petroleum companies or government officials, for example. This also necessarily entails that a wide range of international, regional, national and local laws dealing with human rights, environmental pollution more generally, and fracking specifically, will be relevant. Where available, these laws and their associated explanatory and other instruments had been considered by the PPT. Given this broad scope it is impossible to provide a complete list of all these laws in this opinion and only the most prominent instruments are detailed below.
Second, the non-conventional extractive techniques which are considered in this opinion are such that they have the potential to dramatically impact environmental integrity, which also has a direct impact on human and non-human life. That fracking impacts socio-ecological integrity is not disputed by the victims of fracking, by members of the broader public, by members of this Tribunal, and even by those working in the fracking industry itself. This opinion is therefore based on the generally agreed assumption that fracking impacts a broad range of rights,[81] be they human rights and/or the rights of nature (the latter which is a developing scholarly discourse and normative movement that is increasingly, if still not comprehensively, being taken up in some constitutions).[82]

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80 For more on the human right impacts of fracking, see Finewood, M.H. and Stroup, L.J., "Fracking and the Neoliberalization of the Hydro-Social Cycle in Pennsylvania's Marcellus Shale" (2012), in *Journal of Contemporary Water Research & Education*, pp. 72-79; Short, D., Elliot, J., Norder, K., Lloyd-Davies, E., and Morley, J., "Extreme energy, 'fracking' and human rights: A new field for human rights impact assessments? (2015), in *The International Journal on Human Rights*, pp. 1-40.
81 Short, D., *et al*, "Extreme Energy, 'Fracking' and Human Rights: A New Field for Human Rights Impact Assessments?", 2015 19(6), in *International Journal of Human Rights*, pp. 697-736; Kim de Rijke "Hydraulically fractured: Unconventional gas and anthropology", 2013 29(2), *Anthropology Today*, pp. 13-17; Liu, C., Ahmed, K., Roberson, J., Villeda, K., Gurrero, R. and Franklin, "Human rights and the environment: A study of fracking", available at: https://anthropology.uconn.edu/wp-content/uploads/sites/944/2018/02/Fracking..pdf, pp. 6-13.
82 Kotzé, L. and Villavicencio Calzadilla, P., "Somewhere between Rhetoric and Reality: Environmental Constitutionalism and the Rights of Nature in Ecuador", 2017 6(3), in *Transnational Environmental Law*, pp. 401-433; Villavicencio Calzadilla, P. and Kotzé, L., "Living in Harmony with Nature? A Critical Appraisal of the Rights of Mother Earth in Bolivia" (2018), in *Transnational Environmental Law*, pp. 1-28. Also see Gianolla, C., "Human rights and nature: Intercultural perspectives and international aspirations" (2013), in *Journal of Human Rights and the Environment*, pp. 58-78

Third, climate change and fracking are intimately linked in at least two ways for present purposes: a) fracking is a carbon intensive process that significantly contributes to climate change;[83] and b) there is now sufficient evidence to support the view (ultimately even endorsed at the United Nations level) that climate change impacts (human) rights.[84] It is thus unavoidable that the human rights impacts of fracking will have to be considered also in the light of climate change and the burgeoning climate change discourse. Such an emphasis on climate change in the present case, has never been part of the PPT's work. The present case thus presents a novel, unique and critical opportunity for the PPT to reflect, either implicitly or explicitly, on the related human rights impacts of climate change.

Fourth, the present case offers a unique opportunity to the PPT to interrogate the intra-generational, and perhaps more importantly, the inter-generational aspects of those human and other rights that are impacted by fracking while at once also presenting the possibility to reflect on the aspect of inter-species justice between humans and non-humans, as encapsulated in the idea of rights of nature. Such a focus on non-human rights, would also be a first for the PPT.

While the foregoing are all unique aspects that characterize this specific case, many of the surrounding issues, laws and juridical relationships have already been considered in various of the PPT's previous opinions and will also be relied on, if only by means of cross-reference, for the present opinion. These include, for example: the relationship between the environment and the rights to life, health, water and nutrition;[85] the importance of environmental procedural rights;[86] the criminalization of protests by communities against development projects that impact their environmental interests; and the intimate (often reciprocally beneficial and mutually supportive) relationship between

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83 Staddon, P.L. and Depledge, M.H., "Fracking Cannot Be Reconciled with Climate Change Mitigation Policies" (2015), in *Environ. Sci. Technol.* 49(14), pp. 8269–8270.

84https://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx. Other scholarly works include Knox, J.H., "Linking Human Rights and Climate Change at the United Nations" (2009), 33 *Harv. Envtl. L. Rev.*, pp. 477-498; Humphreys S. (2010), *Human Rights and Climate Change* (eds) Cambridge University Press; Gardiner, S., Caney, s., Jamieson, D., Shue, H., (2010), *Climate Ethics: Essential Readings* (eds), Oxford University Press.

85 For details see Anton D. and Shelton D., *Environmental Protection and Human Rights* (2011), Cambridge University Press; Sachs, W., "Environment and Human Rights", 2004 47(1), *Development* 42; Shelton, D., "Human rights and the environment: Substantive rights", in Fitrmaurice, M., Ong, D.M. and Merkouris, P. (2010), *Research Handbook on International Environmental Law* (eds), Edward Elgar Publishing, p. 265.

86 *The Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters* of 1998; Svitlana. Kravchenko, "The Aarhrus Convention and Innovation in Compliance with MEAs' (2007), in *Colorado Journal of International Environmental Law*, and Shelton, P.D., "Developing substantive environmental rights", in Shelton, D.L. (2011) *Human Rights and the environment*, vol. 2 (eds), Edward Elgar Publishing, p. 416; Dellinger, M. (2012), "Ten years of the Aarhus Convention: How procedural democracy is paving the way for substantive change in national and international environmental law" 2012 (23)2, in *Colorado Journal of International Environmental Law and Policy*, pp. 309-366; Ebbesson, J., "The EU and the Aarhus Convention: Access to information, public participation in decision-making and access to justice in environmental matters", available at: http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/571357/IPOL_BRI(2016)571357_EN.pdf

governments and transnational corporations that engage in widespread human rights abuses.[87]

Unlike the so-called International Bill of Rights (including the Universal Declaration of Human Rights, 1948, and the two International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights of 1966), the Universal Declaration of the Rights of Peoples (the Algiers Declaration of 1976) contains a specific and explicit human right to a healthy environment: "[E]very people […] has the right to the conservation, protection and improvement of its [sic] environment", and "[E]very people [sic] has the right to make use of the common heritage of mankind, such as the high seas, the sea-bed, and outer space".[88] Such a reference not only vividly illustrates the clear mandate of the PPT to provide an opinion on the environment and human rights infringements of fracking, but also signifies that there is a clear link between environmental protection and the broader human rights agenda. The text which is attached as an Annex 4 as an essential component of this Advisory Opinion, analyzes and discusses in detail the close interplay and complementarity of the factual and doctrinal contribution of the PPT in this area with the development of international environmental law, with a specific focus on alternative normative proposals which have been formulated to fill the still existing important gaps.

The articulated and detailed documentation of the long path of investigation, analysis, qualification of the forms which have assumed the disregard and the express violation of even the minimal principles of precaution and control on the fundamental human and peoples' rights constitutes the mandatory background and framework of this Session, targeted to document one of the major present forms of the alliance of States and transnational powers in the modification of the natural environment. While the trajectories of these two actors have obviously followed distinct and independent developments, the case of fracking could and should be seen as a crossroad between the evolution of the jurisprudence of the PPT and of that of the international law of environment.

In sum, the present case before the PPT is in many aspects unique and groundbreaking: it details and critically interrogates the long path of destruction occasioned on a fragile earth system and on all living beings as a result of critically harmful activities of governments and the fracking industry. It is the first case in the history of the PPT to explicitly and comprehensively link environmental degradation and infingments of human and other rights, and to thoroughly investigate that connection.

4.3 Summary of the legal framework

The following and final part of this chapter lists a broadly representative example of the burgeoning body of human rights and related instruments (including reports) that provide both the juridical framework within which the claim before the PPT has been framed, as well as the parameters within which its findings should be assessed and formulated.

87 http://permanentpeoplestribunal.org/category/jurisprudence/?lang=en.
88Articles 16 and 17.

While other categorizations are possible, the instruments are grouped in the following order: a) human rights instruments directly related to the issue in question and associated reports dealing with these human rights laws; b) instruments dealing with environmental protection, including climate change, and associated reports related to these; c) instruments dealing with transnational corporations and reports related to these.

Human rights instruments

- Statute of the Permanent Peoples' Tribunal (1979, amended in 2018)
- The Universal Declaration of Human Rights, UN General Assembly Resolution 217 (III), 1948
- Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights) Roma, 1950 and its Protocols
- International Convention on the Elimination of All Forms of Racial Discrimination, UN General Assembly Resolution 2106 (XX), 1965
- The International Covenant on Civil and Political Rights, UN General Assembly Resolution 2.200 A (XXVI), 1966
- The International Covenant on Economic, Social and Cultural Rights, UN General Assembly Resolution 2.200 A (XXVI), 1966
- The American Convention on Human Rights; San José de Costa Rica, 1969 and its Protocols
- The Universal Declaration of the Rights of Peoples (the Algiers Declaration), 1976
- Convention on the Elimination of All Forms of Discrimination against Women UN General Assembly Resolution 34/180, 1979
- The African Charter on Human and Peoples Rights; Nairobi 1981 and its Protocols
- Declaration on the Right to Development, UN General Assembly Resolution 41/128, 1986
- International Labour Organization, Indigenous and Tribal Peoples Convention, 1989 (No. 169)
- Convention on the Rights of the Child; UN General Assembly Resolution 44/25, 1989 Asian Human Rights Charter, Kwangju, South Korea, 17 May 1998
- Rome Statute of the International Criminal Court, 17 July 1998
- United Nations Millennium Declaration, UN General Assembly Resolution 55/2, 2000
- Arab Charter on Human Rights, Cairo, 22 May 2004
- Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law, UN General Assembly Resolution 60/147, 2005
- United Nations Declaration on the Rights of Indigenous Peoples, UN General Assembly Resolution 61/295, 2007
- European Union Guidelines on Human Rights Defenders, 2008
- OSCE, Guidelines on the Protection of Human Rights Defenders, OSCE Office for Democratic Institutions and Human Rights (ODIHR), 2014

- Transforming our World: the 2030 Agenda for Sustainable Development, UN General Assembly Resolution 70/1, 2015

With due consideration of the following reports and documents:

- ONU, Commission on Human Rights, "The right to restitution, compensation and rehabilitation for victims of gross violations of human rights and fundamental freedoms. Final report of the Special Rapporteur, Mr. M. Cherif Bassiouni, submitted in accordance with Commission resolution 1999/33", UN Doc. E/CN.4/2000/62, 18 January 2000
- Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights, 2011
- Inter-American Commission on Human Rights, "Report on the Situation of Human Rights Defenders in the Americas", 7 March 2006, OEA/Ser.L/V/II.124 Doc. 5 rev.1
- Inter-American Commission on Human Rights, "Second Report on the Situation of Human Rights Defenders in the Americas", 31 December 2011. OEA/Ser.L/V/II. Doc. 66
- Informe a la Comisión Interamericana de Derechos Humanos, "El rol de las empresas y los Estados en las violaciones contra los defensores y las defensoras de los derechos de la tierra, el territorio y el ambiente", Informe Conjunto de Organizaciones de la Sociedad Civil, Octubre 2015
- Inter-American Commission on Human Rights. "Criminalization of the Work of Human Rights Defenders", 2015. OEA/Ser.L/V/II.Doc. 49/15
- Inter-American Commission on Human Rights. "Hacia una política integral de protección a personas defensoras de derechos humanos", 2017. OEA/Ser.L/V/II. Doc. 207/17

Environmental and climate laws

- Declaration of the United Nations Conference on the Human Environment, Stockholm, 1972
- Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, Finland, 25 February 1991
- The United Nations Conference on Environment and Development, Rio de Janeiro, 1992
- Convention on Biological Diversity, 1992
- United Nations Framework Convention on Climate Change, 1992
- Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Aarhus, Denmark, 25 June 1998.
- The Paris Climate Agreement, 12 December 2015. https://unfccc.int/sites/default/files/english_paris_agreement.pdf
- Revised African Convention on the Conservation of Nature and Natural Resources, 7 March 2017

With due consideration of the following reports and documents:

- Brundtland Report: United Nations World Commission on Environment and Development (WCED) Report on Sustainable Development (1987)
- Declaration to The Hague on the Environment, 11 March 1989, International Legal Materials, Vol. 28, No. 5 (September 1989), pp. 1308-1310.
- Draft Principles on Human Rights and the Environment, "Human Rights and the Environment. Final report prepared by Mrs. Fatma Zohra Ksentini, Special Rapporteur", UN Doc. E/CN.4/Sub.2/1994/9, Annex I, 6 July 1994.
- The Permanent Peoples' Tribunal on Industrial Hazards and Human Rights II, London, November-December 1994
- The Earth Charter, 2001
- The World Charter for Nature, 1982
- United Nations Declaration on the Need to Ensure a Healthy Environment for the Well- Being of Individuals, G.A. Res. 45/94, 14 December 1990
- Report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights; UN Doc. A/HRC/10/61, 15 January 2009
- Universal Declaration of Rights of Mother Earth, 2010
- Report of the Special Rapporteur on the situation of human rights defenders, Margaret Sekaggya; UN Doc. A/HRC/19/55, 21 December 2011
- United Nations General Assembly in Resolution 19/10: Human rights and the environment, 19 April 2012, A/HRC/RES/19/10
- Report of the Special Rapporteur on the human rights obligations related to environmentally sound management and disposal of hazardous substances and waste, Calin Georgescu; UN Doc. A/HRC/19/55, 21 December 2011; UN Doc. A/HRC/21/48, 2 July 2012
- Report of the Special Rapporteur on the rights of indigenous peoples, James Anaya. Extractive industries and indigenous peoples; UN Doc. A/HRC/24/41, 1 July 2013
- Report of the Independent Expert on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, John H. Knox. Mapping report; UN Doc. A/HRC/25/53, 30 December 2013
- The Oslo Principles on Global Climate Change Obligations, 2014
- Climate Change and Human Rights, UNEP, 2015
- Understanding Human Rights and Climate Change, UNHCHR, 2015
- Inter-American Commission on Human Rights. Indigenous peoples, Afro-descendent Communities, and Natural Resources: Human Rights Protection in the Context of Extraction, Exploitation and Development Activities; 2015, OEA/Ser.L/V/II. Doc.47/15OEA/Ser.L/V/II.Doc. 47/15
- Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Başkut Tuncak; UN Doc. A/HRC/30/40, 8 July 2015
- Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, United Nations General Assembly, A/HRC/31/53, 21 December 2015

- Declaration on Human Rights and Climate Change, Global Network for the Study of Human Rights and the Environment, 2016
- Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment; UN Doc. A/HRC/31/52, 1 February 2016
- IUCN World Congress on Environmental Law, World Declaration on the Environment Rule of Law, Rio de Janeiro, April 2016
- Principles on Climate Obligations of Enterprises, 2017
- Knox, John H., Defensores de Derechos Humanos Ambientales. Una crisis global, Informe de Políticas Públicas, Universal Rights Group, febrero 2017
- Framework principles on human rights and the environment, Annex to Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment; UN Doc. A/HRC/37/59, 24 January 2018
- Human Rights Committee, "General comment No. 36 (2018) on article 6 of the International Covenant on Civil and Political Rights, on the right to life", 30 October 2018; Doc. No CCPR/C/GC/36.

Transnational corporations

- OECD Guidelines for Multinational Enterprises 1977 (2011 update of the Guidelines)
- UN, "Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights" United Nations Sub-Commission on the Promotion and Protection of Human Rights, 2003
- UN, Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, John Ruggie - Business and human rights: mapping international standards of responsibility and accountability for corporate acts; Doc. A/HRC/4/35, 19 February 2007
- UN, State responsibilities to regulate and adjudicate corporate activities under the United Nations core human rights treaties: an overview of treaty body commentaries; Doc. A/HRC/4/35/Add.1, 13 February 2007
- UN, Corporate responsibility under international law and issues in extraterritorial regulation: summary of legal workshops, Doc. A/HRC/4/35/Add.2, 15 February 2007.
- UN, "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework"; UN Human Rights Council Resolution 17/4, 2011
- Elaboration of an international legally binding instrument on transnational corporations and other business enterprises with respect to human rights; UN Human Rights Council adopted resolution 26/9, 2014
- OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector (2016)
- Legally Binding Instrument to Regulate, in International Human Rights Law, the Activities of Transnational Corporations and Other Business Enterprises. Zero Draft 16.7.2018

5. The PPT Advisory Opinion on the four questions

Regarding the first three questions submitted to the PPT,

1. *First, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, breach substantive and procedural human rights protected by international law as a matter of treaty or custom?*
2. *Second, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, warrant the issuance of either provisional measures, a judgment enjoining further activity, remediation relief, or damages for causing environmental harm?*
3. *Third, what is the extent of responsibility and liability of States and non-state actors for violations of human rights and environmental and climate harm caused by these oil and gas extraction techniques?*

without seeking to offer specific legal advice across a range of issues arising from the evidence received from a number of countries, it is the Advisory Opinion of this Tribunal that:

- The evidence is clear that the unconventional oil and gas extraction (UOGE) industry has violated many provisions of the substantive and procedural international human rights law contained in the instruments indicated in chapter 4. UOGE techniques breach, by its very nature, substantive human rights protected by international law, especially the right to health, by attacking all the components of natural ecosystems that can reach their destruction and therefore result in an ecocide; and threaten the enjoyment of all human rights of the present and future generations through its direct contribution to climate change. And because of the way in which they are imposed on the populations closest to the places of exploitation, they also often violate procedural human rights protected by international law, especially the rights of access to information, participation in decision-making and access to information; and also, frequently, they violate the environmental impact assessment obligations, and rights of human rights defenders. In particular, regarding the basic right of self-determination, it is clear that the industry violates the right by failing to attain the fully informed and free consent of the victims of human rights violations that follow the entrance of UOGE operations into a community.

- Without a remedy there is in effect no right. As we have argued in answering the first question above, without such remedies as reparation or compensation, and restoration of an ecosystem that has been damaged, social and ecological justice will be denied. Restraining orders, injunctions are essential to any armory of legal actions that claims to be comprehensive, coherent and just. Other actions that

could be included in such an armory would be commissions of inquiry and like processes leading to state orders, e.g. a moratorium or even the banning of industry operations. The legal framework for these actions would normally be the state or sub-state jurisdiction.

- States have obligations under international human rights law to protect their people from harms and to ensure their self-determination. Nevertheless, it is clear that in the States we have received evidence from laws at all levels are in place that facilitate the violation of those rights. There are some mechanisms of international law before which to make effective the responsibility of States for the violation of human rights, especially at the regional level. But there are usually other mechanisms planned in each of the States or sub-state entities. Non-state actors, largely mega corporations and TNCs, have, in theory, similar responsibilities under various documents establishing "guiding principles" for their behavior (these are also indicated in chapter 4 above). Despite the passing decades of such documents being promulgated, the power of the business sector, with assistance from complicit nation states that want their investments and taxes, has been able to block the process of making the provisions obligatory, as evidenced by the difficulties in moving forward with the development of a binding instrument for transnational corporations within the framework of the UN Human Rights Council. There are no mechanisms of international law before which to make effective the responsibility of corporations in relation to the violation of human rights. Only the constant development of critical moral standards, called in literature as 'soft law', provide the moral basis of interrogation and criticism of anti-human rights action, whether by states or corporations. These and the formal laws of states and sub-states entities will be available.

The needed complementarity of the human and peoples' rights and the rights of nature

The basic issue that resulted in the organization of this session of the PPT is how to address the increasing danger to the rights of people, communities and nature from the UOGE industry, a danger that is being realized in many countries of the world. Given the significant contribution the industry makes to greenhouse gas emissions and thereby climate change, it is vital to consider ways that the people can react given that we are now at the "climate crossroads". It is to that task the PPT has been dedicated.

The most innovative task that the PPT was called upon to undertake was to consider the role of the emerging but largely unfulfilled and untested integration of the rights of humans and rights of nature into a unified jurisprudential stream.

The petitioners seek an advisory opinion from the Tribunal on four fundamental legal questions associated with the impacts of fracking on human rights and climate change. Among these they ask the Tribunal to determine the possible *extent of responsibility and liability of States and non-state actors, both legal and moral, for violations of the rights*

of nature related to unconventional oil and gas extraction techniques. To approach the answer to the question, it is necessary to review the recent history of the emerging rights of nature.

The evidence presented to this Tribunal was composed of a number of case studies and some detailed *amicus curiae* presentations stressing the substantial negative environmental implications of fracking and the potential violations of the rights of nature associated herewith.

This Tribunal welcomed these submissions and expert testimony and has analysed them with a view to propose an Advisory Opinion and Recommendations that will strengthen the call for social reparations, including the restoration of environmental damage caused by fracking. This tribunal wishes also to explore modalities in which the "traditional" human rights framework as enshrined in international law, covenants and principles can be progressively complemented with jurisprudence and legal norms recognizing the rights of nature.

The cases presented to this Tribunal provide illustrative evidence of the direct and indirect impacts of fracking, from pollution and contribution to climate change, to destruction of water wells and biodiversity. The cases also presented clear evidence of the significant negative impact of the large scale infrastructure associated with the UOGE industry, and taken together the very substantial impact on global environmental balances and climate change.

This Tribunal acknowledges that fracking affects both the rights of nature and of communities and peoples in the cases presented and highlights the impacts on indigenous peoples, in what can be defined as a systemic process of "co-violations".

This is the context in which the broad and transformational challenge posed by the rights of nature emerges, in which we are invited to move from a merely anthropocentric to a more social-biocentrical approach that recognizes the indivisibility and interdependence of all forms of life, and on the other hand maintain the cogency of current human rights obligations and norms.

The matter is not only that of strengthening and widening the current frameworks on human rights and peoples' rights, but rather complementing and deepening it with a new generation of rights, the rights of nature, as part of a process of progressive emancipation of peoples.

It is now an acknowledged fact that the enjoyment of human rights cannot be separated from a healthy and safe environment. Even more, environmental degradation caused by the massive extraction of natural resources is a driver of serious violations of human rights, from right to health food, water, housing, jobs. Furthermore, the expansion of the extractivist frontier is also affecting those people and communities that defend land and the environment, their bodies, subjectivities and territories. Those perhaps most impacted are the "Guardians of Mother Earth", mostly indigenous peoples that live in an indissoluble interdependency with nature, and recognize Mother Earth's intrinsic value in their lives.

An important opinion by the Interamerican Court on Human Rights explicitly confirms the intrinsic relationship between humans' enjoyment of rights and a healthy

environment, and goes further to specify that: "the right to a healthy environment as an autonomous right, unlike other rights, protects the components of the environment, such as forests, rivers, seas and others, as legal interests in themselves, even in lack of certainty or evidence about the risk to individual persons. It is about protecting nature and the environment not only because of its connection with a utility for the human being or for the effects that its degradation could cause on other people's rights, such as health, life or personal integrity, but because of its importance for the other living organisms with whom the planet is shared, also deserving of protection in themselves."[89]

This Tribunal therefore proposes that on the basis of the cases analysed and the study of existing jurisprudence, further activities be carried out on how to complement or integrate international human rights regimes and the rights of peoples with the rights of nature.

This effort will require a consolidation of the principle of humans' responsibilities to contribute to the preservation of nature's natural cycles, while recognizing its relevance. However further steps ahead are needed. We need to understand - and accept this in practice –that we, human beings, are nature. We cannot continue to exploit and destroy nature. She can exist without us, human beings, but we cannot live without our Mother Earth."[90]

The incorporation of nature's right to restoration after damage, opens up the door to a cultural and civil transformation. Restoration differs from but is complementary to reparation for human beings, whose living conditions can be affected by some environmental damage caused by other human beings. Such differentiation is crucial to be able to distinguish environmental rights as part of human rights and the rights of nature for all living beings and for Mother Earth as such. In the rights of nature, nature has a value per se, independently from its use by and usefulness for human beings. This is a radical departure from the dominant anthropocentrical vision. These rights as presently conceived do not defend an untouched nature, that would mean for us to stop growing food, fish or raise cattle.

The rights of nature are considered as ecological rights to differentiate them from environmental rights, that stem from human rights. These ecological rights are oriented to protect vital cycles and different evolutionary processes, and not only threatened species or natural areas. They defend living systems, all forms of life, ecological cycles and rhythms. You can still eat meat, fish, or cereals, for instance, inasmuch there is a guarantee that ecosystems would still function with their native species. In this context, ecological justice aims at securing the persistence and survival of species and their ecosystems as a whole, as networks of life. Beyond compensation to humans for the environmental damage, what is proposed is a restoration of affected ecosystems. In concrete, two justice systems will have to be applied at the same time: environmental

89 Inter-American Court of Human Rights, Environment and Human Rights, Advisory Opinion OC-23/17 of November 15, 2017, Requested by the Republic of Colombia, para. 62 (translation from Spanish).

90 This point is clearly made in the Encyclical letter "Laudato Si": "we ourselves are dust of the earth [...]; our very bodies are made up of her elements, we breathe her air and we receive life and refreshment from her waters" and Pope Francis goes even further in affirming that "We are part of nature, included in it and thus in constant interaction with it." Encyclical Letter "Laudato Si" of the Holy Father Francis on Care for Our Common Home, 24 May 2015, paras. 2 and 139.

justice for people and ecological justice for nature. These are structurally and strategically bound together.

However, beyond a merely theoretical and academic approach, it should be noted that both in the history of human rights and in the more recent history of the development and acknowledgment of the rights of nature, it was the agency of movements, of social and political actors that has contributed and continues to contribute to its further refinement, recognition and to the establishment of new categories. It is a constituent process from below from which the rights of nature have emerged: from indigenous peoples that reject the commodification of their Mother Earth, to communities opposing extractivism that recognize that the mere anthropocentrical approach is leading to the destruction of planet earth, we can therefore affirm that people are calling for the recognition of the rights of nature with all its political, cultural, social, economic and spiritual implications, as a fundamental element of the peoples' rights. Without ecological justice there will be no social justice, and vice versa.

The shift from nature as an object to nature as a subject has begun. In reality, this vision has been present in the perception of indigenous peoples for a long time now. And in a powerful effort the rights of nature have been recognized for the first time in a constitution by the Constitutional Assembly of Montecristi in Ecuador in 2008. Bolivia then adopted a law on the rights of nature in 2010. Elsewhere in the world these examples have been followed. In November 2016, the Colombian Constitutional Court recognized similar rights to the Rio Atrato. The Supreme Court of Uttarakhand in Naintal, Northern India, issued a verdict stating that the Ganges and Yumana rivers are living entities and declaring the Himalayan Mountain ranges, glaciers, rivers, streams, rivulets, lakes, jungles, air, forests, meadows, dales, wetlands, grasslands and springs "as the legal entity/legal person/juristic person/ juridicial person/moral person/artificial person for their survival, safety, sustenance and resurgence" (2017)[91]; and declaring "the entire animal kingdom including avian and aquatic […] as legal entities having a distinct persona with corresponding rights, duties and liabilities of a living person" (2018).

In March 2017, the Whanganui river in New Zealand was acknowledged as having to appeal to the court, through two of its representatives, one of the Whanganui iwi tribe and another from the Crown community. In 2013 the Te Urewera national park was recognized as a legal entity with the same rights of a person. Land has no owner. Rather is it managed by the Crowns and Tuhoe.

We can also cite the Environmental Code of the Loyalty Islands Province, New Caledonia (2016); or the Yarra River Protection (Wilip-gin Birrarung murron) Act 2017 passed by the Victorian Parliament, in Australia.

At the subnational level, the Tamaqua county in Pennsylvania was the first US municipality to approve a local ruling that recognizes Nature's right to exist, thrive and evolve. Since then as many as 36 communities in 7 US States (Pennsylvania, Ohio, New

91 High Court of Uttarakhand, Mohd. Salim v State of Uttarakhand, 20 March 2017, http://lobis.nic.in/ddir/uhc/RS/orders/22-03-2017/RS20032017WPPIL1262014.pdf

Mexico, New York, Maryland, New Hampshire and Maine) approved similar rulings that codify the rights to nature.

In Nepal, a process is underway to recognize the rights of nature through a Constitutional Amendment. On the other hand, a group of North American citizens filed a claim asking that the Rocky Mountains or the Nevada desert could sue individuals, corporations or State governments in the US.

The struggles for the rights of nature, in particular after the adoption of the Ecuadoran Constitution, increasingly assumes the universality of such rights. For instance, the Rights of Nature can be used as a tool to defend indigenous territories outside of Ecuador. In the case of the public claim aimed at stopping the construction of the Belo Monte Dam in Brazil, the Ecuadorean constitution was taken as reference, while stressing that "it could be clearer and more proper to apply the rights of nature as regards the destruction of the Xingu territory".

Many are the proposals aimed at universalizing the rights of nature: for instance the Earth Charter - whose aim is that of offering a Great Charter or Planet's constitution – promoted within the UN system and its organizations since 2000, or the Universal Declaration of the Earth's Rights, initiated by EnAct International, issue for quite some time, and has offered significant contributions.[92]

In 2014 civil society organizations of all the continents convened the International Nature's Rights Tribunal, that represents an ethical space for the realization of these rights.

From the above, it is clear that the rights of Nature are a global issue and the time has now come to promote the Universal Declaration of the Rights of Nature at the United Nations, on the basis of the proposal that was adopted in the Earth Summit of Tikipaya, Bolivia in 2010. Equally urgent is the establishment of an international tribunal that could judge environmental crimes against people and Nature, as also proposed in the course of the same Summit.

It is worth pointing out that, in spite of existing international instruments such as the UN Declaration on Human Rights Defenders (that also includes those that struggle for the environment and land), the situation of defenders of land and Mother Earth is getting worse. It is therefore time to propose the parallel strengthening of the human rights and rights of nature regimes. In this context, the Permanent Peoples' Tribunal and the Tribunal on the Rights of Nature could find some common ground and strengthen each other, as well as look into the possibility of joint initiatives on various topics, starting with the situation of the defenders of land and Mother Earth.

The Earth Charter (2000) includes among the principles of ecological integrity: a) the principle of protecting and restoring the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life, which includes "[M]anage the extraction and use of non-renewable resources such as minerals and fossil fuels in ways that minimize depletion and cause no serious environmental

[92] IUCN as well acknowledges the importance of the Rights of Nature in its resolution "Incorporation of the Rights of Nature as a focal element in IUCN decision-making" adopted at the World Nature's Congress of IUCN in Jeju in 2012. The resolution invites IUCN and its members to promote the Universal Declaration of the Rights of Nature in order to reconcile themselves as human beings with Mother Earth.

damage"; and b) "prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach", which implies, among other aspects: "Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive; Place the burden of proof on those who argue that a proposed activity will not cause significant harm, and make the responsible parties liable for environmental harm; [...] and prevent pollution of any part of the environment and allow no build-up of radioactive, toxic, or other hazardous substances".[93]

Article 3 of the Universal Declaration of Rights of Mother Earth (2010) states the obligations of human beings to Mother Earth, and in particular that "all States, and all public and private institutions must, among others: "[...] (e) establish and apply effective norms and laws for the defence, protection and conservation of the rights of Mother Earth; (f) respect, protect, conserve and where necessary, restore the integrity, of the vital ecological cycles, processes and balances of Mother Earth; (g) guarantee that the damages caused by human violations of the inherent rights recognized in this Declaration are rectified and that those responsible are held accountable for restoring the integrity and health of Mother Earth; (h) empower human beings and institutions to defend the rights of Mother Earth and of all beings; (i) establish precautionary and restrictive measures to prevent human activities from causing species extinction, the destruction of ecosystems or the disruption of ecological cycles [...].[94]

In light of the documents provided and the testimonies heard in this proceeding, the actions of States and companies in allowing and developing the UOGE techniques analyzed in this session of the Tribunal are incompatible with these principles.

Unfortunately, such provisions are contained in texts that are not part of positive international law and, therefore, can only be affirmed a moral responsibility of States and companies that do not respect them. We lack formal ways to make effective as a legal liability the violation of the rights of nature at the international level, beyond the pronouncements of opinion courts such as this one.

The answer to this fourth question is clear.

The agency of the people remains central to the hope for protecting the rights of people and the rights of nature from the depredations of the UOGE industry. The facts are clear and the legal resources, though emergent to some extent especially with regard to the rights of nature, are available even now, as indicated in chapter 4 above.

The way forward is the continuing struggle by the people from the bottom up, from the streets, in the media, throughout civil society and in the courts. To the extent that international agencies and legal instruments, state legislation and court decisions reflect the will of the people as demonstrated by resistance to the violations of state and non-state bodies, the rights of nature will be protected.

93 The Earth Charter, http://earthcharter.org/invent/images/uploads/echarter_english.pdf, p. 2.
94 The Universal Declaration of Rights of Mother Earth, http://therightsofnature.org/universal-declaration/

6. Overall summary of the Advisory Opinion

The points which follow provide the framework for a better and comprehensive understanding of the continuity and complementarity of the answers formulated to the four questions submitted to the Tribunal.

The evidence presented to the PPT, along with other publicly available material it has considered in its deliberations, clearly demonstrates that "fracking" or, more broadly, unconventional oil and gas extraction (UOGE) poses many and varied consequential dangers to the rights of humans and nature.

From many jurisdictions around the globe, the evidence is overwhelming: first, UOGE is a major contributor to the crisis the world is facing at the "climate crossroads"; second, the dangers of UOGE to the rights of people, communities and nature are inherent in the industry, and that such dangers all too often result in serious, even catastrophic violations of those rights. Where UOGE operations impact, local ecosystems are destroyed and that of the planet comes under threat.

Seeking justice for the people

The historic role of the PPT is to expose injustice according to factual evidence presented to it, but also, as part of its opinion forming mission, to raise the consciousness of the people and to provide guidance to the way forward to achieve justice. As part of that guidance it makes recommendations for changes in state and international law, policies and programs and, especially in recent times, for regulation of the TNCs and other corporate bodies. But that approach has its limits. As the evidence on the UOGE industries has clearly demonstrated, despite apparent legal restraints the TNCs and others continue to wreak havoc on human rights and those of nature.

There is a need to go beyond liberal legalism in the guidance the PPT gives to the people. The time for relying on the State and its juridical apparatus for comprehensive solutions is gone. That goes also for the international community and international law. Certainly those affected already by the depredations of the UOGE industry should be encouraged to exercise whatever rights they may have under international law, state and sub-state laws. Others should exercise their legal rights at all levels to prevent further rights violations. But the future of the planet is not going to be determined in the courts, but in the mass movement of the people in the streets. Therefore it is a moral duty of the PPT to look beyond a rights-based approach at this critical juncture when we are at the crossroads with climate change.

On the limits of law

Under the present dominant politico-economic structures, law is best understood as a site of struggle, the resultant form that emerges out of the contention between social forces. Environmental law and other laws regulating industries are clearly the result of conflicts among deeply-held beliefs and interests between such forces. Once in place, laws are "in play". They continue to be sites of struggle for their meaning, implementation, reform or

annulment. Of course, the wealthy and powerful, today the mega-corporations and TNCs, generally dominate these struggles.

Law, at whatever level, has symbolic and instrumental dimensions, these are both emergent and interacting.[95]

Instrumental dimensions indicate specifically those changes in the legal landscape that the promulgators, for whatever reason, wish to make in order to achieve some purpose, e.g. to allow or disallow certain activities such as UOGE, or to subject it to regulation. Thus law can be used as an instrument.

The law also signals the result of a political determination by the law maker of a struggle over a law. It represents the symbolic victory/defeat of certain social forces. Yet despite the intentions of the law maker, the law may be unenforceable against the powerful, e.g. a state or mega-corporation engaged in the UOGE industry. If, because of regulatory capture or other reasons as demonstrated to the PPT in case studies it has heard, the promulgator of the law cannot use the law as an instrument to achieve the original apparent purpose of the law, then the law can be considered essentially symbolic.

In some circumstances the law appears to be instrumental but it is actually symbolic from the beginning. It was promulgated in circumstances, usually political and/or economic pressures, which demanded such symbolism for the purpose of enticing the public to think that law will be used for instrumental purposes in their favour, while the intention of the authority responsible for the law is not to honor its apparent instrumental commitment.

It has been made clear to the PPT from evidence received and generally available commentaries that in the specific case of fracking much law regulating the industry has been largely symbolic in substance and procedure, despite any initial instrumental intention.

While we must recognize the symbolic value of the International Bill of Rights and the usefulness of the universal norms that it has created and those conventions, declarations and principles that have flowed in its wake, we must also recognize that they alone cannot, and for the most part have not, served the instrumental function of protecting human rights. Nor until recently has it begun to be seen as protecting the rights of nature. Nearly sixty years ago, Rachel Carson's *Silent Spring* awakened the world to threats to ecosystems and humans from the profit-seeking corporations of her day. The book inspired the environmental movement and many legal responses to the dangers of unfettered corporate activity. Today, that Silent Spring looms large over a close horizon of catastrophe. We are reminded that "the first IPCC report was in 1990, which was 28 years ago. The UN, even back then, warned us to keep global temperatures from reaching 1°C (above a late 19th century baseline temperature) or face societal collapse. Global

95 See e.g. Carson, W.G. (1974), "Symbolic and Instrumental dimensions of Early Factory Legislation: A Case Study in the Social Origins of Criminal Law", in Hood, R., (ed.) Crime, Criminology and Public Policy, pp. 107-138, London: Heinemann. See also Baxi, U. (2016), "Dimesions Of Impact Analysis", in Manoj Kumar Sinha & Deepa Kharab (ed), *Legal Research Mthehology*, pp. 182-190, Delhi, Lexis/Nexis.

temperatures are currently at 1.1°C, and will likely reach a 1.5°C increase within a decade from now. Carbon dioxide levels are now 60 percent higher than they were in 1990, and are still rising, as are methane levels" to which the UOGE industry contributes significantly.[96] As Professor Hans Schellnhuber, one of the world's leading experts on the impacts of climate change, has warned: "Climate change is now reaching the end-game…the issue is the very survival of our civilization".[97]

Despite laws about the environment, some instrumental, some symbolic, the profit-driven corporations still continue to devastate the planet and now dominate the nation states that are expected to use the law to protect the people and the planet from this unrelenting threat to our existence. That expectation has not and cannot be fulfilled.

Around the world today extractivist industries' activities abound with consequent serious violations of human and nature's rights. Such violations, committed by mega corporations for the most part, are done either under what have become symbolic environmental laws that have been implemented to allow UOGE activity, or are done in violation of such laws but with impunity from the state. Nation states have invariably been "bought off" by the extractivist industries in the name of ersatz "development".[98] The instrumental dimension of the laws, to the extent that it existed initially, has been stripped away. Only symbolism remains.

What should be the people's response in the face of the limits to legalism, state capture by the mega-corporations and the "balance of power" in legal cases that greatly favour the perpetrators of violations of human and nature's rights?[99]

In answering the question, the Advisory Opinion and Recommendations of the PPT, seeking to meet the needs of the people and nature for protection, reparation and restoration, cannot simply advert to the legal norm. While it is important to recognize the symbolic importance of legal reforms, and potential instrumental impacts at local, state, regional, national and international levels, such as those sought by witnesses to this session of the PPT, it is clear from the history of struggles for the reform of laws relating to the environment, in particular fracking, that those reforms even if achieved, would be insufficient without more.

Martin Luther King, Jr., among many others over the centuries, believed that faced with injustice humans had to respond if they were to live with dignity and fight to bring about change in order to reach a condition of freedom and justice. Thus his pronouncement:

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96 D. Jamail, The Global Extinction Rebellion Begins", Truthout, November 15, 2018, https://truthout.org/articles/the-global-extinction-rebellion-begins/

97 *Ibid*.

98 See generally on the role of TNCs , e.g. the interim Statement and Judgment of the recent session of the PPT on The Role of TNCs in Southern Africa (2016-2018), http://permanentpeoplestribunal.org/33-transnational-corporations-in-southern-africa-manzini-swaziland-16-17-august-2016/?lang=en

99 See e.g. the Ecuador case on the "Amazon Chernobyl", involving the defendant Chevron. There was a clear case against Chevron and a judgement for 9.5 billion US dollars awarded against it. Yet the case is still running after more than 25 years as Chevron continues to refuse to pay and tries, with the support of some national and arbitral tribunals, to undermine the judgement against it.

"One has a moral responsibility to disobey unjust laws".[100] Thoreau also argued that there was a moral obligation to resist tyranny: "A government in which the majority rule in all cases cannot be based on justice, even as far as men understand it ... Must the citizen ever for a moment, or in the least degree, resign his conscience to the legislator? Why has every man a conscience, then? I think that we should be men first, and subjects afterward?"[101]. Through the actions of the people, those corporations and states that oppress the rights of people and nature must be brought to understand they can no longer do so. The time for talking in order not to do anything, or as little as possible, has long since passed.

The PPT recognizes its own moral responsibility to take a position beyond the legalism (that is merely the legality of the dominant) that is bound to favour powerful corporate violators and their complicit partners in crime, the government authorities at all levels. Such authorities have betrayed the people and in doing so, have made a mockery of democracy, the rule of law and the right of peoples to determine their own destiny, and that of the planet.

The PPT believes that the direct, active resistance of the people in countries around the globe must be recognized as justifiable resistance to the unjust, even murderous, destruction of communities and plundering of nature's resources aided and abetted by governments. As has been said, "When injustice becomes law, resistance becomes duty".

The PPT supports the resistance movement that has been growing for many years and recognizes the importance of both the legal struggle and the non-legal struggles of groups around the world.

The PPT Recommendations therefore will reference not only the measures of substantive and procedural law reform sought by the witnesses it has heard in this session, but also measures that can strengthen the now worldwide struggle against climate change and destructive extractivist activities, importantly including the UOGE sector. Recent reports of the climate change crisis, in significant measure caused by UOGE operations, makes more urgent people's direct action in resisting operations to which they have not given their consent and which seriously injure people, communities, often those of first nations people, and despoil the ecosystems of the world.

What is required is the full implementation of the people's democratic rights, including the right to resist tyranny and oppression and the internationally recognized right to self-determination of issues affecting them.

A more comprehensive state action sought to protect human rights

Many of those who appeared in presenting their cases and testimonies understandably sought recommendations from the PPT that would seek government actions, generally

100 See his views in King, M.L. (1991), "Letter from Birmingham City Jail," in Bedau, H.A. (ed.), *Civil Disobedience In Focus*, London: Routledge, p. 69.
101 Thoreau, H.D. (1991), "Civil Disobedience", in Bedau H. A. (ed.), *Civil Disobedience In Focus*, London: Routledge, p. 29.

relating to law, that would protect people, communities and nature from the harms incurred where UOGE has been permitted. Examples include substantive laws to fill the vacuum in legislation regulating the UOGE industry; procedural laws to ensure transparency in all decisions regarding the legal rights and activities of corporations; laws to ensure accountability for corporate violations e.g. compensation and reparations; laws to protect the rights of those likely to be placed in danger by UOGE, including the need for procedural due process; to require more than the mirage of consultation and to ensure that without informed consent the UOGE operations will not be allowed to proceed; to reform laws that favour the interests, directly or indirectly, of corporations over people and communities; to protect, by decriminalization, the rights of those who wish to exercise their moral duty to protest illegal or unjust actions of the state or corporations. The PPT supports efforts to resist the depredations of UOGE, including the reform of law, its reservations about the utility of the law notwithstanding.

State capture

It was made clear in case studies presented to the PPT that there exists an "axis of betrayal" between corporations and governments that allows the violations described to the PPT. Betrayal in that corporations are expected, under the UN Guiding Principles on Business and Human Rights, to operate with "respect" for human rights (which must imply respect for those of nature) and demonstrably often do not.

Betrayal by governments comes in many forms, including the failure to pass effective and comprehensive legislation, as it appears that environmental law in general functions to mitigate but not prevent entirely damage to nature and people due to a liberal legalism that seeks to protect the profits of the corporations and secure "economic development" central to the goal of increasing corporate profits. Governments also fail to provide for effective implementation and enforcement of such legislation. Further, an apparently universal process occurs with the government agencies designated to enforce legislation and otherwise regulate corporate activities whereby they fail to perform their regulatory function for any number of reasons, especially financial but also ideological, or corruption arising out of an inappropriate relationship with the industry to be regulated. The evidence presented and available publicly shows that corporate "regulatory capture" is common in the UOGE sector of extractives industries.

In the current period of neo-liberal globalization, rather than just "regulatory capture" we might more accurately speak of "state capture". The mega corporations, more wealthy than many nation states and seen almost universally in cargo cult fashion as essential "growth machines" providing "development", have gained a dominant position viz a viz nation states as well as governments of sub-state jurisdictions. In effect, they have established a new form of sovereignty or quasi-sovereignty. They do not derive sovereignty from the people nor do they exercise their power on behalf of the people. Rather they operate, according to law, in the interests of the corporation and its major shareholders. Too often this means they are in conflict with the interests of the citizenry and nature, even of the governments who are beholden to them.

Contemporary conjuncture

Even if, against all evidence, the State could escape capture and had the capacity, intention and will to significantly regulate the operations of the UOGE industry, the evidence we have received clearly demonstrates that the industry necessarily has negative impacts on the planet's people and ecosystem. It is inherently unsafe, with serious, known negative impacts, nor does that include the unknown future resultant damage below the surface caused by such new, invasive techniques as are increasingly being deployed by the UOGE industry. We might conclude that the precautionary principle has been thrown to the (methane-polluted) winds.

It could be thought irrational to allow an industry that is unnecessary, known not to be sustainable for the long term and inherently abusive of human and nature's rights to continue operating. Especially is it irrational, and most potentially catastrophic, when we consider its inevitable significant contribution to climate change and water scarcity at a time when there is an urgent necessity to adopt policies that will save the planet. The urgency has been made clear by the crisis warnings emanating from the COP24 meetings in Poland.

More comprehensive State action to protect the rights of nature

A large and convincing quantity of evidence clearly demonstrated to the PPT the devastating effects on ecosystems resulting from corporate and State violations of the rights of nature under law-international down to the local- including the moral, existential right to justice, i.e. the right of the planet to be protected and thereby survive along with its inhabitants.

Many of the requests from witnesses were directed to protect the rights of nature. The People's Jurisprudence of the PPT has evolved over the years and has become a strong voice for the protection of Mother Earth and the rights of nature. The clearly established violation of those rights resulting from the fracturing of the earth, the consequent pollution of air and water, and much else detailed to us, requires urgent attention from the international community, nation states, the corporations involved in UOGE, and the citizens being affected around the globe.

The PPT recognizes the propriety and urgency of making recommendations for protecting the rights of nature that are being recognized increasingly across the globe, e.g. in the Universal Declaration of the Rights of Mother Nature, in court decisions, legal instruments and Constitutions, and in the banning of the process of fracking in four countries and many sub-national jurisdictions, as well as moratoria in a number of jurisdictions. Thus, in regard to the violations of the rights of nature, we also have a duty to recommend that such violations should be sanctioned and future violations be juridically deterred and prevented.

The PPT is a Tribunal for the people. We have heard the voice of the people and therefore, having studied the evidence and found it convincing, we recognize the need to

make many Recommendations for state legal reform. The list of specific Recommendations in that category is found below

Yet given the limits of legalism demonstrated in the evidence we have considered and discussed in chapter 5 above, it will be the direct actions of the people that will primarily determine the struggle for a healthy planet.

Going beyond a moratorium

Given the historic roots and continuing position of the PPT that it seeks to expose injustice, and to outline and support the quest for the kind of justice that the State will not render, it would be ironic if, in the face of the evidence it has received at this session of the inherent risks and consequent violations of the rights of humans and nature, it was not prepared to provide the justice to which petitioners are entitled.

We respect the precedent in People's Jurisprudence of the call for a moratorium on fracking made in the very thorough case study made by the Ohio Citizen's Tribunal on the Human Rights Impacts of Fracking, very similar to that made in the report prepared for the United Kingdom government's "A Human Rights Assessment of Hydraulic Fracturing and other Unconventional Gas Development in the United Kingdom" (2014). However, the UK government did not accede to the call for a moratorium despite the evidence indicating that it was justified. Interestingly, the government of Scotland did impose a moratorium, indicating the highly politicized nature of these moratoria. Of course, a State moratorium can be reversed, as recently happened in the economically beleaguered former mining colossus, Western Australia, and in the Northern Territory of Australia desperately seeking "economic development", not heeding the experience of other jurisdictions where a "black gold rush" turned community life into a nightmare.

We will go beyond the call for a moratorium and recommend that UOGE should be banned, and the political struggle required should focus on the illnesses, deaths and devastation to communities and Mother Earth that have followed its imposition on the people after symbolic consultation, or none at all and in the consequences that climate change is already causing in so many places in the world and that threatens the very survival of future generations. The serious rights violations suffered by people and nature are accompanied by little if any economic benefit to those communities while the profits go to the corporations and other "benefits" to the complicit State officials.

The industry is being driven not by necessity but the desire for profits by meg-a corporations with the complicity of governments and others who believe it will bring benefits to them, and "tough luck" if there is "collateral damage". That expression is normally used to refer to military actions in armed conflict. Today there is a "silent war" by the industry, with its political, financial and media allies, against the ecosystem. The assault is directed at Mother Earth while people are the indirect "collateral damage".

7. Concluding remarks

1. We recognise the full responsibility of State and non-state actors whose actions have been considered and assessed in this AO for the commission of systematic violations of human, peoples, ecological, and nature rights as they are affirmed and sanctioned in the existing international law.

2. We underline the failure of existing international juridical system and documents to fully address the responsibilities of the same actors with respect to the spectrum of clearly documented violations of peoples and nature rights, specifically when and where such violations are produced and justified in the name of laws and contracts are strictly dependent upon economic interests, that pretend to be independent from the international binding principles and norms which protect and promote human, peoples, nature rights.

3. Such failures must be urgently addressed in close collaboration with the many groups and initiatives which represent specifically the rights, the struggles, the models of resistance of the communities affected by UOGE and related extractive and more broadly exploitation activities.

4. We formally recognize and congratulate those countries and sub-state jurisdictions that have banned fracking, and condemn those countries and sub-state jurisdictions that have revoked bans and moratoria on fracking.

5. We recommend that a Session of the PPT be organized without delay to consider the developments in the trend of UOGE to expand worldwide; the results of State and sb-state attempts or failure to regulate the industry; forms and impacts of resistance to UOGE; and to receive and consider action plans for increasing effective resistance to the industry' operations.

We congratulate Professor Tom Kerns, his organizing team, the many witnesses and experts who have presented their impressive evidences, for the enormous work they did in organizing this innovative Session of the PPT, and encourage them to develop appropriate educational materials from the vast oral,visual,written documentation made available to the pre-Tribunal Sessions and to the PPT itself for use in school, other educational institutions, community and climate activist organizations, and by mainstream and social media.

8. Recommendations

A) To the United Nations:

1. That the Universal Declaration of the Rights of Mother Earth (UDRME) be adopted as soon as possible by the United Nations.
2. That the methods, present and envisioned for the future, of extracting oil and gas from underground, referred to in general as “fracking”, be banned.
3. That an International Working Group (IWG) be established to develop People’s Earth Jurisprudence and publish reports which can be used by legislatures and courts around the world. The IWG should include in its work an analysis and justification of the right to use civil disobedience including forcible action where necessary and morally justified to defend Mother Earth.
4. That ecocide be given similar recognition as genocide in international law through a Universal Declaration from the United Nations.
5. That the Special Rapporteur on Human Rights and the Environment be asked to investigate the violations of the rights of humans and nature by the UOGE industry.
6. That, after 41 years of “Guidelines” and “Principles”, the United Nations approve as soon as possible the draft legally binding instrument to regulate, in international law, the activities of transnational corporations and other business enterprises

B) To the States and sub-state jurisdictions:

7. That all States and governments at all levels should include in their constitutions a recognition of the right of all their citizens to a healthy environment.
8. That Environmental Law should be recast as Ecological Law to protect the planet’s ecosystems.
9. That concepts and institutions based on humans-only, anthropocentric understandings be reformed to allow a broader democracy to be achieved through recognition of the right of nature to be represented in any proceedings affecting nature and to participate in decision-making through a form of guardianship.
10. That the People's Jurisprudence developed in People's Tribunals, Citizen's Inquiries, and other non-state bodies, by scholars, commentators, indigenous communities and other groups, and including the entire informal discourse concerning the rights of nature, should be recognized as a legitimate normative process and recognized as part of emerging international law.
11. That State and sub-state jurisdictions should consider adopting the Declaration on Human Rights and Climate Change and making its standards and provisions part of public policy at all levels.

12. That State and sub-state jurisdictions should adopt the UDRME in their constitutions and legislation.

13. That State and sub-state jurisdictions guarantee to all citizens access to justice in environmental matters, including the timely access to all relevant information, the opportunity to prepare and participate in decision-making procedures, particularly those directly affected by projects that may negatively affect their rights or those of the environment; and that free prior informed consent according to international standards and obligations be guaranteed when activities that threaten nature, human rights and communities are under consideration for approval.

14. That Courts throughout the world recognize the rights of nature as proclaimed in the UDRME, the Ecuadorian Constitution, Bolivian legislation and similar legislation in other jurisdictions, and use these instruments and concepts as precedents for implementation and protection of such rights.

15. That in all legal judgements against UOGE operatives for violations of the rights of people, communities and nature, punitive damages be included.

16. That an International Working Group be established to study and report on the potential contribution that self-determining modes of governance in a federated system of bioregions could make to safeguarding the rights of nature, human rights and communities, as well as enriching democracy.

17. That governments cease persecution of climate activists, defenders of human rights and those of nature, take immediate and effective steps to end impunity for the perpetrators of such persecution and protect the defenders from the persecution they now suffer from states and corporations.

18. That protests and demonstrations against the operations of the UOGE industry and the violations of human and nature's rights by the industry should be decriminalized.

C) To the peoples and communities that are mobilized in defense of nature:

19. That a Clearing House on the UOGE industry be established to gather and publish data from around the world on such matters, *inter alia*, as rights violations by the industry, actions or inactions by governments to permit/enable or restrict such activity; resistance actions by local organizations and "law enforcement" responses.

20. That human and nature's rights activists/defenders should be encouraged to oppose the UOGE industry using tactics justifiable in moral terms, supported by forms of international solidarity from the climate activist community.

21. That human and nature's rights activists/defenders should promote and support litigation before national courts regarding the violation of human rights against those responsible for aggravating climate change or against those who, should they do so, do not adopt the necessary measures to deal with it.

22. That an International Conference on Action for Climate Change and Against Extractivism be organized to link groups resisting the violations and depredations of the UOGE industry with others resisting extractivist industries in order to plan and coordinate actions and support, including joint and solidarity actions.

23. That a Permanent Peoples' Tribunal on UGOE be established in those regions where the industry is operating with the task of monitoring and exposing the violations of the industry and developing support for the resistance to the operations of the industry.

24. That local community organizations and activist groups be encouraged to establish Local People's Tribunals (LPT) or Local Citizen's Commissions (LCC) to focus resistance to granting permits for UOGE industries to operate in a community and to expose violations of the rights of people, communities and nature by existing UOGE operations.

Annex 1

Petition for a Permanent Peoples' Tribunal

Session on

The Human Rights impacts of fracking and climate change

January 21, 2018

This document updates our initial petition asking that the Permanent Peoples' Tribunal schedule a Session formally addressing the human rights impacts of fracking and climate change. This petition has seven sections:

I. The question to be addressed by judges
II. Issues and community concerns
III. Initiators, steering group, attorneys
IV. Resources available to the court regarding matters of fact, human rights norms and earth rights norms
V. Process, location and dates
VI. Lecture Series on Human Rights and Climate Change
VII. Anticipated outcomes

I. The questions to be addressed by judges

The petitioners seek an advisory opinion from the Tribunal on four fundamental legal questions associated with the impacts of fracking and climate change.

1. First, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, breach substantive and procedural human rights protected by international law as a matter of treaty or custom?
2. Second, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, warrant the issuance of either provisional measures, a judgment enjoining further activity, remediation relief, or damages for causing environmental harm?
3. Third, what is the extent of responsibility and liability of States and non-state actors for violations of human rights and environmental and climate harm caused by these oil and gas extraction techniques?
4. Fourth, what is the extent of responsibility and liability of States and non-state actors, both legal and moral, for violations of the rights of nature related to environmental and climate harm caused by these unconventional oil and gas extraction techniques?

We would like to see these questions addressed in light of the following six areas of concern, or subcases:

1. The human health subcase which concerns the health impacts of fracking, both acute and chronic, especially for vulnerable groups – due to exposures to endocrine disruptors, known and probable carcinogens, radon gas, neuro- and developmental toxicants, ozone, and noise.
2. The climate subcase which concerns the human rights and earth rights implications of fracking's impacts on the climate system, for present and future generations and for other living beings, which may result from a CO2-intensive extraction process, fugitive and intentional methane releases, fostering a continued reliance on fossil fuels, and so on.
3. The ecosystems subcase which concerns the human rights and earth rights impacts on ecosystems, oceans and wildlife, on contamination and depletion of ground and surface waters, and on the contribution to earthquake swarms.
4. The social costs case which concerns the impacts on communities, social services, roads, housing, property values and relations among neighbors.
5. The public participation case which concerns the lack of opportunities for, and sometimes obstruction of, public participation in decision-making about fracking.
6. The fuels infrastructure case which concerns the human rights and earth rights impacts resulting from fracking infrastructures such as pipelines, compressor stations, export facilities, Liquid Natural Gas facilities, storage facilities and so on.

Prosecutors' arguments, submitted evidence and witness testimony will address human rights concerns in each of the subcases. Yet focusing only on the rights of human beings, without also acknowledging the inherent (not just instrumental) value of other living beings and systems, can be harmful too. So some of these subcases will be argued also from an earth rights (or rights of nature) perspective based on the Universal Declaration of the Rights of Mother Earth, the Earth Charter, the Nagoya Protocol, Title II of the 2008 Constitution of Ecuador and other similar documents. While *human* rights will be the central focus in this Session – partly because the PPT is a human rights court, and partly because human rights are already well established in law – earth rights arguments will play a key role in the climate, ecosystem and fuels infrastructure subcases too, because the lives and well-being of non-human beings and systems are just as much at stake as the lives and well-being of humans.

In sum, we request that the PPT summon the interested parties, hear arguments and evidence from prosecuting and defense attorneys and their witnesses, and render appropriate judgment on the above questions.

II. Issues and community concerns

Communities are concerned about a range of issues related to the health, ecosystem and climate impacts of extreme oil and gas extraction, including, among others:

- adverse acute and long-term human health impacts, particularly for children, the elderly, the disabled, the place-bound and other vulnerable groups;
- adverse impacts on the climate system resulting from accidental and intentional methane releases;
- adverse social and economic impacts, particularly for vulnerable populations;
- the storage, use and disposal of hazardous materials, especially on indigenous people's

lands;

- degradation of ambient air quality resulting from increases in volatile organic compounds, other hazardous air pollutants, diesel emissions, dust and particulate matter;
- contamination and depletion of both surface waters and groundwater sources;
- heavy truck traffic, diesel exhaust, noise pollution and light pollution from round the clock operations;
- damage to soils, lands and ecosystems;
- loss of property value due to the effects of nearby fracking and pipeline operations;
- increased risk of accidents, well blowouts, fires, explosions and vehicle crashes;
- fostering a continued reliance on fossil fuels;
- unsafe disposal of, for each fracking operation, one to two million gallons of waste fluids containing toxic chemicals, brine and radioactive materials;
- increased risk of earthquakes.

III. Initiators, steering group, attorneys

The initiating organizations that submitted the original petition are:

- The Global Network for the Study of Human Rights and the Environment
- Environment and Human Rights Advisory
- The Human Rights Consortium

In addition to these initiators, current Steering Group members include:

- The Spring Creek Project at Oregon State University
- The Oregon State University Master of Arts in Environmental Arts and Humanities program
- A dozen or so environmental and human rights activists, NGO leaders, attorneys and professors

Attorneys:

- Benedict Coyne, President, Australian Lawyers for Human Rights
- Richard Sahli, Attorney at Law, Columbus, OH
- Lisa Mead, Executive Director, Earth Law Alliance will argue Rights of Nature cases.
- Michelle Maloney, PhD, Co-Founder and Convener, Australian Earth Laws Alliance, will assist with arguing rights of nature cases

IV. Resources available to the court regarding matters of fact and human rights norms

A significant literature about the factual and human rights dimensions of fracking and climate change has been emerging and is now available to the court:

For information about matters of fact related to fracking and climate change, see:

- The well-researched and highly authoritative *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)*, co-authored by Concerned Health Professionals of New York and by Physicians for Social Responsibility, 4th edition, November 2016
- The *Fifth Assessment Report* is the most recent climate assessment report of the Intergovernmental Panel on Climate Change (IPCC)

For reviews of human rights norms related to fracking and climate change, see:

- "Does Fracking Violate Human Rights?" several invited papers in the *Questions for a Resilient Future* series at The Center for Humans and Nature, Spring 2017
- *Fighting for Our Shared Future: Protecting Both Human Rights and Nature's Rights – 2016 Update*, Earth Law Center, December 2016
- *United Nations Toolkit on the Right to Health*
- *Philippine Petition on Climate Change and Human Rights*, May 2016
- *Declaration on Human Rights and Climate Change*, Global Network for the Study of Human Rights and the Environment, May 2016; poster-size version, letter-size version, tri-fold version, blurb about DHRCC
- "'The Declaration on Human Rights and Climate Change': A New Legal Tool for Global Policy Change," Kirsten Davies, et al, *Journal of Human Rights and the Environment* (8.2) September 2017
- *Indigenous Peoples, Afro-Descendent Communities, and Natural Resources: Human Rights Protection in the Context of Extraction, Exploitation, and Development Activities*, by the Inter-American Commission on Human Rights, 2015
- *Report on Human Rights and Climate Change*, UNEP, 12-10-15
- *Understanding Human Rights and Climate Change*, UNHCHR 2015
- *Human Rights and the Business of Fracking: Applying the UN Guiding Principles on Business and Human Rights to Hydraulic Fracturing*
- *A Guide to Rights-based Advocacy: International Human Rights Law and Fracking*, Sister Áine O'Connor, RSM, Mercy Global Action Coordinator at the UN, et al, 2015
- Extreme energy, 'fracking' and human rights: a new field for human rights impact assessments? Damien Short, et al, 2015
- *A Human Rights Assessment of Hydraulic Fracturing and Other Unconventional Gas Development in the United Kingdom*, 2014
- *Report of the Independent Expert on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*
- *A Human Rights Assessment of Hydraulic Fracturing for Natural Gas in New York State*, 2011

For testimony and findings available from preliminary pre-PPT tribunals, see:

- the Athens, Ohio pre-PPT Tribunal held May 13, 2017
- the Youngstown, Ohio pre-PPT Tribunal held July 29, 2017
- the Brisbane, Australia pre-PPT Tribunal to be held in February 2018
- other pre-PPT Tribunals still in the planning stages

For overviews of this tribunal session, see:

- "An International Tribunal on the Human Rights Impacts of Fracking: Structure, Grounding and Purposes," Tom Kerns, in *New Frontiers in Environmental Constitutionalism*, pp 48-61 United Nations Environment Program, May 2017
- "Why a Human Rights Tribunal?" Tom Kerns, in *Minding Nature*, June 2017
- "Fracking Goes on Trial for Human Rights Violations," Kathleen Dean Moore, in *Truthout*, Nov 2015
- Other overviews can be seen on the media page of the Tribunal website[102]

V. Process, location and dates

Three one-day preliminary tribunals have already been conducted in the US and more are anticipated in the US, in Australia and possibly in the UK. Testimony, findings and recommendations from those preliminary tribunals will be available to attorneys and judges prior to the plenary PPT session next spring.

The week-long plenary session of this tribunal will be conducted virtually throughout the week of May 14-18, 2018. Zoom is donating its conferencing software for the Tribunal and the Media Services department at Oregon State University (OSU) will be setting up online conferencing facilities and assisting with technical support. Once judges have been selected, Zoom and OSU will send us all (organizers, judges, attorneys, etc.) information about how to prepare for the process. We will all have two or three test sessions well before May 14th, with all of us online simultaneously so we can learn the software, become familiar with it and access whatever technical support we need.

The reason for conducting the tribunal virtually is so it judges, attorneys, witnesses and observers will not need to travel to a specific location, but will instead be able to participate fully and easily from their homes or offices. Each participant will need a good internet connection and access to a basic computer with a built in (or attached) camera and microphone. Most computers now have both. Some people find it works better to use a headset or ear buds like those that come with most smart phones. But if not everyone has a good internet connection or owns that kind of computer, they may be able to make arrangements with a friend or organization who does. The sessions will be conducted using Zoom conferencing software which is free for all users (organizers will offer help downloading it).

Because judges, attorneys and witnesses will not be required to travel to participate in the tribunal, there will be significant savings in travel costs and time, and the tribunal's carbon footprint will be reduced significantly. The entire tribunal process will also be video-recorded and streamed live so anyone in the world can watch it in real time or at a later time. We also plan to have a court reporter in attendance throughout each hearing so a transcribed record of all proceedings will be available.

In addition, private conferencing time can be arranged for judges who wish to deliberate and discuss together privately online, before, during or after the week of hearings.

Some judges, attorneys or witnesses may wish to travel to be with others near them, if that is desirable. Depending on grant funding we may also be able to bring one or more judges here to

102 https://www.tribunalonfracking.org/

the OSU campus, and perhaps one of the prosecuting attorneys, to participate in person. That will all be dependent on funding.

We are all breaking new ground here, so one of our goals will be to provide a good model of how this process can work so others in the future can conduct similar events virtually, saving money and reducing carbon footprints.

As for the opening day and final day of the tribunal session, they will be like the other days except that there will be an opening ceremony to initiate the tribunal and a formal closing ceremony on the final day. The court's findings and recommendations are not expected until some later date post-tribunal, and when they do become available, public press events will be arranged to announce them.

Upon completion and publication of the Tribunal's findings and recommendations, they will be formally presented to the United Nations Special Rapporteur on Human Rights and the Environment and to the United Nations Office of the High Commissioner for Human Rights.

VI. Lecture Series on Human Rights and Climate Change

In the months leading up to the Tribunal, the Spring Creek Project will present a Lecture Series on Human Rights and Climate Change.

This online series will feature leading scientists, attorneys, writers, community leaders, activists, and artists. Some lectures will explain the current state of human rights and climate change — how did we get here and what is happening around the world, while others will invite listeners to imagine a future in which climate justice is available to all living beings. Other lectures may focus on a place — Standing Rock, deep sea drilling sites, fracking fields next to schools and in neighborhoods, etc. Together, the lectures will invite audiences to imagine a world in which environmental crises are easily recognized as human rights crises.

One lecture, each of which spans about 20 minutes, will be released globally each Wednesday noon beginning January 31. The lectures will be free and publicly available on the Spring Creek Project website, social media channels, and at a weekly live-screening. Judges, attorneys, witnesses and others will be able to view each lecture as it is released. Lectures and dates of presentations can be reviewed at https://liberalarts.oregonstate.edu/feature-story/bedrock-lectures-human-rights-and-climate-change

Some lectures, depending on content, may also be submitted as testimony to the Tribunal.

VII. Anticipated outcomes

We anticipate that this PPT Human Rights Session on Human Rights, Fracking and Climate Change will result in:

1) findings and recommendations that provide comprehensive Advisory Opinions on the four questions in section one above.
2) findings and recommendations with respect to the six subcases.

The intention is that this Tribunal's Advisory Opinion and recommendations will
1) bring human rights and earth rights norms and law into the foreground of public discourse about oil and gas extraction and about climate change;
2) provide a quasi-legal precedent that could be referenced as interpretive “soft law” in the event of future actions in domestic and/or international courts; and
3) demonstrate, for those who might wish to bring future cases, what legal actions of this sort look like.

While it can be difficult for domestic courts to hold their governments to account for planetary human rights violations beyond national boundaries, the PPT's independence and broader focus can provide a unique forum and highly strategic fulcrum for addressing those larger pressing planetary human rights and earth rights concerns.

Organizing Team
Permanent Peoples’ Tribunal Session on Fracking and Climate Change

Annex 2

The Program of the Session

Tribunal Program May 14-18, 2018

Pacific Time	**Mon May 14**	**Tue May 15**	**Wed May 16**	**Thur May 17**	**Fri May 18**
9-10 am	Opening ceremony: welcome, overview, Robin Kimmerer, Gianni Tognoni, John Knox	**Lisa Mead**, Earth Law Alliance, Rights of Nature, Part I	**Lakshmi Fjord**, Charlottesville pre-PPT tribunal	**Simona Perry**, Ethnographic Field Research **Megan Hunter**, Freshwater Accountability Project	**Maura Stephens**, Coalition to protect New York
10-11 am	**Evan Hamman**, **Revel Pointon**, co-lead attorneys: Opening arguments	**Lisa Mead**, Earth Law Alliance, Rights of Nature, Part I	**Lakshmi Fjord**, Charlottesville pre-PPT Tribunal	**Allie Rosenbluth**, Rogue Climate **Jody McCaffree**, Citizens Against LNG	**Revel Pointon,** Summation, closing arguments
11 am-noon	**Rick Sahli**, Athens and Youngstown Ohio pre-PPT Tribunals	**Nathalie Eddy, Bruce Baizel**, Earthworks	**Andy Gheorghiu**, Food and Water Watch; Food and Water Europe	**Daniel Taillant**, Center for Human Rights and the Environment	**Gianni Tognoni** PPT Preliminary Statement **Closing ceremony**
Break					
1:30-2:30 pm	**Rick Sahli**, Athens and Youngstown Ohio pre-PPT Tribunals	**Robin Bronen**, Climate forced migration in Alaska	**Michelle Maloney**, Australian Earth Laws Alliance,	Judges and attorneys: conceptual discussion	

			Rights of Nature Part II		
2:30-3:30 pm	**Shay Dougall**, Australia pre-PPT Tribunal	**Ceal Smith**, Alaska Climate Action Network, Fracking on the Kenai Peninsula and in the native village of Nuiqsut, Alaska	**Michelle Maloney** Australian Earth Laws Alliance, Rights of Nature, Part II		
3:30-4pm **4-4:30 pm**	**Shay Dougall**, Australia pre-PPT Tribunal	**Amanda Kennedy**, Procedural Rights in Australia	**Declan Doherty**, Environmental Defender's Office, Western Australia **Vanessa Brown**, Vermont 350.org, Green Mountain Druids		
7– 8:30 pm	**Sandra Steingraber,** Keynote address				

Annex 3

PERMANENT PEOPLES' TRIBUNAL

Session on Human Rights, Fracking and Climate change (14-18 May 2018)

PRELIMINARY STATEMENT

The PPT is an international, fully independent organization established in 1979 as an opinion Tribunal having as its primary statute the Universal Declaration of Peoples' Rights (Algiers, 1976). The main aim of the PPT is to contribute to the struggle of peoples for their self-determination and the prevention, assessment, judgment and reparation of their fundamental rights, whenever international institutions do not fulfil their responsibilities to ensure the full respect of obligatory duties of justice by public or private actors.

Over five days, from 14 to 18 May, 2018, the PPT heard testimony and received other evidence relating to fracking and its impact on climate change, human rights and the rights of nature. Included were very substantial reports from four pre-PPT Citizens' Tribunals that had gathered scientific, technical, social, cultural and experiential testimony from many community organizations, experts and individual citizens. The PPT also received other such evidence from individuals, experts and NGOs on the negative impact of fracking on the environment, people's lives and on their communities.

Given the overwhelming volume and comprehensiveness of the evidence received and the need to consider all of this carefully, the panel of ten jurors will necessarily take several months to formulate a precise and comprehensive Opinion, including recommendations.

Because the matters considered by the PPT are of great significance and public concern around the globe, especially to those affected negatively by the fracking industry, and generally speaking by the expansion of the fossil fuel extractive frontier, with all its consequences on the climate crisis, on the environment and on peoples' rights, by industry role players themselves, and governments across the world insofar as they have responsibilities to abide by laws and to protect the public, human rights and the environment, this Preliminary Statement is issued now for public discussion and action to abate the negative effects of fracking.

The dramatic impacts of the unconventional gas and oil extraction techniques on people, the environment and the climate were elaborately documented to the PPT, including a comprehensive exposition of facts and related oral, visual, juridical and cultural evidence which clearly established beyond any reasonable doubt the reality of violations of the rights of humans and of nature, and a significant contribution to climate change. Such findings require the urgent ascertainment and attribution of responsibilities as well as of the measures which must be undertaken to avoid an irreversible worsening of the situation; and to bring about changes in practices, policies of reparation for injuries suffered, and rehabilitation of environmental destruction including the contribution of fracking to climate change.

What has become clear is that fracking is, with important but limited exceptions, an ongoing and expanding reality that affects both the rights of nature as well as the rights of individuals and communities in all the countries which were considered by the PPT, with specifically dramatic consequences on indigenous peoples. This is just a sample of impacts and consequences suffered elsewhere where fossil fuel exploration and extraction (including of non conventional fuels such

as tar sands as well as shale gas and shale oil) continues unabated. The many practices of resistance, research and of resilience by people and their communities that have been presented to the PPT underline that the violations of rights are generally planned and implemented intentionally, as well as being hidden when possible and denied when exposed. Also, the frequent absence of appropriate juridical-normative terms of reference is not recognised by governments as a vacuum to be urgently corrected, thus providing corporations an excuse to operate within a regime of impunity.

The scenario of rights violations and impunity, often resulting from regulatory capture, that fracking presents appears as an exemplary model of the broader geopolicies and strategies of states and powerful corporations that have imposed a tragic hierarchy of values across the world, which has resulted in the rights of people and the rights of nature being subjugated to the financial interests of states and corporations. A sort of systemic crime architecture.

The Advisory Opinion of the PPT will be oriented to provide proposals that are not merely descriptive by answering the four main questions which have guided the preparation and implementation of this Session. The Opinion will also explore, evaluate and make findings on the responsibilities for the multiple abuses of rights violations and the roles that many actors play in this respect. The Tribunal will, in addition, focus on:

- the possible ways of strengthening the role of local communities and indigenous peoples which must be further recognized as the main subjects of inviolable rights including that of self-determination;

- the necessary evolution of existing international, national, and local juridical institutions, concepts and laws which could ensure an innovative role of the guarantors of the rights of affected and threatened human communities and of nature;

- the promotion of broader and more effective networks of community and political actors capable of transforming the many but fragmented and dispersed experiences of resistance and resilience into a true transversal “people”, fighting for the combined respect and promotion of the fundamental Universal Declaration of Human Rights and the more recent Universal Declaration of the Rights of Mother Earth.

It is then the Interim Opinion of the PPT that:

The evidence we have considered is consistent internally, almost without exception. It is also consistent with the external evidence to which the Tribunal was referred, i.e. the results reached, discussed and analysed in hundreds of independent reports and refereed research publications.

The evidence clearly demonstrates that the processes of fracking contribute substantially to anthropogenic harm, including climate change and global warming, and involve massive violations of a range of substantive and procedural human rights and the rights of nature. Thus the industry has failed to fulfil its legal and moral obligations.

The evidence also shows that governments have, in general, failed in their responsibility to regulate the industry so as to protect people, communities and nature. In addition, they have failed to act promptly and effectively to the dangers of climate change that fracking represents.

Finally, this particular Session of the PPT has been an experiment of collaboration and communication. It has sought to overcome the economic constraint of limited resources which impede what should be a permanent, timely exercise of assessing, monitoring, preventing and transforming the universe of violations which occur in the present global scenarios, where the decisions on policies which go against the fundamental rights of nature and of human communities are taken, imposed and directed centrally by those who have unlimited resources.

The experiment has been a resounding success, with the inevitable but instructive limitations, thanks to the commitment of an organising group which deserves the recognition and gratitude not only of the PPT, but of all those who can now transform this experiment into a flexible and powerful tool which could allow the struggles of the communities of the world to become more globally and more timely known, shared and effective.

Panel or the judges:

Alberto Acosta Espinosa
Lilia América Albert Palacios
Andrés Barreda
Upendra Baxi
Gill H. Boehringer
Maria Fernanda Campa
Louis Kotzé
Larry Lohmann
Francesco Martone
Antoni Pigrau Solé

PPT General Secretariat:

Simona Fraudatario
Gianni Tognoni

Annex 4

The juridical framework of the Session: the relationship between the evolution of PPT Jurisprudence and the evolution of international law of environment

Antoni Pigrau Solé

1. Introduction: the relevance of this Session

The PPT was founded in 1979. It is based on the Universal Declaration of the Rights of Peoples adopted in Algiers on July 4, 1976, by a large group of jurists and representatives of social movements from different countries, on the main international instruments for the protection of human rights, and on its own Statute.
In 2000, the PPT, in the context of the analysis of the responsibilities of large companies in different cases of violation of human rights, justified its own legitimacy in the following terms:

> "The PPT stands as a deviant 'institution' within the institutional landscape of dominant law. For good reason, it would be anathema for dominant law to countenance the usurpation of its assumed role of public judgement by an institution and process of legality which does not abide by its strictures, scriptures and disciplines. But it is precisely this deviance which provides the PPT with the claim to an alternative legitimacy that may derive its sustenance from the communities that have been expelled from the embrace of dominant law's 'protection'. Here, therefore, lies the challenge: how might attempts to initiate a peoples' legality move towards securing spaces for the voices of the victimised to emerge into the public conscience."[103]

A futher development can be found in the 2014 verdict on the dramatic impact of the neoliberal economic policy in Mexico:

> "Because the PPT, by definition, has no power to translate its rulings into practical punitive decisions, it derives its legitimacy from two complementary qualities: a) its ability to guarantee effective representation for 'peoples' orphaned of their rights and victims lacking any hope of recognition or remedy; b) the fact that it uses the existing law with a vision guaranteeing and promoting interpretations and rulings which recognize victims as rights holders, which take up the challenge of treating the rights of individuals and of peoples as having inviolable hierarchical priority over the treaty law governing market commodities."[104]

The above framework is the most explicit documentation of the competence of the PPT to deal with the questions submitted to the Tribunal in this Session on Human Rights, Fracking and Climate Change, which address directly to the close relationship between human rights and the environment:

[103]Permanent Peoples' Tribunal, *Global Corporations and Human Wrongs*, Warwick University, 22 - 25 March, 2000, Judgment.
[104] Permanent Peoples' Tribunal, *Free Trade, Violence, Impunity and Peoples' Rights in Mexico* (2011-2014), Final Hearing, Mexico City, 12-15 November 2014, Judgment.

"First, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, breach substantive and procedural human rights protected by international law as a matter of treaty or custom?
Second, under what circumstances do fracking and other unconventional oil and gas extraction techniques, along with their impacts on the climate system, warrant the issuance of either provisional measures, a judgment enjoining further activity, remediation relief, or damages for causing environmental harm?
Third, what is the extent of responsibility and liability of States and non-state actors for violations of human rights and environmental and climate harm caused by these oil and gas extraction techniques?
Fourth, what is the extent of responsibility and liability of States and non-state actors, both legal and moral, for violations of the rights of nature related to environmental and climate harm caused by these unconventional oil and gas extraction techniques?"

This case has some specific characteristics which require the PPT to produce a deeper analysis. Firstly, it is about issuing an Advisory Opinion that, although it will be based on the evidence presented in relation to specific cases, is not aimed at issuing a judgment against specific actors.
Secondly, the unconventional techniques of gas and oil extraction are based on the chemical manipulation of the environment, therefore the environmental issue is the core of the activity which is the object of the analysis. The environmental impact is an expected component and a burden assumed by the promoters of these operations, which occur in a context of growing social and academic awareness about concepts such as ecological integrity or natural rights.
Thirdly, this analysis will take place in a historical context in which climate change is the main global threat to the survival of the human species and consequently to the exercise of all human rights: the energy model on which the global social metabolism is based must inevitably be questioned.
Finally, this issue also involves more directly than any other cases in the history of the PPT, the rights of future generations.
On the other hand, this issue raises other aspects about which the PPT has already had occasion to rule, such as the relationship between the environment and the rights to life, health, water or food; the importance of procedural environmental rights, such as the criminalization of protest against projects imposed on communities or the capture of government institutions by networks of influence and interests of large transnational corporations, or the responsibility of these corporations in the violation of human rights.
For these reasons, it is convenient to recall some of the contributions of the PPT throughout its long history, and to correlate them with some of the developments of international law, and other normative proposals aimed at alleviating its limitations, that may be relevant for this Session.

2. Colonial conflicts, political repression and human rights

The Algiers Declaration was adopted at a time when social awareness of environmental problems was still in its initial phase, driven by the United Nations Conference on the Human Environment, held in Stockholm in June 1972. For the first time, the UN promoted a global debate on the protection of the environment and the Conference had an important influence on public opinion. The Stockholm Declaration on the Human Environment contains 26 principles that reflect the different priorities of the different groups of States. It was a political moment in which the demands of the countries of Asia, Africa and Latin America, integrating the Movement of Non-Aligned Countries, focused on the elimination of colonialism, challenging the framework of international economic relations, and fighting for the establishment of a new international economic order. In this context, the first serious attempt of international regulation of corporations was developed, through the work of a UN Commission created in 1974, which tried,

without success, to elaborate and adopt a "Code of Conduct for Multinational Companies", between 1975 and 1983.

The Algiers Declaration reflects that political moment. It emphasizes the following collective rights of peoples: the right to exist and to see their national and cultural identity respected, including the right to use their own language; their right to political self-determination, to free themselves from all direct or indirect colonial or foreign domination and from all racist regimes; to have democratic governments representing all citizens, capable of ensuring effective respect for humans without discrimination; and a set of economic rights, among which are the exclusive right to their natural resources, the right to choose their own economic and social system, and the right to choose their own way of economic development, in freedom and full independence from external interference.

A direct reference to environmental aspects is specifically found in Section III of the Declaration. Dedicated to the economic rights of peoples, article 8 states that:

> "Every people has an exclusive right over its natural wealth and resources. It has the right to recover them if they have been despoiled, as well as any unjustly paid indemnities."

Further, a Section V, dedicated to the right to environment and common resources, includes three articles:

> "Article 16
> Every people has the right to the conservation, protection and improvement of its environment.
> Article 17
> Every people has the right to make use of the common heritage of mankind, such as the high seas, the sea-bed, and outer space.
> Article 18
> In the exercise of the preceding rights every people shall take account of the necessity for coordinating the requirements of its economic development with solidarity amongst all the peoples of the world."

The relationship between human rights and the environment is now supported by the majority of national constitutions, by international treaties and by the opinion shared and repeatedly expressed by international judicial and non-judicial bodies for the protection of human rights. In his most recent report the UN Special Rapporteur John Knox emphasizes and proposes a comprehensive set of 16 Framework Principles on Human Rights and the Environment: "States should ensure a safe, clean, healthy and sustainable environment in order to respect, protect and fulfil human rights."; and "States should respect, protect and fulfil human rights in order to ensure a safe, clean, healthy and sustainable environment."[105]

It is convenient at this moment to remember what has been the evolution of the doctrine of the PPT throughout its almost 40 years of activities, in the light of some fragments of its decisions which are most significant for the present Session.

In the first stage (1979-1985), the right to self-determination and the monitoring of serious armed conflicts were the main focus of interest, in cases such as Western Sahara (1979), Eritrea or The Philippines (1980), Afghanistan (1981 and 1982), East Timor (1981) or the genocide in Armenia

[105] Principles 1 and 2.

(1984). But also the scenarios of massive violations of human rights sponsored by military dictatorships or armed conflicts within the framework of other authoritarian regimes in Latin America were the subject of attention by the TPP: Argentina (1980), El Salvador (1981), Guatemala (1983) or Nicaragua (1984).

3. Capitalism and debt crisis, industrial risks, human rights and the environment

The second stage (1986-1996) saw the focus of the PPT shift to consider issues arising from the capitalist debt crisis, the grave risks from industrial operations, and the relationship of human rights and threats to the environment. Thus was opened a new focus of attention, dealing with the violations of human rights derived from the operation of the global economic system. However, the PPT also continued to hold sessions that dealt with issues dominant in the first stage, e.g. the sessions on Puerto Rico (1989), Tibet, (1992) or former Yugoslavia (1995) and on impunity for crimes against humanity in Latin America (1991).

Thus, the Berlin Session of 1988 focused on the external debt crisis and on the role assumed by the International Monetary Fund and the World Bank as guardians of the interests of the most wealthy countries:

> The proportion of the credit and availability of finances is significant in a significant way for a large number of banks. On the other side, the social situation, politics, economics and ecology of the majority of the Third World is worsened dramatically. The growing interest on foreign debt has determined a sharp transfer of at least $ 87.8 billion between 1984 and 1987. These official World Bank data are minimum estimates: OECD calculates a sharp transfer of $ 287 billion from the South to the North between 1982 and 1987. […]
> The crisis shows that development cannot be based on bank loans with interest. Bank loans oblige the state to open its economy to the world market, that is to integrate it into the world market, dominated by highly industrialized capitalist countries. In concrete terms, this means that Third World countries must provide multinational banks and private companies with opportunities to make profits. However, the conclusion must be drawn that the foreign debt crisis is not just a debt crisis, but a crisis of a global model of development."[106]

In this context, at this stage of the PPT activity, the role of the large transnational corporations emerges, together with the impacts on human rights derived from damage to the environment. These are the sessions on the policies of the IMF and the World Bank (1988 and 1994), the Brazilian Amazon (1990), the conquest of Latin America and international law (1992) or the catastrophes of Bhopal (1992 and 1994) and Chernobyl (1996).

More specifically, in its judgment on the Brazilian Amazon, the PPT affirmed in 1990 that:

> "The policies pursued by the Brazilian authorities in Amazonia do not only violate the individual or collective rights of the populations established in these regions, plundered and destroyed by those who stole their wealth with impunity; they also jeopardize the right of all members of the international community to a healthy environment, for whose precarious balance everyone is responsible.

106 Permanent Peoples' Tribunal, Le politiche del Fondo Monetario Internazionale e della Banca Mondiale, (*The policy of the International Monetary Fund and the World Bank)*, First Session, West Berlin 26-29 September 1988, Judgment, translation by the author.

> The dangers that the policies pursued in the Amazon by the Brazilian authorities are causing to the planet's environment, have been repeatedly highlighted in front of the Tribunal, as for example the dramatic consequences of the increase in the greenhouse effect or the climatic changes related to the disappearance of the Amazon forest.
> The PPT finds that at present it is not possible to express an opinion with rigorous certainty on this point, just as there are no dispositions of international law which impose for this case very specific rules, apart from the various Conventions recently concluded with regard to the environment, of which none, however, directly concerns the risks inherent in the destruction of the Amazonian forests."[107]

And, on the prevailing economic model:

> "These are the countries, in particular the seven richest countries in the world, which set the terms of an unequal exchange for the benefit of their products, and indicate as a sole possibility of economic development a model of forced industrialization, energy-consuming, which arouses need of consumption, which is based on quantitatively unlimited production.
> This model, based on aggression against nature and the pillage of its resources, drags developing countries in the same direction. The economic choices of these countries are thus determined by the economies of the North which find no way out for the goods they produce, their technology, their financial resources."[108]

With its analysis on the fifth centenary of the conquest of America, the Tribunal noted, in 1992, the profound impact of the capitalist economic model on the environment, derived from the new relationship between human beings and nature, characterized by the appropriation and commodification of natural resources:

> "A first contemporary phenomenon of the conquest of America was the new attitude towards nature. [...] in the sixteenth century there began an intense and unregulated exploitation of the natural environment. The fact that this exploitation primarily affected the colonial territories facilitated the alienation of nature that appeared and was conceptualized as terra nullius. It is, however, in even deeper ways that the relationship between man and nature is reversed.
> Indeed, the reversal is inscribed in a new model of rationality, which is that of mercantile exchange. The restricted trade relations of the traditional societies are now opposed by the system of universal exchange, characterized by the inclusion of natural resources and labor relations in a universal system that transforms every asset and every activity into a monetary equivalent. The homo economicus is born at the time of the conquest of America."[109]

And the PPT uses reasoning that leads us to the concept of the ecological footprint, which was developing in those same years:

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107 Permanent Peoples' Tribunal, Amazzonia brasiliana (*Brazilian Amazonia)*, Paris, 12-16 October 1990, Judgment, translation by the author.
[108]*Ibid.*
[109] Permanent Peoples' Tribunal, La Conquista dell'America e il diritto internazionale (*The Conquest of America and the International Law),* Padova, Venice, 5-8 October 1992, Judgment, translation by the author.

> "The methods of production and consumption of the richest countries have spread only to a part of the population of the countries of the South of the world. This model of consumption could not be extended to all human beings: its maintenance, to the exclusive advantage of a fifth of the world population, requires the use of more than three quarters of natural resources and industrial production.
> This obstacle of an economic nature is added to the threat of the destruction of the environment, whose magnitude would be immeasurable if (ignoring for a moment the impossibility linked to the relative scarcity of resources) all the inhabitants of the planet shared the model of life of the most rich."[110]

The catastrophic industrial disaster in Bhopal allowed the PPT to affirm, also in 1992, the connection between environmental pollution and human rights:

> "Traditional human rights law is not inclined to address industrial and environmental hazards. Human rights standards have too often been narrowly interpreted to exclude from their purview the anti-humanitarian effects of industrialisation and environmental damage. Yet the legal postulates for our approach are clear: It is of little difference if the death which comes to the sleeping victim in the middle of the night is caused by a politically-motivated death squad or by a cloud of poisonous gas. In either case, the right to life of an innocent person is violated in an inexcusable manner. In either case, the basic moral impulse of humanity is brutally transgressed, and in either case the international community has a profound interest in taking steps to ameliorate the effects of the violation and to prevent its repetition."[111]

The PPT also called for an international regulation of the duties of transnational corporations, in relation to industrial and environmental risks:

> "If the human rights referred to industrial and environmental risks must have some legal or social effect, they must be related to clear and specific duties. Currently the system of existing international law assigns duties above all to states. Although there are embryonic trends that affirm the opportunity to also define the duties of international organizations, individuals and businesses, these trends are evidently insufficient; the specific and absolute duties of governments, businesses and individuals must be enunciated in conjunction with their rights."[112]

The PPT returned to the issue in 1994:

> "The responsibility lies mainly on the economic actor whose activities have caused the harmful event. Usually this actor is a private individual who has taken the form of a company (corporation). [...] It is now known that Transnational Corporations (TNC) play a dominant role in the world economy, by multiplying investments in low-wage countries (developing countries) in order to increase, sometimes enormously, their earnings. .As a result, it is not surprising that many, if not most, of industrial risks are attributable to legal

[110] *Ibid.*
[111] Permanent Peoples' Tribunal, Rischi industriali e diritti umani (*Industrial risks and Human Rights),* First Session, Bhopal, 19 - 23 October 1992, Judgment, translation by the author.
[112] *Ibid.*

> persons whose financial structure and management are totally controlled from abroad, from TNCs."[113]

The PPT also took steps towards the attribution of responsibility to the home States of the corporations:

> "Finally, the responsibility could fall on the home state of the legal person in charge of the corporation, at least when that state is different from the host State. The first state includes the home State of the parent company whose subsidiary is established in a third country. This home state must be responsible when it has encouraged companies to invest or to promote other activities without considering all the related risks or excercising reasonable control over them."[114]

Meanwhile, a broad spectrum of local environmental conflicts occurred in the United States, in protest against the discriminatory distribution of the environmental burdens of economic development to the detriment of minority communities and human groups with dramatically scarce economic resources. These protests culminated in October 1991, in the "First National People of Color Environmental Leadership Summit", which adopted a reference document, the 17 Principles of Environmental Justice, in which elements of distributive justice, participatory justice and compensatory justice are strictly and effectively articulated.

On the other hand, in 1987 the Report of the World Commission on Environment and Development was published, chaired by the former Norwegian Prime Minister Gro Harlem Brundtland. Sustainable development was defined therein as "development that meets the needs of the present , without compromising the ability of future generations to meet their own needs. " Under these premises, the Rio de Janeiro Conference on Environment and Development was celebrated in 1992, providing an enormous impetus to the development of environmental law both at the international and at country level.
The 1992 Rio Conference adopted, among other texts, the Rio Declaration on Environment and Development and the Framework Convention on Climate Change. The Convention was completed in 1997 by the Kyoto Protocol, which, for the first time, introduced quantified objectives to reduce greenhouse gas emissions.

The Rio Declaration on Environment and Development formulates a set of principles, including, for the purposes of this Session: Principle 2, which refers to the responsibility of States "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"; Principle 4, which states that "environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it"; Principle 10, which proclaims the rights to have an appropriate access to information concerning the environment that is held by public authorities, to participation in the decision-making processes and to the effective access to judicial and administrative proceedings, including redress and remedy; Principle 15, which provides that "the precautionary approach shall be widely applied by States according to their capabilities", in such a way that "[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation"; and Principle 17, which establish the obligation of the environmental impact assessment "for proposed activities that are likely to have a significant

[113] Permanent Peoples' Tribunal, Rischi industriali e diritti umani (*Industrial risks and Human Rights),* Second Session, London, 28 November - 2 Dicember 1994, Judgment, translation by the author.
[114] *Ibid.*

adverse impact on the environment and are subject to a decision of a competent national authority."

By way of completing these developments, and in view of the serious industrial accidents that had occurred in different countries, in the above mentioned session of 1994, in an innovative decision, the PPT adopted, launched and promoted the Charter on Industrial Hazards and Human Rights, which contains 39 articles, with rights collected under well specified targets and obligations: the Right to Accountability, the Right of Refusal, the Right to Living Environment Free from Hazards, the Right to Environmental Information, the Right to Community Participation, the Right to Enforcement of Environmental Laws and, at the procedural level, rights such as the Right to Shift the Burden of Proof or the Right to Corporate or State Criminal Accountability. Prior to the launch it was explicity subscribed to by a broad consultation with more than hundred organizations active in the area of human rights and the environment. The entire document is particularly relevant to this Tribunal Session.

In 1996, following the Chernobyl catastrophe, the PPT pointed out the need to face the impacts of the risks generated by the economic system on human rights and the need for new alternative conceptions of development, rights and governance, assuming and anticipating many of the current critical approaches propagated from the academy and from social movements:

> "There is an urgent need for a new jurisprudence on human rights that includes the right of all peoples to be considered as human beings, which finds new ways to apply the principle of responsibility beyond the borders of the state / nation, which investigates the responsibilities in the case of nuclear accidents and compensation in cases where danger situations are to be feared in the near and far future. We must extend the horizons of human rights, explore new paths beyond the existing knowledge parameters. We must find new perspectives on the universality of human rights: and while the possibilities for extending the parameters now known are being sought, we must also explore the possibilities of opening up to other cultural perspectives, to find other notions of development, democracy and even dissent. other notions of equality, dignity and justice; other notions of law that are capable of recognizing the rights of communities and the collective rights of peoples. In the current paradigms of human rights, the state / nation is not able to respond to the needs of law, specific to each individual community. Perhaps in an understanding of the needs of individuals and communities not limited to individual rights, the path can be found to transform the human rights landscape."[115]

4. Globalization, transnational corporations, human rights, environment and nature rights

The third, and current, stage of PPT jurisprudence (1998-2019) manifests a further development of its concern with the impact of globalization and the magnified role of TNCs. This tendency in the jurisprudence of the PPT found important occasions for extending its analysis over a series of sessions on the rights of workers and consumers in the textile industry and the impacts of transnational corporations, in the cases of: major garment companies (1998); Elf Aquitania (1999); Multinationals and "Human Wrongs" (2010); agrochemical companies (2011); the series of sessions on transnationals in Colombia (2006-2008); the session on Canadian mining companies in Latin America (2014); the comprehensive process on the EU and transnational corporations in Latin America (2006-2010); the session on free trade, violence, impunity and the

[115] Permanent Peoples' Tribunal, *Chernobyl: ambiente, salute e diritti umani* (*Chernobyl: Environment, Health and Human Rights),* Vienna 12-15 April 1996, Judgment, translation by the author.

rights of peoples in Mexico (2011-2014); the session on living wage for mainly womens garment workers in Asia (2009-2014) or about transnational corporations in Southern Africa (2016-2018). It must be underlined that, at the same time, the PPT mantained its more traditional commitment of giving voice to the victims associated with armed conflicts or other forms of violence, as in the cases of Algeria (2004), the Philippines (2007), Sri Lanka (2010 and 2014), Myanmar (2017), the sessions on migrants or refugees (2017-2019) and on the Kurdish people (2018).

Meanwhile, a second attempt at international regulation of transnational corporations was set up in 2003. The United Nations Sub-Commission on the Promotion and Protection of Human Rights adopted the "Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights", despite the failure of the endorsement of the Human Rights Commission and of the General Assembly because of the opposition of the most industrialized countries.

In 2000, after an extensive participatory process supported by more than 6,000 organizations, the Earth Charter was proclaimed as a declaration of fundamental ethical principles for the construction of a just, sustainable and peaceful global society in the 21st century. The Charter enunciates 16 principles around four axes: Respect and Care for the Community of Life, Ecological Integrity, Social and Economic Justice, and Democracy, Nonviolence, and Peace. The first axis includes the principles of Respect Earth and life in all its diversity or Secure Earth's bounty and beauty for present and future generations. In the second axis the following principle are affirmed: Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life; Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach; Adopt patterns of production, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being; Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired. The PPT assumes the principles enunciated in this Charter.

In 2006, the PPT investigated in Colombia the impacts of the activity of transnational corporations on the environment and health, receiving data very similar to those provided to it in this session:

> "It was stated in the Hearings that the redirection of watercourses, the massive movement of land and the continuous explosions in the areas of exploration and mining affect the ecosystem and the tranquility of the population; that deforestation not only affects the habitat of hundreds of species, many led to extinction, it also affects the maintenance of a constant flow of water from forests to other ecosystems and urban centers. And that the enormous consumption of water required by the mining activity generally reduces the groundwater level of the place, drying out wells of water and springs. The water ends up contaminated with toxic materials that can persist for hundreds and even thousands of years. The hazardous chemicals used in the different phases of the processing of metals such as cyanide, concentrated acids and alkaline compounds end up in the drainage system. The alteration and contamination of the hydrological cycle has very serious effects that affect nearby ecosystems, especially aggravated for forests and people.
> Although it is true that the environmental impacts of large-scale mining are not measured, their consequences are already noticeable in the health of the communities: serious effects on the skin, lungs, ears, eyes. [...]

> Desertification and other serious environmental consequences were also mentioned because of the extensive open-pit mining operations, which are also in the process of expansion."[116]

At the Hearing on Indigenous Peoples held within the framework of the Colombian session, the Tribunal was able to hear first-hand description of the relationship between the different indigenous peoples and nature, as well as its juridical qualification and implications:

> "In the indigenous tradition everything that exists has its origin, mothers and fathers, owners, spirit, own life, function, utility and duties of reciprocity, rights and duties; finally, the right to be, the right to exist, not in terms of the individual human being and center of the universe, but as own entity endowed with particular qualities; everything has a specific place in creation and in the indigenous world."[117]

And the PPT could make this vision its own:

> "In the indigenous cosmovision, the territory represents the universe, that is, what is above the ground, on the ground and under the ground. It includes renewable natural resources (water sources, wood, flora and fauna) as non-renewable resources (mines, gas and oil). The territory is linked to the sacred, to the space of social reproduction, physical survival, work, solidarity, and in general to the exercise of our autonomy.
> The land, which was given to us from the beginning, is what sustains our coexistence, our raison d'être as native indigenous peoples, in that territory there are the norms that we must fulfill as representatives of a specific culture.
> Each and every one of the places of our history are components of what we call ancestral territory, as sacred space that nourishes, strengthens and gives us existence on this planet. Therefore, this space belongs to each and every one of those peoples to whom the Spiritual Mother entrusted them with specific missions, which we must protect, the territory is where Laws and History are written, without them we would not be peoples with different cultures".
> The territory is also the protection of the sacred sites, like the lagoons and the stones that rest on it. There are lagoons where the mothers of the fish are produced. The territory is inhabited by the different species of animals that serve for food, both terrestrial and aquatic. Without them there would be no life".[118]

That same year the new Constitution of Ecuador incorporated a chapter which establishes the "Rights of nature", among them the "right to fully respect the existence and the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes" and "the right to restoration [...] independently of the obligation of the State and natural or legal persons to indemnify individuals and groups that depend on the natural systems which are affected."[119]

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[116]Permanent Peoples' Tribunal, *Empresas Transnacionales y Derechos de los Pueblos en Colombia, 2006 – 2008, Audiencia sobre empresas mineras* (Transnational corporations and peoples' rights in Colombia, 2006-2008, Hearing on mining corporations) Medellín, 10 and 11 November 2006, translation by the author.

[117] "Informe sobre el concepto de derecho de los pueblos indígenas" (Report on the concept of the right of indigenous peoples), Atánquez, Resguardo Kankuamo, Colombia, 2008, translation by the author.

[118] Permanent Peoples' Tribunal, *Empresas Transnacionales y Derechos de los Pueblos en Colombia, 2006 – 2008, Audiencia sobre Genocidio Indígena* (Transnational corporations and peoples' rights, Hearing on the genocide of Indigenous peoples), Atánquez 18 y 19 de julio de 2008, Judgment, translation by the author.

[119]Constitution of the Republic of Ecuador, 2008, Chapter 7, Articles 71 and 72.

Thereafter, in 2009, the new Constitution of Bolivia included, not only "the right to a healthy, protected and balanced environment" that "must allow individuals and communities of present and future generations, in addition to other living beings, develop normally and permanently", but also:

> "Any person, in his own right or on behalf of a collective, authorized to take legal actions in defense of the environmental right, without prejudice to the obligation of public institutions to act on their own in front of attacks on the environment."[120]

In 2008, the PPT summarized witness testimonies, that described in a few words the essence of the modus operandi of the large transnational corporations in Colombia, many of the elements of which can be found in any country:

> "A parade of numerous organizations of victims through these hearings, revealed to the panel of judges that information that almost never goes beyond the barriers of the mass media: the modus operandi of these large companies; the magnitude of their capitals; the exorbitant rates of their profitability; the proliferation of their subsidiaries; the technical mechanisms that camouflage their irresponsibility, such as permanent changes of corporate name, the constant transfer of capital to avoid tax burdens, disadvantageous legislation or risks of contraction of profits; their disastrous consequences in the environment; the persecution and extermination of their trade unions; the use for their interests, with large salaries, of the public force of the State, designed to protect the whole society; the clandestine negotiation with paramilitary groups; the extrajudicial executions of their unsubmissive unionists and of members of social movements that oppose the great damages caused, such as the reduction of their labor force, their indirect contracting systems and the consequent precariousness of their workers; the adulteration of their products with great damage to the health of consumers.
>
> All this accumulation of social damage has produced mechanisms facilitating legal gaps that ensure the freedom of capital, or even legal statutes designed and developed by the same transnational corporations and adopted as law of the nation, as has happened with the mining code"[121]

In 2010, the PPT returned to the role of transnational corporations and their close functional relationship with States of origin and international organizations that direct international economic relations:

> "All these cases demonstrate that a regime of widespread permissiveness, unlawfulness and impunity exists and is manifested in the behavior of European TNCs in Latin America. This regime is fostered by the institutional policies of multilateral development banks (Inter-American Development Bank, World Bank, European Investment Bank), international financial institutions, such as the International Monetary Fund, and regional institutions such as the EU and its various institutions. In particular, the PPT has confirmed the tolerant and even complicit attitude of the EU, which directly serves to promote the interests of its TNCs as the main actors in its economic expansion in terms of international competitiveness.

[120]Bolivia: Political Constitution of the State, 7 February 2009; Chapter V, First section, Artícles 33 and 34.
[121] Permanent Peoples' Tribunal, *Empresas Transnacionales y Derechos de los Pueblos en Colombia, 2006 – 2008, Sesión Final* (Translational corporations and Peoples' Rights in Colombia, 2006-2008), Bogotà, 21 – 23 July 2008, Judgment, translation by the author.

> Among the instruments designed to achieve the globalisation of the interests of the EU and European corporations, the Association Agreements, investment promotion agreements and free trade agreements should be highlighted.
> A number of EU internal policies, such as the directives on agrofuels, biotechnology and intellectual property, translate into processes that threaten and undermine rights in Latin America and that generate enormous economic benefits for European corporations in areas such as biological fuels, genetically modified organisms, basic water and energy services, financial services and pharmaceuticals.
> Evidence was also provided on the significant role of European development agencies and pension funds in backing the corporate interest agendas of TNCs in Latin America, as well as that of the European Investment Bank loans, more than 90% of which are aimed at supporting TNCs."[122]

In 2011, the PPT reflected upon the scientific reports about the borders of the sustainability of the Planet and the inadequacy of the current law to face the new global environmental challenges:

> "Scientific research has shown that the cumulative environmental effects of economic growth and modernization in industry as well as on the countryside ("Green Revolution"), have led mankind to "planetary boundaries", some of which have been trespassed. Climate change and the foreseeable climate catastrophe are not the only boundary, although today the most important and most disputed one in the global discourse arena.[…] Contemporary human rights values, standards, and norms remain important but scarcely provide adequate conceptual languages to meet these challenges."[123]

In 2012, the PPT insisted on the close relationship between colonialism and capitalism and on the continued role of commercial companies in their promotion, development and maintenance:

> "The make-up of colonial empires has been based on the appropriation of natural resources and of the labour force, often slaves, of populations and territories conquered by the powers of the time, leveraging their technological expertise and military force. Commercial enterprises formed their operational arm by ensuring an adequate flow of resources to feed the metabolism of this early capitalism.
> This model has been maintained over the years and it is possible to observe that international economic relations remain organized around a prevailing model characterized by unequal economic exchange, labour exploitation of weaker sectors of the planet's population and massive exploitation of natural resources. This exploitation of natural resources, we now know, far exceeds the capacity of the planet and generates massive contamination of water, soil and air, to the point of calling into question – we now also know – the very survival of the planet. Today these large commercial enterprises are referred to as transnational corporations, but their function has remained the same: to guarantee the flow of energy, resources and the required labour force so that a small sector of humanity can maintain a pace of life and consumption that monopolizes a substantial portion of wealth by denying its access to the vast majority."[124]

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[122]Permanent Peoples' Tribunal, *The European Union and Transnational Corporations in Latin America: Policies, Instruments and Actors Complicit In Violations of the Peoples' Rights*, Final Session, Madrid, 14-17 May 2010, Judgement.
[123]Permanent Peoples' Tribunal, *Session on Agrochemical Transnational Corporations*, Bangalore, 3-6 December 2011, Judgment.
[124] Permanent Peoples' Tribunal, *Libre comercio, violencia, impunidad y derechos de los pueblos en México, 2011-2014, Audiencia general introductoria* (Free trade, violence, impunity and peoples' rights,

In 2013, the PPT spoke again on the relationship between the capitalist system and the environment, with the adoption of a less restrictive approach to the perspective of individual human rights such as the right to life or health:

> "But the expansion of the mercantile worldview in its neoliberal form is unprecedented and totally out of control. This worldview does not perceive trees, rivers, land, mountains as beings with their own dignity and rights, but as part of a world of "natural resources" and "natural capital", that is, goods and services that await the development of investment to be consumed productively after being exchanged in a market.This process is aimed at an accumulation without comparison in human history, and its devastating result has been the almost total decline of the planet and of its lands, seas, rivers, lakes, forests, meadows, basins and other places, as well as of the original communities that inhabit them, and their ways of thinking, living and exchanging with the universe.
> These relations form the social-ecological fabric of the Peoples. When corporations poison nature with industrial or agrochemical processes and waste, they not only cause deaths, birth defects and stillbirths, they also destroy this tissue. [...]
> That environmental devastation impacts the concrete scenarios of communities and people.. Territories should be understood as spaces not only for production and life, but also cultural and spiritual, because they reproduce the life and culture of peoples. In these territories, complex social and cultural relations are interwoven, which speak of knowledge, thoughts, ways of managing life. This serious environmental situation has an echo and reflection in psychosocial situations that affect children, women, the elderly, young people and adults."[125]

In 2014, the PPT addressed the impacts of Canadian mining companies in Latin America, and provided elements of special interest for this Session on UOGE. Regarding the global vision:

> "On the whole, we are faced with a global phenomenon which involves similar actions and behaviours on the part of those states where the greatest number of transnational companies are headquartered. However, in order to progress in our interpretation of reality, we must also analyze its concrete manifestations, as we are doing here, even more so with respect to the mining industry for it is not only emblematic of how transnational corporations operate, but also constitutes the most aggressive form of blind extractivism. Blindness is the operative term, as the industry remains removed from any considerations of sustainable use of natural resources and respect for the environment or for the communities surrounding the operation site […]
> The exploration and exploitation of resources carried out by these companies usually leads to the displacement and uprooting of local communities; the endangering of water sources, food security and biodiversity of entire regions; the altering of traditional forms of life while causing chronic health problems; the undermining of sacred lands of indigenous peoples; and a frequent ignoring of indigenous peoples' rights to participation, to consultation, and to free, prior and informed consent in relation to activities that will have substantial impacts on their way of life. These activities thus increase human rights

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2011-2014, General introductory hearing), Ciudad Juárez, Chihuahua, 27-29 Mayo 2012, Judgment, translation by the author.

[125]Permanent Peoples' Tribunal, *Libre comercio, violencia, impunidad y derechos de los pueblos en México, 2011-2014*, Audiencia temática sobre Devastación Ambiental y Derechos de los Pueblos (Free trade, violence, impunity and peoples' rights, 2011-2014, Thematic Hearing on Environmental Devastation and Peoples' Rights), Mexico City, 15-17 November 2013, Judgment, translation by the author.

violations and give rise to a rising and systematic criminalization of environmental and community activists and human rights defenders."[126]

But it also refers to the most recent extractive techniques:

> "Modern industrial mining techniques have major environmental impacts that occur at all stages of the process. Contamination of streams and groundwater (acid mine drainage, heavy metals, chemicals such as arsenic and sulfuric acid, erosion and sedimentation); reduction and depletion of rivers and aquifers; decrease in air quality (toxic particulates, gaseous emissions, including sulfur dioxide); soil contamination, deforestation and irreparable degradation of landscapes (excavation of massive pits, creation of mountains of waste products), of forests and of fragile ecosystems; and loss of biodiversity are among the most important environmental impacts caused by this kind of exploitation."[127]

Regarding the responsibilities of States in relation to the activities of companies, the Tribunal not only relied on the United Nations Guiding Principles on Business and Human Rights, adopted by the Human Rights Council in June 2011, but also in the Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights, adopted in 2011 by a group of International experts.

In 2014, a new attempt was made to establish international standards to regulate the activities of transnational corporations, when the Human Rights Council adopted Resolution 26/9 of June 25 on: "Elaboration of a legally binding international instrument on the transnational corporations and other commercial enterprises in the field of human rights ", with a vote against the Member States of the European Union, the United States and Japan, among other states. This process, which has the support of the PPT, generated a first draft of the treaty in 2018, which constitutes an important document for the purposes of this session.

A new orientation in PPT jurisprudence seems to be present in the session on "Fundamental rights, local community participation and megaprojects. From the Lyon-Turin high-speed rail to the global reality" (2015), which focused on the high-speed railway project between Turin and Lyon. It stands as a representative case in Europe of a set of infrastructure mega-projects that are imposed on local communities, violating environmental standards, such as the obligations of environmental impact assessment and the rights of access to information, participation and access to justice, and other civil rights as a consequence of the criminalization of social protest. That Session on mega-projects in Europe is particularly relevant for the present Session:

> "Faced by the development of critical environmental and territorial situations, the international community and individual states have developed other frames of reference, which have consolidated the specific obligations and rights of peoples and states in view of a sustainable management of common goods, natural resources and territories. It is appropriate at this stage to emphasize in particular the multilateral conventions on the environment and certain more specific documents such as the Aarhus Convention which provide for mandatory procedures for the participation of local communities in all decision-making processes regarding the management of the environment and territories. It is especially appropriate to highlight the protection of the right to access adequate information, which is provided within a given (opportune) period on projects proposed for

[126]Permanent Peoples' Tribunal, *Session on the Canadian Mining Industry. Hearing on Latin America*, Montreal, Canada, May 29 – June 1, 2014, Judgment.
[127]*Ibid.*

development in specific territories, the participation in the decisions taken in the context of activities to be realized and access to legal remedies by mechanisms of administrative law whose outcome shall be to resolve disagreements or diverging opinions on these processes. In this sense, the essential respect of the right to participation matches the principal instrument guaranteeing and legitimizing decision-making processes in connection with projects concerning the respective rights and territories of individuals and local communities as well as reviewing the need for such projects, and this might ultimately result in alternative options to expressing opposition. Any major limitation to exercising the right of participation constitutes a barrier to guaranteeing other rights and translates into a violation of democratic governance."[128]

The rights of access to environmental information, participation in decision-making and access to justice in environmental matters, have been consolidated, at least formally, in many countries and, in particular, at European level with the adoption and application of the Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus, Denmark, on 25 June 1998) and, very recently, with the adoption of the Regional Agreement on Access to Information, Public Participation and Access to Justice in Environmental Matters in Latin America and the Caribbean (Escazu, Costa Rica, on 4 March 2018). These are very relevant texts for this PPT Session.

"Planetary warming continued in 2016, setting a new record of about 1.1 degrees Centigrade above the preindustrial period", according to the World Meteorological Organization (WMO) Statement on the State of the Global Climate in 2016[129].
On the other hand, despite the repeated warnings of the world scientific community about the seriousness of climate change, the limited results obtained with the Kyoto Protocol (1997) and the insufficient number of ratifications of the Doha Amendment to the Kyoto Protocol (2012), the negotiation for a new agreement was extraordinarily difficult and could only be concretized in the Paris Agreement of 2015. Also in 2015 climate action was included as one of the 17 Sustainable Development Goals (SDGs) enumerated in the United Nations 2030 Agenda for Sustainable Development. The Paris Agreement lacks mandatory targets on quantified emission reduction and depends on the willingness of each of the States called to accept the emissions and to finance the adaptation measures needed by the most vulnerable countries. For these reasons, the Paris Agreement does not offer guarantees of a significant and sufficient change. Citizens of different states have begun to pressure their governments through climate litigation, in which the rights of future generations to live with dignity play an important role[130]. As of March 2017 climate change cases had been filed in 24 countries, with 654 cases filed in the U.S. and over 230 cases filed in all other countries combined.[131]

There have already been some important judicial decisions on complex issues such as the determination of responsibilities of companies for contributing to climate change, or of public authorities for the lack of adoption of sufficient measures directed to combat climate change, such

[128]Permanent Peoples' Tribunal, *Fundamental Rights, Participation of Local Communities and Mega Projects. From the Lyon-Turin high-speed rail to the global reality,* Turin-Almese, 5-8 November 2015, Judgment.
[129]https://sustainabledevelopment.un.org/sdg13.
[130]http://climatecasechart.com/
[131]*The Status of Climate Change Litigation – A Global Review*, United Nations Environment Programme, May 2017.

as: the decision of the India's National Green Tribunal (2016)[132]; the case Urgenda in the Netherlands (2015)[133]; the case Leghari in Pakistán (2015)[134]; the Decision C-035/16 (2016), of the Colombian Constitutional Court[135]; the Advisory Opinion OC-23 of the Inter-American Court of Human Rights (2017)[136]; the case *EarthLife Africa Johannesburg v. Minister of Environmental Affairs and Others*, before the High Court of South Africa, (2017); or the case of *Future Generations*, in Colombia (2018)[137].

Another aspect of interest for this session is the relationship between governments and companies, analyzed in one of the most recent decisions of the PPT in relation to transnational corporations in the southern region of Africa:

> "While communities see these resources as the gifts of Nature, governments and TNCs see them as items and materials, including minerals, forests, water, and fertile land that occur in nature, that can be used for economic gain. […] With economic gain as the prime motivation, anything that hinders that objective is treated as an obstacle that must be subdued or eliminated. The pursuit of gains and profits for the TNCs and as revenue for governments place the communities and the environment at great risks. The evidence presented confirmed that the drive for foreign direct investment and government revenue makes it impossible for governments to enact and enforce strict environmental laws and regulations. Rather, they lower the bar in ways that enable TNCs to operate with scant responsibility. This state of affairs allows extreme harm to the people, communities and their environment. The situation allows for exploration and extraction of harmful minerals without the communities being warned of the nature of the activities." [138]

Meanwhile, the rights of nature, materialized for the first time in the Constitution of Ecuador have had their own trajectory and have been gaining ground. An especially significant milestone in this process has been the Universal Declaration of Rights of Mother Earth (2010)139, which proclaims the rights of Mother Earth: the right to life and to existence; the right to be respected; the right to regenerate biocapacity and continue vital cycles and processes free from human interference; the right to maintain identity and integrity as distinct, self-regulating and interrelated beings; the right to water as a source of life; the right to clean air; the right to comprehensive health; the right to be free from contamination, pollution and toxic or radioactive waste; the right not to be genetically modified or structurally altered in a way that threatens integrity or vital and healthy functioning; and the right to the full and prompt restoration of rights set forth in this declaration that have been violated by human activities.

Other notable events in the afore mentioned process are the adoption of different laws designed to grant legal status to rivers or mountains, such as the following cases: *Te Urewera* Act 2014,

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[132]India's National Green Tribunal, *In re Court on its own motion v. State of Himachal Pradesh and others*, Application No. 237, (THC)/2013 (CWPIL No. 15 of 2010), 7th April, 2016.

[133]The Hague District Court' *Urgenda Foundation v. Kingdom of the Netherlands*, (2015) HAZA C/09/00456689, appeal filed.

[134]Lahore High Court Green Bench, *Leghari v. Republic of Pakistan* (2015) W.P. No. 25501/2015.

[135]Colombia. Constitutional Court, Feb. 8, 2016, Decision C-035/16.

[136]Inter-American Court of Human Rights. Environment and Human Rights. Advisory Opinion OC-23/17 of November 15, 2017, requested by the Republic of Colombia.

[137] Supreme Court of Justice, STC 4360-2018, 5 April 2018.

[138]Permanent Peoples' Tribunal, *Transnational Corporations in Southern Africa*, Johannesburg, South Africa 17-18 August 2017, Judgment.

[139] Approuved on The first Peoples' World Conference on Climate Change and the Rights of Mother Earth, Cochabamba, Bolivia, 20-22 April 2010.

Public Act 2014 No 51, New Zealand, in which a protected zone recognized as: "a legal entity" with "all the rights, powers, duties, and liabilities of a legal person"; The Constitution of the State of Guerrero, amended on 30 June 2014 (Article 2); the Environmental Code of the Loyalty Islands Province, New Caledonia (2016); the ruling of the Constitutional Court of Colombia, in which recognizes the Atrato River as a subject of Rights (2016); *Te Awa Tupua* (Whanganui River Claims Settlement) Act 2017, Public Act 2017 No 7, New Zealand, which grants legal status to the river; The Yarra River Protection (Wilip-gin Birrarung murron) Act 2017 (No. 49 of 2017) passed by the Victorian Parliament, in Australia; the Political Constitution of The City of Mexico (article 18 A 3) (2017); the rulings of the Uttarakhand High Court, India, according the status of "living human entities" to the Ganga and Yamuna Rivers; declaring the Himalayan Mountain Ranges, Glaciers, rivers, streams, rivulets, lakes, jungles, air, forests, meadows, dales, wetlands, grasslands and springs "as the legal entity/legal person/juristic person/ juridicial person/moral person/artificial person for their survival, safety, sustenance and resurgence" (2017); and declaring "the entire animal kingdom including avian and aquatic […] as legal entities having a distinct persona with corresponding rights, duties and liabilities of a living person" (2018); the ruling of the Supreme Court of Justice of Colombia granting rights to the Colombian Amazon Region (2018), or the decision pf the Sami Parliament of Sweden which endorsed the Universal Declaration of Rights of Mother Earth (2018). Also the IUCN World Congress on Environmental Law adopted Rights of Nature in its *World Declaration on the Environment* Rule of Law, in 2016. Finally, deserving of mention is the creation of the International Tribunal Of Mother Earth Rights in 2015[140], promoted by the social movements integrating the Global Alliance for the Rights of Nature.

Many of the rights proclaimed in the Universal Declaration of Rights of Mother Earth have been the subject of attention of the PPT although always from the perspective of the protection of human rights. We are in a historical stage - that of the formation and development of the capitalist system as a hegemonic system of social metabolism - in which the gravity of the impact of human activities on the structure, integrity and sustainability of the Planet is so high that it has been coined the term Anthropocene to differentiate it from the geological stage previously applicable.

The PPT should reflect in future sessions on the need to advance in its parameters of analysis, assuming the centrality of the environmental factor and the need to respect the frontiers of sustainability as a precondition for the enjoyment of all individual and collective human rights of present and future generations and for the establishment of any viable development model.

140 http://therightsofnature.org/rights-of-nature-tribunal/.

Annex 5

List of Attorneys and Experts

I. Attorneys

- Evan Hamman, Faculty of Law, Queensland University of Technology, Brisbane, Australia, co-lead attorney
- Revel Pointon, Law Reform Solicitor, Environmental Defender's Office, Queensland, Brisbane, Australia, co-lead attorney
- Rick Sahli, Environmental attorney, Columbus, Ohio, US
- Lisa Mead, Director, Earth Law Alliance, Findhorn, Scotland
- Bruce Baizel, Energy Program Director, Earthworks, Washington, DC, US
- Nathalie Eddy, Field Advocate, Earthworks, Leadville, CO, US
- Robin Bronen, Human Rights Attorney, Director, Alaska Institute for Justice, Anchorage, AK, US
- Amanda Kennedy, Associate Professor; Deputy Director, Australian Centre for Agriculture and Law, University of New England, Armidale, NSW, Australia
- Michelle Maloney, Director, Australian Earth Laws Alliance, Brisbane, QLD, Australia
- Declan Doherty, Principal Solicitor, Environmental Defender's Office, West Perth, WA, Australia
- Vanessa Brown, Counsel of Record, 350 Vermont, Bethel, VT, US
- Megan Hunter, Counsel of Record, Freshwater Accountability Project, Grand Rapids, OH, US
- Benedict Coyn, President, Australian Lawyers for Human Rights, Brisbane, QLD, Australia
- Cormac Cullinan, Director, Global Alliance for the Rights of Nature; Honorary Research Associate, University of Cape town, Cape Town, SA
- Linda Sheehan, Senior Counsel, Leonardo DiCaprio Foundation, San Francisco Bay Area, CA, US
- Mari Margil, Associate Director, Community Environmental Legal Defense Fund; and the International Center for the Rights of Nature, Mercersburg, PA, US
- Margaret Stewart, Center for Earth Jurisprudence, Orlando, FL, US

II. Experts

- Bernhard Debatin, PhD, Professor of Journalism, Ohio University, Athens, OH, US
- Julie Weatherington-Rice, PhD, Certified Professional Geologist, Certified Professional Soil Scientist, Worthington, OH, US
- David Sligh, former Senior Environmental Engineer, Virginia Department of Environmental Quality, Charlottesville, VA, US
- Robin Bronen, Human Rights attorney, Executive Director, Alaska Institute for Justice, Anchorage, AK, US
- Bruce Baizel, Energy Program Director, Earthworks, Washington, DC, US
- Mariann Lloyd-Smith, MD, East Ballina, NSW, Australia
- Geralyn McCarron, MD, Brisbane, QLD, Australia

- Simona Perry, PhD, Founder and Research Director of c.a.s.e. Consulting Services; Vice-President of the Board of Pipeline Safety Coalition, Savannah, GA, US
- Michelle Bamberger, DVM, Veterinarian, Ithaca, NY, US
- David Paul, PhD, Senior lecturer and post-graduate research coordinator, School of Physical, Environmental and Mathematical Sciences, University of New South Wales, Sydney, Australia
- Gavin Mudd, PhD, Associate Professor, Department of Environmental Engineering, RMIT University; Chair, Mineral Policy Institute, Melbourne, VIC, Australia
- Damien Maher, PhD, Associate Professor, School of Environmental Science and Engineering, Southern Cross University, NSW, Australia
- Andrew Watterson, PhD, Professor, Head of the Occupational and Environmental Health Research Group, University of Stirling, Scotland, UK
- Wil Dinan, PhD, Lecturer, Communication, Media and Culture, University of Stirling, Scotland, UK
- Linda Sheehan, Senior Counsel, Leonardo DiCaprio Foundation, San Francisco Bay Area, CA, US
- Mari Margil, Associate Director, Community Environmental Legal Defense Fund; and the International Center for the Rights of Nature, Mercersburg, PA, US
- Julia Olson, co-lead counsel, Juliana v United States, Eugene, OR, US
- Mary Christina Wood, Professor, University of Oregon Law School; Faculty Director, Environmental and Natural Resources Law Center, Eugene, OR, US
- Anthony Ingraffea, PhD, Professor of Engineering, Emeritus, Cornell University, Ithaca, NY, US.
- John Knox, PhD, Professor of International Law, Wake Forest University Law School; United Nations Special Rapporteur on Human Rights and the Environment, Winston-Salem, NC, US
- Robin Wall Kimmerer, PhD, Professor of Environmental and Forest Biology, State University of New York College of Environmental Science and Forestry, Syracuse, NY, US
- Sandra Steingraber, PhD, Distinguished Visiting Scholar, Division of Interdisciplinary and International Studies, Ithaca College, Ithaca, NY, US

Annex 6

Documentation[141]

A. Reports from the four Pre-PPT tribunals

- Report on the preliminary tribunals in Athens, Ohio and Youngstown, Ohio; organized by Rick Sahli and Teresa Mills, conducted May 13, 2017
  - Summary Report by Rick Sahli
  - Videos of Athens and Youngstown testimony
  - Transcripts of Athens and Youngstown testimony
- Report on the preliminary tribunal in Australia, organized by Shay Dougall
  - Summary Report, by Shay Dougall
  - Videos of Australian testimony on Health, Infrastructure, Climate Change, Government subsidies and Cultural and Social Impacts.
  - Witness testimony catalogue
- Report on the preliminary tribunal in Charlottesville, Virginia, organized by Rev Lakshmi Fjord, PhD and Irene Leech, PhD, conducted October 28, 2017
  - Summary Report by Irene Leech, PhD and Rev Lakshmi Ford, PhD
  - Videos of witness testimony
  - Transcripts of witness testimony
  - Order of witnesses

B. *Amicus Curiae* briefs

- Alaska Immigration Justice Project *amicus* brief, Robin Bronen
  - Climate forced migration (powerpoint)
  - Climate-induced Community Relocations (article)
  - Bering Strait Winter Conditions 2018
- Australian Procedural Rights *amicus* brief, Amanda Kennedy, Evan Hamman and Revel Pointon
- Center for Human Rights and the Environment *amicus* brief, Jorge Daniel Taillant
- Citizens Against LNG *amicus* brief, Jody McCaffree
  - JC Exhibits index
  - JC Exb1-4
  - JC Exb5-9
  - JC Exb10
  - JC Exb11
  - JC Exb12
  - JC Exb13
  - JC Exb14-20
  - JC Exb21-26
- Coalition to Protect New York *amicus* brief, Maura Stephens
  - List of the Harmed
  - "Heartbreaking Stories" article
  - Analysis of Chemicals used in fracking

[141] Access to materials below at www.tribunalonfracking.org

    - Multi-state spreadsheet
- Earthworks *amicus* brief, Nathalie Eddy
    - EW Appendix1
    - EW Appendix2
    - EW Appendix3
    - EW Appendix4
    - EW Appendix5
    - EW Appendix6
- Environmental Defender's Office *amicus* brief, Declan Doherty
    - EDOWA Submission with recommendation
- Field research *amicus* brief, Simona Perry
- Food and Water Watch / Food and Water Europe *amicus* brief, Andy Gheorghiu
- Freshwater Accountability Project *amicus* brief, Megan Hunter
- Native village of Nuiqsut, Alaska *amicus* submission, Eunice Mary Brower
- Newfoundland/Labrador *amicus* brief, Raymond Cusson
    - Mercy Centre *amicus* March 2018
    - Mercy Centre urgent appeal to UN Sept 2013
    - NL Catholic Leaders Presentation
    - Ian Simpson MD 3-9-18
- Rogue Climate *amicus* brief, Allie Rosenbluth
- Vermont 350 and Green Mountain Druids *amicus* brief, Vanessa Brown

C. Rights of nature submissions

- Rights of Nature *amicus* brief, Lisa Mead and Michelle Maloney
    - Appendix1 Impacts of UOGE on Nature 3-31-18
    - Appendix2 Legal Status of UOGE across the world 3-31-18
- Community Environmental Legal Defense Fund *amicus* brief, Mari Margil
- Center for Earth Jurisprudence *amicus* brief, Margaret Stewart

D. Bedrock Lectures on Human Rights and Climate Change

- Kathleen Dean Moore, author, *Moral Ground*, and *Great Tide Rising*, "Breaking Bedrock: Fracking's Impact on Fundamental Rights"
- Reverend Fletcher Harper, Executive Director, GreenFaith, "Faith and Spirituality, Human Rights and Climate Change"
- Julia Olson, Executive Director and Chief Legal Counsel, Our Children's Trust, "Juliana v. The United States: Landmark Precedent in Climate Change Litigation"
- Robin Bronen, Executive Director, Alaska Institute for Justice, "A Rights-Based Approach to Climate-Forced Relocation"
- Bill McKibben, Founder, 350.org, "Large-Scale Changes in Climate and Their Human Consequences"
- Stephen Trimble, Writer and photographer "Community or Commodity? Why Utah Fails the Moral Challenge of the Climate Crisis"
- Debra Marquart, Poet, "Small Buried Things: A Poet's Response to Extraction"
- Jacqueline Patterson, Director of NAACP Environmental and Climate Justice Program, "Organizing Across Movements: Advancing Systems Change Through Collective Visioning and Action"

- Dr. Anthony Ingraffea, Professor of Civil and Environmental Engineering, Emeritus, Cornell University "Shale Gas: The Technological Gamble That Should Not Have Been Taken"
- Kyle Powys Whyte, Associate Professor of Philosophy and Community Sustainability, Michigan State University, "Indigenous Peoples and Climate Justice"
- Josh Fox, Documentary Filmmaker, *Gasland*, "Why Banning Fracking Is More Important than Ever"
- Winona LaDuke, Executive Director, Honor the Earth, "The Next Energy Economy"
- David James Duncan, Author, *Heart of the Monster*, "Heart of the Monster"
- Mary Christina Wood, Philip H. Knight Professor of Law, University of Oregon, "Atmospheric Recovery Litigation: Making the Fossil Fuel Companies Pay for Cleaning up the Atmosphere"
    - Professor Wood's Atmospheric Recovery Litigation Prospectus
- Anna Grear, Professor of Law and Theory at Cardiff University School of Law and Politics, "Human Rights, Climate Change and the Politics of Legal Disembodiment"

E. Invited essays: "Does Fracking Violate Human Rights?" (Center for Humans and Nature)

- Linda Sheehan, Senior Counsel, Leonardo DiCaprio Foundation, "Time to Choose: Violate the Earth, or Create a Respectful Energy Future?"
- Tom Kerns, Professor of Philosophy, Emeritus, North Seattle College; Director, Environment and Human Rights Advisory, "How to Test the Question"
- Kathleen Dean Moore, Distinguished Professor of Philosophy, Emerita, Oregon State University, "The World in Our Hands"
- Michelle Maloney, National Convenor, Australian Earth Laws Alliance, "Contaminated Life: The True Cost and Human Rights Impacts of Unconventional Gas Mining in Australia"
- Jennifer Veilleux, Post-doctoral Associate, Steven J. Green School for International and Public Affairs, Florida International University, "Water Security vs. Energy Independence: A Case of US Human Rights"
- Anna Grear, Professor of Law and Theory at Cardiff University School of Law and Politics; Editor-in-chief, *Journal of Human Rights and the Environment*, "*Which* human rights?"
- Evadné Grant, Associate Head, Department of Law, University of the West of England, "The Human Rights Implications of Fracking: A View from the UK"
- Robin Bronen, Executive Director, Alaska Institute for Justice, "Higher Ground: Protecting Human Rights as the Climate Crisis Forces Coastal Retreat"
- Kate Konschnik, Director, Harvard Environmental Policy Initiative, "Fracking May Not Violate Human Rights, but That Doesn't Get Us Off the Hook"
- Benedict Coyne, President, Australian Lawyers for Human Rights, "How the Dash to Frack Harms Rights-Ful Humans"
- Wenonah Hauter, Founder and Executive Director, Food and Water Watch, "Fracking's Inhumanity"
- Simona Perry, Founder and Research Director of c.a.s.e. Consulting Services; Vice-President of the Board of Pipeline Safety Coalition, "Self-Determination and the Right to Information on the Shale Gas Frontier"

- Adam Briggle, Associate Professor, Department of Philosophy and Religion, University of North Texas, "Fracking and the Human Rights Entanglement"
- Mary Christina Wood & Rance Shaw, University of Oregon School of Law, "Enforcing Human Rights Against Fracking Through the Public Trust Principle"
- Andy Gheorghiu, Campaigner & Consultant for Climate & Environmental Protection, "Frackers Don't Give a Frack about Our Natural Rights as Humans"

F. Keynote address

- Sandra Steingraber, Distinguished Visiting Scholar, Division of Interdisciplinary and International Studies, Ithaca College, "Fighting with Your Whole Heart: Human Rights and the New Science on Fracking"

G. Some human and earth rights guideline documents

- *A Human Rights Assessment of Hydraulic Fracturing for Natural Gas in New York State*, 2011
- *A Human Rights Assessment of Hydraulic Fracturing and Other Unconventional Gas Development in the United Kingdom*, 2014
- *A Guide to Rights-based Advocacy: International Human Rights Law and Fracking*, Sister Áine O'Connor, RSM, Mercy Global Action
- *Framework Principles on Human Rights and the Environment: The main human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, by John Knox, UN Special Rapporteur on Human Rights and the Environment, March 2018
- *Report on Human Rights and Climate Change*, UNEP, 12-10-15
- *Understanding Human Rights and Climate Change*, UNHCHR 2015
- *Philippine Petition on Climate Change and Human Rights*, May 2016
- *Declaration on Human Rights and Climate Change*, Global Network for the Study of Human Rights and the Environment, May 2016
- "'The Declaration on Human Rights and Climate Change': A New Legal Tool for Global Policy Change," Kirsten Davies, et al, *Journal of Human Rights and the Environment* (8.2) September 2017
- *United Nations Toolkit on the Right to Health*
- *Fighting for Our Shared Future: Protecting Both Human Rights and Nature's Rights – 2016 Update*, Earth Law Center, December 2016
- Universal Declaration on the Rights of Mother Earth

Annex 7

Initiating organizations

- Global Network for the Study of Human Rights and the Environment
  Anna Grear, Director
  Cardiff Law School
  Cardiff, Wales, UK

- Environment and Human Rights Advisory
  Tom Kerns, Director
  Yachats, OR, USA

- Human Rights Consortium
  Damien Short, Director
  University of London, UK

Steering Group

- Tom Kerns, PhD, Professor of Philosophy, Emeritus, North Seattle College; Director, Environment and Human Rights Advisory, Yachats, OR, US
- Anna Grear, PhD, Professor of Law and Theory at Cardiff School of Law and Politics; Editor-in-chief, *Journal of Human Rights and the Environment*, Bristol, England, UK
- Simona Perry, PhD, Founder and Research Director of c.a.s.e. Consulting Services, Vice-President of the Board of Pipeline Safety Coalition, Savannah, GA, US
- Bruce Baizel, Energy Program Director, Earthworks, Washington, DC, US
- Kathleen Dean Moore, Distinguished Professor of Philosophy, Emerita, Oregon State University, OR, US
- Carly Lettero, MA, Program Manager, Spring Creek Project; Program Manager, Arts in Environmental Arts and Humanities Initiative, Oregon State University, Corvallis, OR, US
- Shelley Stonebrook, MA, Program Coordinator, Spring Creek Project, Oregon State University, Corvallis, OR, US
- Emily Grubby, Intern, Spring Creek Project; M.A. Candidate, Environmental Arts and Humanities, Oregon State University, Corvallis, OR, US