

CENTER FOR THE HUMAN RIGHTS AND THE ENVIRONMENT

MAY 17, 2018. 11:00-12:00

MR. DANIEL TAILLANT: Hello, my name is Daniel Taillant. I'm the Director of the Center For Human Rights and the Environment, an NGO that was originally founded in Argentina in 1999 and we moved to the United States for political reasons, among others, in 2015. So we've been in Florida now for three years almost, a little bit more.

We would like to speak to you today about fracking and specifically about some recent work that we've done to look at emissions from the oil and gas sector that have to do with fracking but also with conventional oil and gas and the impacts that these emissions have on communities and also a little bit about the technology that we've utilized to register these emissions and the implications that they entail, not only because this is something relatively new but because this is something that really is occurring across the sector and all around the world. And we think it's very important that individuals that are engaged on fracking issues and oil and gas more generally should be taking up.

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1 Environment has worked for several decades now on  
2 bridging the human rights and environments field.  
3 We've worked on things like climate change, corporate  
4 accountability, mining impacts, right to water, these  
5 have been some of the central focuses of our work.

6 We've been more engaged recently on glacier  
7 protection and oil and gas specifically in large part  
8 because in Argentina a very big shale play was  
9 discovered a few years back called Vaca Muerta, or the  
10 dead cow, and this is creating quite a bit of  
11 controversy in Argentina. We've been engaged on some of  
12 the issues related to this topic.

13 And I'm happy to begin if you're ready to go.

14 The title of the presentation is called the  
15 Human Rights Impact of Unchecked Emissions From The Oil  
16 And Gas Sector. It's prepared by myself at the Center  
17 For Human Rights and the Environment and I would like to  
18 suggest and to inform you that parts of this  
19 presentation come from Priscilla Villa and Pete Dronkers  
20 of Earthworks with whom we've done a lot of the field  
21 work that is included in the presentation and by  
22 Jonathan Banks who has provided some of the technical  
23 information about methane impacts in the oil and gas  
24 sector.

25 We have four central questions which you are  
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1 already familiar with so I won't spend time going over  
2 them. But to conclude before we begin on some of the  
3 main elements that we will speak about in this  
4 presentation are ongoing field work that has begun  
5 recently has revealed systematic and very significant  
6 emissions, leaks, from conventional and non-conventional  
7 oil and gas operations.

8           These are emissions or leaks that neither  
9 government nor industry monitors. Generally there's no  
10 data collected regarding these leaks and in most cases  
11 the companies and the governments are not conducting any  
12 repairs or taking any action to stop these leaks and  
13 avoid them in the future.

14           In some cases the leaks are fugitive emissions  
15 which we'll consider emissions that are not intended,  
16 maybe it's a loose pipe or some joint that is leaking or  
17 a part of the equipment that is leaking and is omitting  
18 these emissions to the atmosphere. In other cases it  
19 may be that the leaks or the emissions are actually  
20 intentionally emitted into the atmosphere. This has to  
21 do in most cases with outdated technology or the very  
22 system utilized by the oil and gas industry which  
23 incorporates moments of leakage or emissions into the  
24 atmosphere.

25           In the cases that we've looked at these leaks  
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1 or emissions are highly toxic, both to human health and  
2 are very impacting to the atmosphere, accelerating  
3 climate change tendencies as we know them today. And  
4 for these reasons they are very particular to this  
5 presentation.

6 A summary of our findings before we move  
7 forward, and we'll come back to these issues during the  
8 presentations. The emissions or the leaks in this case,  
9 are placing the human rights of workers of the industry,  
10 people that work on these sites and nearby residences,  
11 at great risk. They are affecting their human right to  
12 a healthy environment. Their right to life. Their  
13 right to health. And their right to information,  
14 because, in most cases, few people or no people know  
15 about these leaks.

16 The severity of the leaks of these emissions  
17 from the sector absolutely warrant provisional measures.  
18 They can be stopped. We must work to stop these toxic  
19 fugitive emissions because we can do it and it's  
20 possible to do.

21 And they require companies to take steps to  
22 monitor, measure and more importantly to cease these  
23 emissions. And they require governments to intervene to  
24 protect communities and force companies to comply with  
25 the law and reduce or even fully eliminate these

1 emissions. And also to provide information about the  
2 emissions past, present and future, to communities.

3 Companies are absolutely liable. They are  
4 fully aware of these fugitive emissions and yet they do  
5 nothing to curtail them or to cease them.

6 States are liable, as they should be enforcing  
7 emissions standards and insuring that the companies are  
8 not allowing fugitive emissions or placing communities  
9 or workers at risk.

10 And knowing that these fugitive emissions,  
11 particularly methane gas, and we'll get into that a  
12 little bit more in the presentation, are many more times  
13 destructive to the atmosphere even up to 100 or more  
14 times impacting than CO2 in terms of their climate  
15 impact. And particularly because of recent agreements  
16 signed by many governments, such as the Montreal  
17 Protocol or the Paris Agreement to reduce these  
18 emissions, states are responsible for the climate  
19 impacts that are caused by these emissions, particularly  
20 if they're not doing anything.

21 Quickly to look at a fracking site and some of  
22 the areas or equipment that might be emitting that we've  
23 looked at with the technology that we'll get into in a  
24 moment. This may occur a fracking tower that is  
25 actually conducting fracking. It could occur at a water  
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1 storage facility or produced water facility, as you see  
2 in the back right of the image, in condensation tanks,  
3 in drilling and fracking equipment, in trucks.

4 It could also exist in infrastructure used for  
5 compressing gas, which is not in this image, and these  
6 emissions include methane but also may include volatile  
7 organic compounds such as VOCs or a particulate matter  
8 or CO2 or black carbon. These are all very toxic  
9 emissions. They're not good for people and not good for  
10 the environment. In the case of methane certainly not  
11 good to prevent climate change.

12 These emissions occur at traditional oil and  
13 gas well pads. They occur in flaring, they occur in  
14 compressors, in gas processing plants, in transmission  
15 equipment and storage equipment and in distribution  
16 inside cities, outside of cities at oil and gas sites  
17 wherever they may be.

18 Oil and gas is the No. 1 industrial source of  
19 methane pollution which is a powerful greenhouse gas.  
20 It's also a major source of toxic emissions that lead to  
21 ozone smog and fine particulate pollution making them  
22 also very concerning to human health and to the  
23 environment.

24 Methane for those that have looked a little  
25 bit into it has a very high global warming potential up  
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1 to 100 times more than CO<sub>2</sub>. In the near term, and this  
2 is especially important for taking action, in the near  
3 term it has a much higher impact than in the long term.

4 And this means that dealing with methane  
5 leakages and stopping them in the short term can be  
6 extremely important to avoid immediate impacts to our  
7 climate. It could have a very, very, very large effect,  
8 positive effect, if we are able to reduce these methane  
9 leakages in the short-term.

10 And some of the scenarios looking forward into  
11 the many decades to come the targets that we have at a  
12 global level to keep global climate change and warming  
13 to 1.5 percent really depends on addressing short life  
14 climate pollutants of which methane is one. So we  
15 really need to include short life climate pollutants in  
16 this reduction if we want to reach global climate change  
17 mitigation objectives and targets.

18 The International Energy Agency recently found  
19 that around 40% to 50% of current methane emissions  
20 could be avoided at no net cost and 75 percent of the  
21 emissions can be cut at a reasonable cost.

22 This is a very important point especially if  
23 we're considering intervention or legal intervention in  
24 the sector. Actually addressing these emissions is very  
25 viable, it's very feasible. The technology exists and  
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1 it's not expensive for the industry.

2 In fact, addressing these emissions can  
3 actually save the industry money and even generate a  
4 profit. So not addressing methane leaks just does not  
5 make business sense and it's also providing a climate  
6 benefit and reducing impacts to people in terms of the,  
7 not only methane, but other emissions that are emitted  
8 as well as then it's a win/win situation for everyone.

9 The oil and gas industry releases a wide range  
10 of chemicals that are known for probable carcinogens.  
11 This is in addition to methane. Remember that methane  
12 is not necessarily a chemical that is impacting human  
13 health. Although if we were to breathe a lot of methane  
14 then we would have respiratory problems in terms of lack  
15 of oxygen. But the real problems here, the immediate  
16 problems, are the carcinogens that are also emitted  
17 alongside of methane.

18 These are pollutants that are either emitted  
19 as a component of raw natural gas or a by-product of  
20 natural gas bunching that occurs at these sites.

21 And studies based on air measurements have  
22 identified elevated levels of benzene, hydrogen sulfide,  
23 formaldehyde, near oil and gas sites. In fact if you  
24 have visited oil and gas sites sometimes you smell  
25 rotten egg smell, this is common in these areas, and  
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1 this is, of course, coming from these emissions that are  
2 occurring.

3 Benzene has been linked to cancer. Ethyl  
4 benzene is associated with respiratory and eye  
5 irritation. Hydrogen sulfide is found generally near  
6 wells producing sour gas and in high concentrations it  
7 can cause severe respiratory irritation and even death.

8 We know of cases, of people, that work at oil  
9 and gas sites that have been exposed to some of these  
10 emissions and have died on the spot because they've  
11 breathed in very large amounts of these gases.

12 The oil and gas industry dumped millions of  
13 tons of methane and other pollutants like VOCs into our  
14 air each year. Pollutants from the oil and gas supply  
15 chain contribute to the formation of ozone or smog  
16 pollution which blankets many world cities in the warmer  
17 months and VOCs and methane then leak from the oil and  
18 gas supply chain and nitrogen oxides, formed by gas  
19 flaring and engines at natural gas facilities, react  
20 together in the presence of sunlight to form ozone smog.

21 So these are just some of the problems that  
22 are related to these emissions, when inhaled ozone can  
23 impair lung functions and trigger asthma attacks and  
24 aggravate conditions for people with bronchitis and  
25 emphysema, in some cases leading to premature death.

1 Children, the elderly and people with existing  
2 respiratory conditions are most at risk from ozone smog  
3 pollution. And, of course, if you work at these sites  
4 and you're there day after day you're also extremely  
5 vulnerable.

6 Fine particle pollution in CO2 emissions are  
7 also extremely significant in the sector, not only from  
8 some of this equipment but also from the trucks and the  
9 transport of these chemicals and agents as they go in  
10 and out of oil and gas operations.

11 This is a slide that suggests that a lot of  
12 these impacts are actually disproportionate for  
13 minorities and affect, for example, Native Americans or  
14 other poor communities more so than they would richer  
15 communities.

16 Some of the things that we can do to address  
17 these emissions impacts, certainly detect leaks. Now  
18 this is something that is lacking in the sector. For  
19 many, many decades the sector has simply allowed these  
20 leaks to occur. Has not even included efforts to stop  
21 the leakage or doesn't really even understand the volume  
22 of the leakages.

23 I spoke recently to the head of research of  
24 Argentina's primary oil and gas company and asked him  
25 about methane leakages from industry and his answer,  
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1 which was quite comical was, what leakage?

2 Now, in many cases, they don't even know that  
3 this is occurring because there aren't systems in place  
4 to measure them.

5 Certainly companies and states should be  
6 working to eliminate or minimize venting. They should  
7 prioritize the capture of gas, not the flaring of gas,  
8 minimize flaring, capture, reuse, recycle and send to  
9 market.

10 These engines that are used in the process  
11 should have pollution controls. There should be a  
12 regular monitoring, measurement and reports as well as  
13 verifications by third-parties to make sure that their  
14 objectives are being met in terms of mitigation,  
15 reduction and elimination.

16 Regardless of the emission source there is  
17 almost always a cost effective regulatory path which few  
18 countries have taken but which more and more are now  
19 beginning to embark on.

20 States like Colorado, California and others in  
21 the United States or also Canadian states and even trade  
22 agreements like NAFTA are beginning to address methane  
23 leakage from oil and gas and to establish commitments of  
24 reducing these emissions as part of their climate change  
25 strategies or simply as part of their environmental  
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1 objectives to clean up dirty industries.

2 States and companies around the world have  
3 recognized the problem and are moving in the right  
4 direction to address these leakages.

5 And now we get to some of the advocacy work on  
6 the ground, which is really what I wanted to show you  
7 because it really has been stunning and our own  
8 experience along with some of our partners and local  
9 communities over the past year have really changed our  
10 own perspective and knowledge about these issues. And  
11 it's really the material that we would like to present  
12 today.

13 And it begins with something called the FLIR  
14 technology. It's a hand held camera that looks a bit  
15 like an old video recorder but that little guy, when you  
16 power it on, it drops to about 250 degrees below zero  
17 and has a very highly sensitive sensor that is able to  
18 capture gases in the atmosphere.

19 Now this is not a heat sensing camera. It  
20 actually is able to detect some 20 different gases of  
21 which methane, benzene and xylene and toluene and others  
22 are a part. And just by holding it in your hand and  
23 pointing it at infrastructure you're able to see  
24 emissions.

25 The FLIR GF 320 is a camera we used in two  
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1 field visits that we did in Mexico and Argentina. This  
2 is state of the art technology utilized, not only by us  
3 in this case, but is the common technology used by  
4 industry to measure your methane leakages.

5 Few countries have these in their institutions  
6 that are doing controls but more and more companies now  
7 have this technology to detect methane leakages. They  
8 detect volatile organic compounds as well as methane  
9 gas.

10 The price of the camera, which is quite  
11 prohibitive, is about \$150,000.00 and that would make it  
12 quite prohibitive for NGOs, for example. And this is  
13 something we're working on to try to get these cameras  
14 and this technology into the hands of local communities  
15 that are engaged with the oil and gas sector.

16 If you look at some of these images you'll see  
17 right away what we're talking about. The image on the  
18 right this is in Colorado right next to a school where a  
19 fracking tower exists. When you look at it if you were  
20 to walk up to the site you would see absolutely nothing.  
21 But if you put on the camera, turn it on and point it to  
22 the tower you'll immediately see voluminous quantities  
23 of gas right next to the fracking tower.

24 This is a plume of emissions that is going  
25 into the atmosphere right around the school and the  
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1 local neighborhood.

2 This is an image taken in Mexico in October of  
3 2017. We went down to Veracruz and looked at about 15  
4 different sites belonging to Pemex, the country's main  
5 and practically only oil and gas company.

6 And if you look at those tanks, and this is a  
7 photo taken at the very moment right as we were turning  
8 on the camera, you see absolutely no emissions but a  
9 moment later with the camera on you can see the copious  
10 amounts of emissions coming right out of the tanks.

11 Now this looks like steam but these are  
12 actually gases. There could be methane gas. There  
13 could be volatile organic compounds in the plume of  
14 emissions coming from the top of those two storage  
15 facilities.

16 This is an image taken in Neuquen Patagonia,  
17 Argentina. This is where the Vaca Muerta oil play, oil  
18 and gas shale play, is located and there we have the  
19 operator with a local community member looking through  
20 the camera pointing at the storage facility and showing  
21 emissions. If you look at the right image you can see  
22 the emissions coming right out of the tank.

23 And the next image another tank in a joint  
24 venture operation by Odeval and YPF, Argentina's state  
25 owned company. Again you see absolutely no emissions at  
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1 the tank. If you were to visit the site you would think  
2 it was very clean and working in great condition but  
3 when you look through the view finder of the FLIR camera  
4 you immediately see the plume of smoke coming from the  
5 exhaust pipes.

6 Now this is one of those cases where the very  
7 technology of the industry, if you look closely at the  
8 image, and you may not see it very well. There are two  
9 little yellow dots right on top of the tank, those are  
10 the venting pipes that are designed to leak these  
11 emissions rights into the atmosphere.

12 In modern technology and state of the art  
13 technology you would not have these vents going actually  
14 into the atmosphere.

15 Another site in the Vaca Muerta shale play  
16 very, very, large amounts of emissions coming from these  
17 three or four tanks that you see there at the end.

18 If you look closely you'll see in the middle  
19 of the image towards the bottom a worker is walking  
20 right next to the tanks. No gas mask or anything else  
21 to avoid breathing in the emissions coming from the  
22 tanks.

23 Another tank also in Argentina. Here you see  
24 the two vent pipes, again right at the top they're more  
25 visible. This is outdated technology that should not be  
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1 used where they vent directly into the atmosphere.

2 Here you have the plume coming out of the  
3 tanks, extremely, extremely intense. This is one of the  
4 worst tanks that we saw.

5 You could see how, in the image, there is a  
6 dark and light part of the tank. The camera is actually  
7 able to see where the fluid is inside the tank without  
8 having to go into the tank by the temperature reading.

9 And you can see in the more sensitive  
10 registration of this image how big that plume is. And  
11 if you were actually to look at it blowing downwind it  
12 was about a mile and a half long.

13 I put a map here to show the location where we  
14 did the filming and a town that is nearby that is only  
15 two kilometers away, the exact same direction as the  
16 plume of smoke that you saw in the previous image.

17 One thing that I would like to stress, and I'm  
18 coming almost to a close of my presentation, is the  
19 importance of sharing this information with local  
20 communities.

21 What you see in the image, and you'll see a  
22 gentleman with a beret sitting behind a table right next  
23 to his little home in a rural part of Patagonia. This  
24 is Mr. Molina. He's 92 years old. He's been living at  
25 this location for about 50 years and he tells us that  
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1 he's been there since the oil and gas sector showed up.  
2 He lived there previously to its arrival. And since its  
3 arrival he's noticed foul smells near his home, a  
4 deterioration in the quality of his plant life around  
5 his home, death of his animals. He has trouble sleeping  
6 at night, constant headaches. And this is the first  
7 time that these people have been told about the  
8 emissions coming from this plant.

9           Now Mr. Molina also happens to be a member of  
10 the Mapuches indigenous tribe. He is a leader of his  
11 tribe and several the people in the image are also  
12 leaders that had come out to listen to our presentation  
13 and actually accompany us to the sites.

14           And there's Mr. Molina with his family again  
15 and some of the indigenous leaders. His granddaughter  
16 is the girl in the black shirt and she's taken up much  
17 of the advocacy and will be a Mupuche leader in the  
18 future in this area.

19           What's very interesting is when you put this  
20 technology in the hands of the local community, this is  
21 another tribe leader, a different part of the country  
22 there, who went with us and who also, for many years,  
23 has been visiting these sites and didn't realize that  
24 there were emissions coming from the equipment. And  
25 he's looking through the FLIR camera. You see how easy  
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1 it is to operate and looking at some of the emissions  
2 coming out.

3 The woman to his right is our colleague from  
4 Earthworks. And right behind her is another indigenous  
5 leader that worked with us.

6 Here is Pete Dronkers of Earthworks who  
7 operates the camera. And I will say Mr. Dronkers is a  
8 certified technician. When you buy this \$150,000.00  
9 camera it comes with a training.

10 So Mr. Dronkers actually went to a FLIR  
11 training, which took about a week, and he is an  
12 authorized and knowledgeable user of this camera and his  
13 testimony is actually valid in court.

14 So if you were to register these emissions or  
15 if he were to register these emissions they could be  
16 used as testimony and he is an authorized expert to be  
17 able to interpret the data.

18 So we know from his training and his use of  
19 the camera that what we were looking at is actually  
20 toxic emissions. Here he is showing other community  
21 members how the camera works and showing them the  
22 emissions coming from the various facilities.

23 You'll also see around his neck a little  
24 indicator that is used in cases where toxic emissions  
25 are so strong that you shouldn't actually be walking  
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1 around near the facilities. He carries that at all  
2 times because in some cases it has gone off and that  
3 suggests to him that he needs to move away quickly from  
4 the facility.

5 Here is another picture that, for us, is  
6 extremely important. These are two workers in the blue  
7 helmets that actually came up to us while we were  
8 filming. They were extremely curious as to what we were  
9 doing. They weren't actually operators of the  
10 equipment. They were workers that were digging trenches  
11 and doing different types of public works right around  
12 those three tanks that you see there in the background.

13 And they had no idea that they were being  
14 exposed to these emissions. They had no knowledge of  
15 how these equipment worked. They simply do work 24/7 all  
16 the time around these facilities whenever they're called  
17 to do so and they are being exposed.

18 So one of the things we would like to talk  
19 about the right, human right to health and to life of  
20 the very workers that have to be at these facilities all  
21 the time.

22 If you look underneath the image there is a  
23 FLIR registration of the emissions coming out from those  
24 tanks at the exact moment that we are looking through  
25 that camera. So you can see the copious amounts of  
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1 emissions coming from the tower.

2 Another indigenous leader who lives downwind  
3 from this facility, this is a processing plant where  
4 they compress gas, and you can see in the image no smoke  
5 but if you look to the right it looks almost as if it  
6 were on fire. And this is also the camera able to  
7 capture emissions as they are occurring at the facility.

8 And this is a facility that operates 24/7.

9 Behind him is a local leader from an NGO that  
10 works with the community on various issues related to  
11 oil and gas.

12 So, to summarize, the human rights impacts,  
13 and this is getting to the end and to the conclusion of  
14 this presentation.

15 Fugitive or intentional emissions from the oil  
16 and gas operations place human rights of workers, of the  
17 industry and nearby residents, at great risk. It  
18 affects their human rights to a healthy environment,  
19 their right to health, the right to life and the right  
20 to information particularly because, in most cases,  
21 communities are completely unaware that this is going  
22 on.

23 The right to information is violated by  
24 companies that knowingly do not provide information  
25 about these emissions and/or the resulting impacts and  
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1 risks that workers and communities face.

2           The severity, or in some cases the potential  
3 severity, if they are lesser, of fugitive or intentional  
4 emissions from the oil and gas sector can be extremely  
5 harmful to human health causing a range of impacts  
6 including skin, eye and respiratory problems, long term  
7 cancer complications and even sudden death as cases that  
8 we know of have occurred at sites.

9           Testimonials from residents like that of Mr.  
10 Molina and workers living near oil and gas operations  
11 receive persistent and regular foul odors at or near  
12 their homes, which they attribute to the oil and gas  
13 sector but don't always know or can't always prove that  
14 it is the sector that is generating them.

15           They indicate also a steady loss of  
16 vegetation, a deterioration of their animals and general  
17 decline in the quality of their environment and  
18 accompanied by problems with sleep, recurrent headaches,  
19 cancer amongst their friends, peers and family, et  
20 cetera.

21           And some of the human rights that are  
22 potentially affected by emissions from oil and gas, the  
23 right to life, the right to health, the right to safe  
24 working environment, the right to a healthy environment,  
25 the right to information we've stressed several times,  
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1 the right to development, the right to remedy. You  
2 know, this needs to be addressed and needs to be  
3 resolved.

4 The right to livelihood of -- you can see the  
5 deterioration of working and living environment, the  
6 right to agriculture, the right to property, the right  
7 to culture, the right to land, the right to climate, to  
8 atmosphere and to air, the right to self-determination  
9 and in the case that we see in Argentina the rights of  
10 indigenous peoples are also greatly affected.

11 So going back now to answer the four questions  
12 that were posited by the panel, under what circumstances  
13 do fracking and other unconventional oil and gas  
14 extraction techniques breach human rights protected by  
15 international law as a matter of treaty or custom?

16 Well, in part, due to the unchecked fugitive  
17 emissions or intentional omissions from the oil and gas  
18 operations in fracking but also in conventional  
19 extraction and production does affect the health of  
20 workers and communities nearby as well as the conditions  
21 of the atmosphere and the climate.

22 The second question. Under what circumstances  
23 do fracking and unconventional oil and gas extractions  
24 technique warrant the issuance, by their provisional  
25 measures, a judgment enjoining further activity,  
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1 remediation relief or damages for causing environmental  
2 harm?

3 Well, if fugitive emissions are detected,  
4 provisional measures should be sought immediately to  
5 cease production, to oblige a company in the state to  
6 identify gases that are leaked and their risk to people  
7 and to the environment and to introduce the necessary  
8 filters, equipment or other actions to stop leakage.

9 Third question. What is the extent of  
10 responsibility and liability of state and non-state  
11 actors to the violation of these human rights and for  
12 environmental and climate harm caused by these oil and  
13 gas extraction techniques?

14 Well particularly as these fugitive emissions  
15 are common often times the technology utilized presumes  
16 that they will emit. While failure to upkeep and  
17 monitor equipment will also likely result in leakage and  
18 because company and state actors know or should know  
19 about them, both the company and the state are  
20 responsible and liable for human rights violations if  
21 they do not take the necessary steps to detect leaks and  
22 introduce action to stop them.

23 Both companies and states are also liable for  
24 not providing information about risks and impacts to  
25 workers and local communities who are most likely to  
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1 suffer these impacts.

2 I will say in both cases, Mexico and  
3 Argentina, our travel there with Earthworks and Clean  
4 Air Task Force and with the local community was the  
5 first time this was ever done. It was the first time  
6 they put a FLIR camera up to this equipment. It was the  
7 first time anyone knew about this information, about  
8 these emissions. So if an NGO can do it shouldn't the  
9 state and shouldn't the company also be doing it?  
10 Absolutely.

11 Finally the last question. What is the extent  
12 of responsibility and liability of states and non-state  
13 actors, both legal and moral, for violations of the  
14 rights of nature related to environmental and climate  
15 harm caused by these unconventional oil and gas  
16 extraction techniques?

17 Well it is extensive. We have known for some  
18 time now that methane gas leakage is extremely harmful  
19 to our atmosphere and can cause up to 100 times or more  
20 impacts to climate change trends than CO2. And  
21 companies are responsible for and liable for these  
22 impacts.

23 Their emissions are causing climate change.  
24 And here is a technique and information about something  
25 that is occurring that is causing direct impacts to  
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1 climate change.

2           One of the great challenges that we've had in  
3 attributing responsibility for climate change to oil and  
4 gas companies is that we didn't really have information  
5 to pinpoint which emissions are coming from which  
6 companies. Well this, with this information, has now  
7 changed.

8           We have the technology that allows us to see  
9 how much individual non-state actors are actually  
10 emitting and we have the evidence to prove that they are  
11 contaminating. We can quantify. We can show that it is  
12 occurring and in that way we can also hold states  
13 accountable for not taking measures to control these  
14 emissions.

15           A few final links that you can find out more  
16 information about these issues. We published a few  
17 years back on UN Guiding Principals on Human Rights and  
18 Business: Approach to Understanding Human Rights in the  
19 Fracking Sector. And we've also prepared an Amicus  
20 Brief, it's very brief, that summarizes some of the  
21 arguments presented in this presentation to the panel in  
22 the form of an Amicus Brief document and you can get  
23 that also on-line.

24           There has being some press coverage, and  
25 you're welcome to see those links and consult those  
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1 press releases. I encourage you to see some of the  
2 video footage. It's quite impressive. It's far more  
3 impressive than the images I've shown here today. And  
4 I'm sure they will fully convince you that this is of  
5 great concern and something that we need to attend to  
6 into the future.

7           Our next stop will be Columbia. We'll be  
8 working there to do similar field work as we've done in  
9 Argentina and Mexico. We will be sharing our findings  
10 with local actors there. We will be introducing  
11 technology to advocates, to NGOs and to others that are  
12 interested in engaging the sector to hold it  
13 accountable.

14           We will be trying to instill capacity to  
15 utilize this FLIR technology. We will try to help local  
16 groups to acquire these cameras for their own local  
17 advocacy. And we're already thinking about and studying  
18 potential litigation in places like Argentina, like  
19 Mexico or maybe Columbia to address, not only the risks  
20 and the impacts that this is causing to local  
21 communities and the state duty and corporate duty to  
22 address them but also looking at climate change or  
23 possible climate change litigation to hold companies  
24 accountable for their emissions.

25           And with that I conclude the presentation and  
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1 I would be happy to take any questions or comments that  
2 you may have.

3 MR. GILL BOEHRINGER: Daniel, Gill  
4 Boehringer. Thank you very much for the wonderful  
5 presentation. It was most interesting but to me very  
6 surprising in one aspect. Most of what you said is  
7 consistent with things that we've heard from other  
8 presentations for the last three or four days, which is  
9 not to say that it isn't valuable. But the one thing  
10 that surprised me was that you were saying that if  
11 everybody does the right thing there will be no problem.

12 And I find that really difficult to  
13 understand. Would you like to comment on that?

14 What I'm talking about is you were several  
15 statements about how it can all be fixed. That we have  
16 the technology, et cetera, et cetera. The leaks can be  
17 stopped and the fugitive emissions and intentional.

18 If they're intentional I really don't  
19 understand how they can be stopped but the fugitive ones --  
20 well, I just find it hard to believe to be honest.

21 MR. DANIEL TAILLANT: Sure. Thank you  
22 for this comment. This is a fundamental to our work and  
23 to the reactions that we also get locally about what to  
24 do with the sector.

25 First of all we believe that we should not  
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1 have a future with fossil fuels. That is our first  
2 opinion.

3 And today, you know, we have about a 80/20 mix  
4 between fossil fuel and renewables and we would like to  
5 see that, over time, inverted and eventually have a move  
6 that is complete to renewable fuels that are  
7 non-contaminating. In the meantime we do have an oil  
8 and gas sector and that will be with us for awhile.

9 In the meantime there should not be  
10 intentional emissions.

11 In the meantime we need to reduce the  
12 emissions that are occurring.

13 So while we would like to love to see all the  
14 oil and gas people leave we don't have an immediate  
15 solution to that problem that can be resolved in the  
16 short-term.

17 So we, at the very least, need the oil and gas  
18 to stop polluting and killing people.

19 So, you know, we don't want to say that if you  
20 fix this everything is fine. We would rather hear, you  
21 know, you need to fix this right now and we need to see  
22 a plan in the next 50 years where you're phasing out of  
23 oil and gas.

24 And we certainly don't want fracking because  
25 that's just expanding the horizon. But it doesn't  
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1 change the fact that we do need to stop the problems  
2 that do exist in the sector that can be resolved  
3 immediately and that will save lives, it will improve  
4 health and it will reduce the impact.

5 MR. GILL BOEHRINGER: So just to come  
6 back to that. I guess we have a different idea and I am  
7 an innocent abroad here.

8 I actually normally think of people as not  
9 being evil so, therefore, when I think of intentional  
10 emissions I assume that you were talking about the  
11 necessary ones in the process in order to stop pipes  
12 from blowing up and so forth.

13 So I would like to have you comment a little  
14 bit more on what intentional emissions are so I will  
15 understand how they can be stopped.

16 And the second thing is fugitive emissions, it  
17 seems to me, is very unlikely that they all can be  
18 stopped. And I guess that relates to the point you  
19 made, which may or may not be the case, that stopping  
20 all these emissions is going to be beneficial for the  
21 corporations. I mean they must be really stupid if they  
22 haven't figured that out by now.

23 But, yeah, go ahead. Please go ahead.

24 MR. DANIEL TAILLANT: Yeah, so I try to  
25 believe the same thing that you do that people are not  
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1 evil but I've run into a few evil people here and there.

2 MR. GILL BOEHRINGER: Especially boards  
3 of directors of corporations.

4 MR. DANIEL TAILLANT: Yes. Well, you  
5 know, I think everyone thinks that they're doing the  
6 right thing and some people may be doing the wrong thing  
7 knowingly and those are the ones that I would consider  
8 evil.

9 But I think part of the problem with the  
10 sector is that this is just how they've done things for  
11 a long time. And, you know, emitting invisible gases  
12 into the atmosphere you get away with because no one  
13 sees them, right?

14 And if you didn't really realize how much is  
15 being emitted you might, you know, in a different state  
16 of mind than we have today, you might not really care  
17 that there is product being lost.

18 In a world now where we are recycling  
19 everything and we're really working on the minimal  
20 fractions of profit that are to be made it just doesn't  
21 make economic sense to emit these gases.

22 And so the industry needs to realize this.  
23 Sometimes the problem is that the amount -- even if  
24 it's a profitable venture to not emit the gases it may  
25 not be that profitable. They may only make a very small  
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1 marginal amount.

2           If there is no incentive to make the company  
3 do this then they're willing to continue emitting  
4 unabated. And that's where the regulatory work comes  
5 in.

6           Governments that today, unlike 20 years ago  
7 where they really didn't care what their emissions were,  
8 that today have climate change strategies that are  
9 aiming to reduce emissions 40%-50% in the next decade or  
10 two. They're trying to find where they can reduce.

11           And like I said in one of the slides the oil  
12 and gas sector is one of the major sources of methane  
13 emissions for industry. And if that's where you can do  
14 your reduction and it's cost efficient why not do it.

15           As a government regulator it makes sense and  
16 as a company you should be willing to comply. And if  
17 you're not then maybe you are evil.

18           DR. THOMAS KERNS: Let's make room for  
19 Maria to ask a question here.

20           MS. MARIA FERNADA CAMPA: I too.

21           DR. THOMAS KERNS: Are you there Maria?

22           MS. MARIA FERNADA CAMPA: Please you and  
23 then--

24           DR. THOMAS KERNS: No, no. I said let's  
25 make room for Maria to ask a question.

1 MS. MARIA FERNADA CAMPA: Okay. Thank  
2 you. Did you apply this camera in United States oil and  
3 gas example?

4 MR. DANIEL TAILLANT: Yes. So not me  
5 personally but Earthworks, the organization that took  
6 the camera that owns the camera, they've done about 700  
7 site visits, most of which have been in the United  
8 States, some in Canada. And every single time in every  
9 one of their site visits they have found problems.

10 So this is one of the things that I said  
11 earlier. This is a systemic problem for the oil and gas  
12 sector. Some are very bad and some are not so bad. But  
13 in almost all cases they find emissions whether they're  
14 fugitive or intentional.

15 MS. MARIA FERNADA CAMPA: Okay. Because  
16 the fracking hydraulic technology is really very, very  
17 bad for environment and for the people. Thank you.

18 MR. DANIEL TAILLANT: In particular on  
19 this point of fracking, because most of the presentation  
20 was, you know, both fracking and conventional but in  
21 fracking at the moment of extraction there is a lot of  
22 loss of gas.

23 When they leave the produced water there is a  
24 lot of emissions from the water that is exposed to the  
25 atmosphere. And then just like in conventional once they  
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1 start processing the gas and separating it that's where  
2 a lot of leakages, the fugitive leaks are going to  
3 occur.

4 MS. MARIA FERNADA CAMPA: Okay. Thank  
5 you.

6 DR. THOMAS KERNS: We have to come to a  
7 conclusion because of the next presentation but I want  
8 to just clarify Gill's question a little bit more about  
9 regulating versus banning.

10 So this is a human rights court and so the  
11 standards on which they're making judgments are human  
12 rights standards rather than regulatory standards.

13 And this court is going to make some  
14 recommendations. It's going to have an opinion about  
15 things. It's not making a binding law ruling or  
16 anything. It's establishing an opinion.

17 So if when you ask this court to make a  
18 recommendation about the future are you recommending to  
19 the judges that they urge corporations to regulate and  
20 states to regulate better or are you asking the judges  
21 to recommend that states ban fracking?

22 MR. DANIEL TAILLANT: Right. So that is  
23 a great question.

24 And I would say where there is no fracking  
25 today I would say no-go zone. No more fracking. I  
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