

AUSTRALIAN EARTH LAWS ALLIANCE

RIGHTS OF NATURE

PART II

MAY 16, 2018 1:30-3:30

DR. MICHELLE MALONEY: Good morning everyone. My name is Michelle Maloney from the Australian Earth Laws Alliance. I am in partnership with Lisa Mead presenting today the second part of the Earth Rights session for the PPT. So I hope you can see my slides.

So my name is Michelle Maloney and, as I said, Lisa Mead will be joining me. She's on a call now. She'll be joining us for this session.

So just a brief introduction just so that you know my qualifications. I've got a Bachelor of Arts and a Bachelor's of Law with honors from the Australian National University and a Ph.D. in law.

I'm also the co-founder of the Australian Earth Laws Alliance and have been working on rights of nature, earth jurisprudence and ecological governance issues for about seven years on top of 20-years before that on environmental law and sustainability issues.

My organization is the Australian Earth Laws Alliance, or AELA, and our mission is very simple, to  
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1 increase the understanding and practical implementation  
2 of earth centered governance. And by that we mean law,  
3 economics, ethics, cultural.

4 And that diagram at the bottom shows that we  
5 focus on a change in culture in the industrialized  
6 societies as well as reconnecting law and governance  
7 with nature and the matters that are at issue and the  
8 issues that matter, building community, creating  
9 alternatives and then transforming law and governance.

10 So an overview of our session today we hope to  
11 complete our session in the time allotted, two hours.  
12 We may try to go a little shorter than that because we  
13 started a little later.

14 I'll do a bit of an introduction and a recap  
15 on Lisa's excellent session earlier this week and then  
16 I'll give an overview of the some of the emerging laws  
17 around the world that recognize and support the rights  
18 of nature. We feel that is an a really important  
19 context for the PPT to understand why this emerging  
20 space around recognizing the legal rights of the natural  
21 world is relevant to our case that is challenging the  
22 impact of unconventional oil and gas extraction.

23 We will then invite an expert witness Mari  
24 Margil. We'll have a video footage from another expert  
25 witness, Damien Maher, who I'll introduce as we bring  
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1     them all on.  Lisa will actually speak to a bit of  
2     evidence about fracking's impacts on earthquakes and  
3     seismic activity.

4             We'll then turn to our final video of the  
5     session which looks at the way that the people in  
6     Scotland have addressed fracking and their choice to  
7     issue a moratorium and then we'll do our closing  
8     statements.

9             So just to recap on Lisa Mead's session.  Lisa  
10    introduced our overall argument and she also talked  
11    about the Universal Declaration of The Rights of Mother  
12    Earth and how it's a civil society agreement formed in  
13    2010 by more than 30,000 people which holds extreme  
14    moral weight and an emerging law and statement of  
15    principle around the fact that we are an interconnected,  
16    indivisible community of life;

17            That industrial legal systems do not, at the  
18    moment, reflect the fact that we rely on and are inter-  
19    dependent with the natural world;

20            And in fact the UDRME is an important basis for our  
21    entire case here at the PPT because it offers a  
22    statement, a normative statement, of how our legal  
23    system should be.  And interestingly since it was  
24    created in 2010, which I'll talk about in a moment,  
25    quite an upsurge of laws around the world that are  
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1 starting to reflect those very principles and this  
2 shifting norm towards recognizing the rights of nature  
3 in our legal system.

4 So Lisa talked about the UDRME and outlined  
5 the rights of nature. We also heard from experts Cormac  
6 Cullinan and Linda Sheehan. We also heard evidence from  
7 Michelle Bamberger and Dr. David Paul on violations of  
8 the fundamental rights of plants and animals to exist,  
9 thrive, and evolve and the fact that fracking and CSG  
10 has been violating the rights of life to exist, thrive  
11 and evolve.

12 Lisa also showed evidence in a video witness  
13 from Professor Gavin Mudd from here in Australia talking  
14 about the impacts of fracking on water ways.

15 So what I'll do now is actually talk through  
16 some of the emerging rights of nature laws around the  
17 world. Again, just to give you some context I'll do it  
18 fairly quickly and I'm very happy to take questions but  
19 I just wanted to give quite a growing number of examples  
20 of how rights of nature is working around the world.

21 This is a brief summary and then I'll have a  
22 couple of extra slides on a couple of these points.

23 So in 2002 CELDF -- I'm very honored to have  
24 Mari Margil from CELDF on our session today -- CELDF  
25 began a push for local laws to pass for rights of nature  
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1 and community rights laws in the US. And she'll talk  
2 about that in her presentation.

3 In 2008 Ecuador was the first modern  
4 constitution in the world, by modern I mean western  
5 legal structure, to actually recognize the rights of  
6 nature in its constitution.

7 In 2010 Bolivia implemented a national law.  
8 In 2010 Bolivia also hosted this phenomenal gathering  
9 looking at climate change and the rights of Mother Earth  
10 and everybody worked together to create the UDRME.

11 Since 2016 activists and lawyers in Europe  
12 have been pushing for an EEU directive for the rights of  
13 nature in the European Union.

14 In 2016 interestingly not a legal structure  
15 but a policy development the Greens party of Scotland  
16 and a separate Greens party of England and Wales, both  
17 adopted rights of nature policies.

18 2017 was somewhat of a push forward for the  
19 rights of nature and legal personhood around the world  
20 and attracted significant attention internationally. And  
21 I'll talk in a moment about what happened with New  
22 Zealand, India and Columbia.

23 There is also a lot of social movements around  
24 the world as well as the work of the Global Alliance for  
25 the rights of nature, all of which are bringing people  
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1 together who are trying to force through a shift in the  
2 legal system and also represent what people know in  
3 their heart to be true, that we are completely dependent  
4 on and part of the natural world. And our legal system  
5 should no longer treat it as invisible but the most  
6 important player in our society and our legal system.

7           Very briefly just for those who aren't  
8 familiar with it. The current framing of the rights of  
9 nature many people look to the work of Thomas Berry.  
10 He's written a number of books. He called for earth  
11 rights. It does build on a longer history of deep  
12 ecology and legal writing, everything from Christopher  
13 Stone, *Should Trees Have Standing*, et cetera.

14           There's quite a phenomenal body of work that  
15 we can turn to but I just wanted to mention that the  
16 theoretical framework that many of us use for the rights  
17 of nature comes from some of the ideas articulated  
18 really beautifully by Thomas Berry.

19           Any future governance system must recognize  
20 the rights of the non-human world to exist, thrive and  
21 evolve and generate.

22           Berry looked to first nations culture in law,  
23 as we all do, for deep inspiration for how earth  
24 centered governance and law can work and how it can  
25 permeate and infiltrate the living culture of our human  
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1 society. It's really important. But Berry also give us  
2 a gift by challenging the western legal system to  
3 actually look at this more seriously and to activate it.

4           And the other point that I would mention in  
5 amongst this amazing body work that I could possibly  
6 talk about today is rights of nature is a little  
7 distinct to legal personhood because rights of nature  
8 articulate that rights exist for life, and life  
9 supporting system exists, and nature has its own rights.  
10 It doesn't have to have human rights. Bees have bee  
11 rights. Rivers have river rights. And these rights or  
12 these arguments about how it should be maintained and  
13 left to exist are really just based on the way that  
14 natural systems, animals and plants work, live and  
15 operate.

16           The final point on Berry is that he always  
17 said that we are a community of subjects, not a  
18 collection of objects. And that's a fundamental point  
19 for the whole earth laws movement.

20           In a moment when I talk a bit more about New  
21 Zealand, India and Columbia I'll talk a little bit about  
22 legal personhood for nature but I won't go into too much  
23 detail. There is a lot of material for those who would  
24 like to read about it.

25           The main point that I would like to make is  
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1 that legal personhood and legal rights for nature is an  
2 emerging legal space but when we talk about legal  
3 personhoods we're, of course, talking about really  
4 taking the first step towards rights of nature.

5 In our analysis at least, within the  
6 Australian Earth Laws Alliance, we see a bit of a  
7 difference. Sometimes in practice it's not hugely  
8 important but there is a difference in stating that  
9 something has legal personhood rights by either saying  
10 recognition as something like corporation, which is  
11 treated more as a legal person and not sort of as a  
12 human being.

13 And the difference is with legal personhood,  
14 and we'll see this in the India case, there's been a  
15 little bit of confusion for some people in how you  
16 articulate the rights of nature when you talk about it  
17 in literally in a human-centered way, legal personhood.

18 We believe that Thomas Berry's articulation of  
19 bees having bee rights, a whole argument for the rights  
20 of nature, is that the intricate unique system of life  
21 has its own unique rights. But that said I won't go any  
22 further about this but what is important about the legal  
23 personhood space is that it's been a really -- it's an  
24 area that is developing quickly.

25 Last year we saw this with the progression of  
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1 a number of laws because it's a way for the western  
2 legal system to grab a concept that it already  
3 understands i.e. corporations and other entities have  
4 legal rights, legal personhood rights, and moving  
5 forward with that with nature. So it's offering up some  
6 very interesting analysis.

7           Very quickly though Ecuador in 2008 included  
8 these provisions and it's what I would say it  
9 articulates the rights of nature framework, not a legal  
10 personhood framework. It talks about the  
11 interconnectedness and vitality of life, the indivisible  
12 nature of life, the primacy of earth laws and so on.

13           There's been a number of successful cases  
14 argued under the rights of nature provisions in Ecuador  
15 including the rather famous Whanganui River case in 2011  
16 that found for the rights of the river to flow, and  
17 other cases.

18           In Bolivia the national law is, again, very  
19 much focused on the rights of nature. Does not talk  
20 about legal personhood.

21           I just want to briefly show a photo of the  
22 Universal Declaration of The Rights of Mother Earth, the  
23 UDRME. For those who don't know it was held over more  
24 than a week and thousands and thousands of people were  
25 genuinely engaged in crafting and writing up the  
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1 documents. And Cormac Cullinan and many other people  
2 were involved in that process.

3           Very quickly, again, in New Zealand in 2017 an  
4 act was passed in parliament by the New Zealand  
5 government that was the result of decades worth of  
6 discussion and compensation, arguments between the Maori  
7 people and the New Zealand government under the Treaty  
8 of Waitangi. I can provide more info on this if you  
9 want it but this is to just move through the slide  
10 quickly.

11           What is important about the Whanganui River is  
12 that it was the first time in the western colonized  
13 nation that indigenous values and the recognition of  
14 this living entity as a whole were embedded into a  
15 modern legislative tool. It took the debate between  
16 Maori people who wanted not just compensation but to be  
17 returned to their spirits and their land and the Crown's  
18 resistance to that argument. And it allowed somewhat of  
19 a halfway house by using western tools and articulating  
20 that the river has it's own legal identity.

21           And it's got two guardians, one from the Crown  
22 and one from the Maori Trust as a set up to take away  
23 the previous arrangement where it was just the ownership  
24 of the Crown. A broader guardianship structure was set  
25 up at the end of last year.

1           And the reason I talk a little bit about the  
2 Whanganui River is it is the one that has inspired  
3 references from courts in the court cases in India and  
4 Columbia.

5           Some people don't know that in New Zealand  
6 there are now three major ecosystems that have their own  
7 legal rights. The Urewara Forest is very interesting.  
8 Again, after many years of debate and discuss and  
9 arguments the Waitangi Treaty discussion process, legal  
10 decision process, came to a new act that came out in  
11 2017 where the Te Urewara will effectively own itself  
12 into perpetuity.

13           And at the end of last year, and I still have  
14 to do some reading on how this structure will work,  
15 Mount Taranaki also has these same legal rights as a  
16 person. So New Zealand has been leading the way in the  
17 legal personhood development.

18           So interestingly on top of all that many, many  
19 years of the developments under the Treaty of Waitangi  
20 in early 2017 we saw a court case, two court cases pop  
21 up in India that were really important and grabbed  
22 international attention.

23           The state of -- I'm not even going to try to  
24 say that at six o'clock in the morning -- in India the  
25 court decided that the rivers Ganga and Yamura and all  
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1 their tributaries, streams, every natural water way  
2 flowing, are declared as a legal person and would have  
3 the status of a legal person with all the corresponding  
4 rights.

5           There's a whole range of issues that have been  
6 developing around people challenging that decision by  
7 the court, undergoing scrutiny, particularly around the  
8 idea that nature having liabilities. But the fact that  
9 this case has come into a jurisdiction that does not  
10 have the legislative basis for the rights of nature is  
11 extremely important and very powerful.

12           And the same with Columbia in 2017, again, in  
13 that first four months of last year we saw all of these  
14 river cases coming out. A court in Columbia recognized  
15 the Atrato River, together with its basin and  
16 tributaries, as a legal entity. And the river's rights  
17 are distinct from the community's rights and its rights  
18 are to protection, conservation, maintenance and  
19 restoration by the state and local communities.

20           And then earlier this year it went further and  
21 now the Amazon region inside Columbia has been  
22 recognized as having legal rights. It's the first time  
23 that a bio-region or sub-region has legal rights.

24           Just wanted to briefly mention that in  
25 Australia last year there's been a new act for the Yarra  
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1 River which does not give legal rights to the river but  
2 it does, for the first time in Australia's sordid  
3 colonial history, recognize the indigenous peoples  
4 connection and spiritual connection to the river.

5           It's an interesting development and one that  
6 many other communities are looking to. They are looking  
7 at that and connecting it to the rights of nature and  
8 seeing what can happen in Australia. And we had our  
9 first public rally for river rights in Australia in  
10 March in western Australia.

11           So what I wanted to say from that material was  
12 really simply that we see this emerging social and legal  
13 norm shift as really changing the way that people are  
14 looking at the legal system. It's a way for ecological  
15 governance and democracy to be shifted so that local  
16 communities, particularly at the broader earth  
17 community, can argue for greater standing, enforcement  
18 and rights of natural systems.

19           The increasing body of law demonstrates that  
20 it's a shifting norm, demonstrates that people want a  
21 different system. And increasingly it demonstrates  
22 civil society will not tolerate damage to ecosystems.

23           And finally we have put into our written  
24 submission that we think that this growing  
25 jurisprudence, which articulates rights of nature and  
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1 how they can be enforced, is actually shifting what we  
2 think is towards a growing evidence of a customary  
3 international law by the rights of nature.

4 I'm not going to talk to these notes but I  
5 just want to flag, for the tribunal, that there are many  
6 issues around rights of nature, including how do you  
7 speak to nature, it's about relationships, about  
8 establishing the rights and duties. It can change  
9 standing in a legal jurisdiction. It already has in  
10 those places where the laws exist.

11 But, at the same time, it's also drawing on  
12 some very conventional legal tools, remedies such as  
13 injunction, compensation, restoration, and the ideas  
14 around indigenous custodianship, community guardianship  
15 new administrative and management structures for the  
16 rights of nature.

17 So, on the one hand, it has the potential and  
18 it is to turn its legal system on its head. On the  
19 other hand it can be implemented in such a way that is  
20 really no different than to setting up a structure to  
21 support a company.

22 Another important point to make when we think  
23 about the rights of nature within the context of this  
24 tribunal, and if people are kind of thinking how can we  
25 give rights of nature it's important to remember that  
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1 every time we've expanded rights there's resistance,  
2 from ending slavery in the US to introducing votes for  
3 women around the world, for the constitutional  
4 recognition of first nations people in Australia,  
5 people resist or hasn't been there before and once those  
6 laws are passed they become the norm.

7 I'm going to end my little overview of things  
8 with a lovely quote from Mari Margil. It's also my  
9 segue into her presentation today. An important thing  
10 to note is this idea of how could we possibly balance  
11 the rights of nature? We believe it's completely easy  
12 to do.

13 Recognizing rights of nature, as Mari Margil  
14 puts it, does not put an end to human activities, rather  
15 it places them in the context of a healthy relationship  
16 where our actions do not threaten the balance of the  
17 system upon which we depend. These laws do not stop  
18 all development. They hold only those uses of land that  
19 interfere with the very existence and vitality of the  
20 ecosystems with depends upon them.

21 And before I introduce Mari I would like to  
22 draw on this quote to remind the Tribunal why Lisa Mead  
23 and myself have brought this case and invited these  
24 amazing witnesses to join us.

25 We believe that unconventional oil and gas  
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1 extraction absolutely threatens the balance of the  
2 system upon which we depend. The impacts it has on  
3 land, the subsoil, plants and animals, particularly and  
4 most obviously water and human health, absolutely  
5 violate the rights of the natural system, takes out of  
6 balance our co-existence with other species and should  
7 absolutely should be stopped.

8           So that is the end of my overview of the  
9 emerging rights of nature laws around the world. It's  
10 now my really great pleasure to introduce Mari Margil  
11 from the Community Environmental Legal Defense Fund.  
12 She's an attorney based in the US and together with  
13 Thomas Lindsey and others at CELDF have really been  
14 leading the way on rights of nature law making around  
15 the world. So without further adieu I would like to  
16 introduce Mari.

17           Mari, would you like to give your  
18 presentation?

19           MS. MARI MARGIL: Thank you so much  
20 Michelle. Can folks hear me all right?

21           My name is Mari Margil with the Community  
22 Environmental Defense Fund and our International Center  
23 For The Rights Of Nature.

24           We are based in the United States but work  
25 around the world. In the United States we've assisted  
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1 more than 30 communities to establish legal rights of  
2 nature and the human right to a healthy environment.  
3 This includes many communities that have been fracking  
4 as a violation of the rights of nature.

5 We have also met in 2008 with the Ecuador  
6 Constituent Assembly as they were drafting that new  
7 constitution there on the rights of nature and, as  
8 Michelle said, Ecuador is the first country in the world  
9 to recognize legal rights of nature within its national  
10 constitution.

11 Today our organization is working with  
12 Michelle in Australia, in the United States, in Nepal,  
13 India and other countries to advance rights of nature  
14 and legal frameworks. As we see people across the globe  
15 finding that legal systems which treat nature as  
16 rightless, that is without even legal rights, basic  
17 rights to exist, that they're unable to protect nature.

18 Today legal systems around the world have  
19 split the world into basically two categories. One,  
20 either as things or property without legal rights or as  
21 rights bearing entities with legal rights.

22 Treated as property we find that nature is  
23 considered to be without legal rights and, therefore,  
24 environmental laws which we find around the world.

25 Environmental laws authorize the use of property, that  
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1 is the use of nature such as fracking through aquifers,  
2 drilling through the oceans or, as we have in the United  
3 States, blowing the tops off of mountains in order to  
4 mine coal.

5           Conventional environmental laws therefore,  
6 again, which we find around the world, they legalize  
7 fracking, they legalize drilling, they legalize mining  
8 and other practices, meaning environmental laws legalize  
9 environmental harm.

10           Under decades of these environmental laws  
11 which treat nature as property, which treat nature as  
12 being without rights, the state of the environment is  
13 worsening. And we see this in many ways including eco  
14 system collapse such as the die-off and bleaching of  
15 coral reefs around the world which support millions of  
16 species. And with species we see species extinction  
17 rates around the world occurring at rates that are  
18 greater than 1,000 times natural background rates. And,  
19 of course, climate change which is accelerating far  
20 faster that even the most optimistic scientific models  
21 predicted.

22           The Community Environmental Legal Defense Fund  
23 began our work with communities more than 20-years ago  
24 to help them protect against environmental harm,  
25 including things like drilling and mining, but we ran  
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1 into this system of environmental law which legalizes  
2 environmental harm as well as the larger legal system,  
3 which Michelle mentioned, which does things that  
4 recognizes rights and protections for corporations,  
5 including oil and gas corporations and other industries  
6 which draft the very laws which regulate their  
7 activities. That is, they're drafting environmental  
8 laws which authorize their industrial activities such as  
9 fracking and mining.

10 We learned, along with our communities, that  
11 we can't protect nature under environmental laws which  
12 authorize destruction. And with this, in 2006, we  
13 assisted the first community in the United States, the  
14 very first place in the world, to develop a new kind of  
15 law. And that new kind of law recognized legal rights  
16 of nature. This was Tamaquo Borough, a small community  
17 in the state of Pennsylvania in the United States.

18 Since that time the Community Environmental  
19 Legal Defense Fund has assisted more than 30 communities  
20 which have done the same, recognized legal rights of  
21 nature in their local legal system. This includes the  
22 city of Pittsburgh, in the state of Pennsylvania, a city  
23 of 300,000 people or so. It's the first city in the  
24 United States to ban fracking as a violation of the  
25 rights the nature.

1           We found that communities have found it  
2 necessary to recognize legal rights of nature, including  
3 rights such as the right to exist, to thrive, to  
4 regenerate, to be restored.

5           To recognize those legal rights of nature  
6 alongside the human right to a healthy environment  
7 recognizing that it is impossible to fulfill the human  
8 right to a healthy environment if the environment itself  
9 doesn't have rights.

10           And, for example, with fracking which  
11 contaminates millions of gallons of fresh water at each  
12 fracked well which harms human health and the  
13 environment which, of course, accelerates climate  
14 change, we found it's impossible to fulfill the human  
15 right to a healthy environment under legal systems which  
16 authorize the use of the environment for fracking. That  
17 is, under legal systems which treat the natural world as  
18 property as without rights and regulate its use to  
19 conduct fracking and other destructive activities.

20           And what we found is that environmental crises  
21 have extended across the globe, that there is a growing  
22 understanding that we must fundamentally change the  
23 relationship between humankind and the natural world and  
24 recognize the highest level of legal protection for  
25 nature that we have in the law. And that means the  
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1 recognition of legal rights of nature.

2 Furthermore, we find that communities as  
3 they're finding in the United States and in countries  
4 around the globe, an increase in fracking, an increase  
5 in fossil fuel extraction, of course, an increase in the  
6 impacts of climate change.

7 Last year, 2017, we assisted the first  
8 community in the United States, that is the city of  
9 Lafayette in the state of Colorado in the Rocky  
10 Mountains. We assisted Lafayette to ban fracking as a  
11 violation of (1) first the human right to a healthy  
12 environment and a healthy climate and, second, the  
13 rights of nature to be healthy and thrive, including the  
14 rights of nature to a healthy climate. They called it  
15 their Climate Bill Of Rights to prohibit fracking and  
16 fossil fuel development as a violation of the human  
17 right to a healthy environment and the rights of nature.

18 Lastly I wanted to finish by letting you know  
19 that we're also working, of course, outside of the  
20 United States and other countries and partnering with  
21 people, with communities, with NGOs and even governments  
22 to advance legal rights of nature frameworks.

23 And this includes in the country of Nepal  
24 where we've been working for a number of years to  
25 advance a rights of nature natural constitutional  
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1 amendment, specifically a right to a healthy climate for  
2 humans and nature. And this includes the rights of the  
3 Himalayas to a healthy climate.

4 Nepal is home to Mt. Everest and studies show  
5 that the Himalayas are experiencing the fastest rate of  
6 warming from climate change of any mountain range on  
7 earth. By recognizing a constitutional amendment that  
8 is the constitutional rights of nature, including the  
9 rights of the Himalayas, intended to provide Nepal and  
10 the people of Nepal the ability to defend the rights of  
11 the Himalayas from climate change impacts from nature  
12 polluters around the globe.

13 I'll end there and thank you very much for  
14 this opportunity and I'm happy to take any questions.

15 Thank you.

16 DR. MICHELLE MALONEY: Thank you, Mari.

17 Does the Tribunal have any questions for  
18 Mari?

19 I have a very simple one, Mari. Based on the  
20 work that you've been doing I mean the nature of this  
21 PPT is looking at does fracking violate human rights and  
22 earth rights?

23 From your experience in the work of the  
24 communities that you work with do you think fracking  
25 violates the right of humans in the natural world?  
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1 MS. MARI MARGIL: We absolutely believe  
2 that fracking violates the rights of nature, the rights  
3 of human rights to a healthy environment, the rights of  
4 the natural world. And, furthermore, we see that by  
5 legalizing activities such as fracking and other fossil  
6 fuel extraction it stands in the way of people in the  
7 their communities from not only protecting nature but  
8 with putting in sustainable earth friendly energy  
9 systems in their place.

10 It's impossible to have a sustainable energy  
11 system in your community if fracking is taking place.  
12 And, therefore, we see it as a fundamental violation of  
13 the rights of nature, of the rights of human kind to a  
14 healthy environment, and also a legal and practical  
15 barrier to establishing sustainable systems in its  
16 place.

17 DR. MICHELLE MALONEY: Thank you, Mari.

18 MS. MARI MARGIL: Thank you.

19 MR. GILL BOEHRINGER: Gill Boehringer.

20 Mari, I was wondering what has been the  
21 reaction in Colorado to what the City of Lafayette has  
22 done? Is there a challenge?

23 Well, yeah, can you tell us a little bit about  
24 it?

25 MS. MARI MARGIL: Well, in Colorado, as  
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1 in other places, the oil and gas industry, of course, is  
2 very powerful. We've seen communities in Colorado that  
3 have banned fracking or put moratoria on fracking. Have  
4 seen both the state of Colorado, that is the state  
5 government, along with the oil and gas industry sue  
6 communities to override, to overturn those laws.

7 I know you spoke yesterday or the first day of  
8 the tribunal regarding Mora County and John Olivas, a  
9 former county commission chairman there who we worked  
10 with Mora County, New Mexico to assist them to put in  
11 place their ordinance which banned fracking as a  
12 violation of the human right to a healthy environment  
13 and the rights of nature as well.

14 And what we found in both New Mexico and  
15 Colorado which are, of course, neighboring states in the  
16 US, is that you have industry and government partnering  
17 to stop communities from putting in place protections  
18 against fracking and successfully going into court and  
19 getting court rulings in which the courts are saying  
20 that state law pre-empts communities from being able to  
21 protect themselves as we saw in Mora County.

22 This is has not happened yet with Lafayette,  
23 which I have spoke about earlier, which established a  
24 Climate Bill Of Rights. But I can tell you what, in  
25 Mora County which faced, as John Olivas I think  
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1 explained, a challenge in federal court and the US  
2 District Court, the federal court judge, Judge Browning,  
3 said in his ruling which found that Mora County was  
4 pre-empted in banning fracking, he also wrote in his  
5 decision that Mora had quote "a legitimate county  
6 interest in enacting the ordinance."

7 That is that he noted sympathy for the  
8 community and said they had a legitimate interest in  
9 trying to protect against fracking, to try to protect  
10 the human health and the environment and nature from oil  
11 and gas extraction, but his hands were tied.

12 That is he found that state law pre-empted the  
13 community and he said specifically that this is  
14 something that the state government and the federal  
15 government and courts were going to reckon with in order  
16 for the people of Mora County to protect themselves.

17 So I say that to say we see this very much as  
18 the beginning of a movement. Michelle spoke in her  
19 opening about this being really we see this as standing  
20 on the shoulders of past peoples movements who saw that  
21 government and laws were oppressive and unjust and  
22 needed to have a fundamental shift in those laws in  
23 order to protect people. And in this case to protect  
24 nature.

25 And we see this about building a movement to  
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1 do so which means confronting unjust laws and putting in  
2 place laws that establish what we need to see in the law  
3 even when those laws may get challenged. Because we  
4 know that we have to keep pushing that forward to  
5 ultimately establish in the United States, of course, at  
6 the state level and ultimately at the federal national  
7 level these kinds of laws including constitutional  
8 rights of nature.

9           And in the United States in places like  
10 Colorado where Lafayette is, which established the  
11 Climate Bill Of Rights at the local level, we've been  
12 working with people and communities and groups to  
13 advance state level constitutional amendments which  
14 would begin to codify rights of nature protection at the  
15 state level. And we see it in the United States needing  
16 to build upward from there, including through this local  
17 law making to the state level and to the national level.

18           MR. GILL BOEHRINGER: Thanks.

19           One other question just to get it on the  
20 record. We've had a number of people, including in the  
21 previous session, a very strong position that fracking  
22 is inherently damaging and needs to be banned. You  
23 can't frack and expect nothing bad, no harms to happen.

24           So I was wondering what your recommendation is  
25 to the Tribunal. Are you asking us to recommend that it  
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1 be banned like a moratorium or total ban or whatever?

2 MS. MARI MARGIL: Yes. I think the short  
3 answer is yes. I think it is inherently destructive,  
4 inherently violative of a human right to a healthy  
5 environment and to the rights of nature.

6 MR. GILL BOEHRINGER: And you say that on  
7 the basis of many years of working on this issue.

8 It's not just an opinion. It's a thoughtful  
9 and reasoned response to what you have seen and read and  
10 understand.

11 MS. MARI MARGIL: Unfortunately it comes  
12 from communities across the United States as well as, of  
13 course, study upon study, which shows the environmental  
14 destruction that comes from fracking but the many, many  
15 people and communities and even governments that we have  
16 worked with across the United States, which has seen  
17 that even upon the threat of a lawsuit from industry or  
18 even their own state or federal government, people in  
19 their communities and local government officials are  
20 moving forward to ban fracking as a violation of the  
21 human right to a healthy environment and the rights of  
22 nature, because they understand that it is inherently  
23 destructive and inherently violative of rights.

24 And even with the threat of a legal challenge  
25 they are needed to move this forward because they have  
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1 no other way to protect themselves other than by taking  
2 this step at the local level to establish a legal ban  
3 knowing that they could be threatened with a lawsuit,  
4 they could be threatened with bankruptcy at the  
5 municipal community level, but they see that they have  
6 absolutely no other choice under the law than to take  
7 that step.

8 MR. GILL BOEHRINGER: And just to follow  
9 up. I hear from the evidence and the testimony and what  
10 I also know from my own experience and research, the  
11 real problem here is that the corporations are so  
12 powerful that they get away with ignoring the law,  
13 violating the law, so that simple law reform or trying  
14 to tighten up regulations and so forth cannot work.

15 Would you agree with that?

16 MS. MARI MARGIL: Yes. And we didn't  
17 really have the time in the presentation to speak about  
18 it but our work is broader than recognizing the rights  
19 of nature and banning activities such as fracking.

20 We take a very systemic approach to protecting  
21 the natural world. And by that I mean as we absolutely  
22 recognize that so long as corporations have rights and  
23 protections which they wield against people, against  
24 communities and, of course, against nature that we  
25 simply cannot protect the environment.

1           So even if we prohibit fracking tomorrow  
2 around the globe corporations will find another method  
3 to extract oil and gas and fossil fuels. And so,  
4 therefore, we have to understand that the system itself  
5 is destructive to the natural world.

6           It's not enough to just ban fracking or just  
7 to ban mining or other destructive activity. We have to  
8 fundamentally change the system of law. And that means  
9 in our communities, for example, in the United States  
10 not only are we assisting them to recognize rights of  
11 people, communities and nature, we're also, then,  
12 simultaneously removing corporate constitutional rights,  
13 corporate protections when they come in to violation of  
14 people, communities and nature. So essentially  
15 elevating the rights of people and nature over the  
16 rights that corporations have.

17           Because without a fundamental shift in that  
18 system, without establishing that the rights of people  
19 and nature are prime, then we are unable to protect the  
20 environment. And so we work with more than 30 plus  
21 communities in the United States to withdraw, to remove  
22 corporate constitutional rights when they will violate  
23 their human right to a healthy environment and the  
24 rights of nature.

25           And without doing that then you're kind of  
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1 leaving out half of the equation by establishing rights  
2 but without removing the rights and protections that the  
3 corporations have of which they can override the rights  
4 that nature has.

5 MR. GILL BOEHRINGER: Well, let me just  
6 follow-up on that again. Sorry, this is very  
7 interesting and important I think.

8 And I like your approach but I would say that  
9 I am a little skeptical about using the law and concepts  
10 of rights and so forth to control corporations given  
11 their power and not only regulatory capture but  
12 governmental capture.

13 And being a criminalologist I know that there is  
14 a lot of power that goes along with money and that  
15 corporate bodies have gotten away with murder in the  
16 work place, you know, and on and on and we could go on.  
17 And because there are many things in this discussion  
18 about fracking that reminds one of the tobacco  
19 companies, big pharma and the other who knows things.

20 Asbestos here in Australia. We had a shocking  
21 example of that with Hardee's. They know and they do.

22 So maybe we should be talking about getting  
23 rid of corporations in some way or moving towards a  
24 cooperative community rather than one dominated by  
25 corporations.

1 MS. MARI MARGIL: Well, I think to that  
2 point specifically, you know, when we work with  
3 communities they understand that it's not enough to  
4 prohibit fracking.

5 For example, without looking at another means  
6 to create sustainable energy systems and the idea of  
7 cooperatively or community owned systems, to provide  
8 energy or farming or water this course is being  
9 increasingly discussed and methods to implement.

10 Because I think you're quite right we just  
11 can't eliminate the need of energy. We need to a way to  
12 do it sustainably and locally and in a humane system.

13 And I guess I would just say one other thing,  
14 if I may, that is sort of a broader idea which is I  
15 understand what the Tribunal is very focused on fracking  
16 which, of course, is taking place now around the globe,  
17 but we also think it's critically important that we  
18 don't, I guess, divide ourselves by certain kinds of  
19 environmental destruction or environmental practice.

20 And by that, I mean, of course you mentioned  
21 big pharma. You know, there's big oil, there's big gas,  
22 there's big ag or big food. You know, there's all sorts  
23 of ways that corporations and industry have divided us  
24 as those who are seeking to protect the environment by a  
25 particular practice, environmentally destructive  
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1 practice such as fracking.

2           So which is to say that I think that we need  
3 to take a very systemic view of how we treat the natural  
4 world. So it's in the communities that we work it's  
5 very often that they're trying to stop a particular  
6 imminent threat such as fracking.

7           And so, of course, that's what they're focused  
8 on prohibiting as they establish the rights of nature.  
9 But they're not simply trying to protect the natural  
10 world from fracking. They're trying to protect it on the  
11 whole.

12           And, therefore, activities such as fracking  
13 but also corporate agriculture, pesticide spraying and  
14 other activities, communities and people who are  
15 advancing the rights of nature in other parts of the  
16 world at different levels of government, they're doing  
17 it on a broad spectrum that is to protect ecosystems, to  
18 establish the rights of ecosystems, the rights of  
19 natural communities across the board. Not just to stop  
20 fracking. Not just to stop corporate agriculture and  
21 other kinds of activities recognizing that it's going to  
22 take a fundamental systems change in how we treat the  
23 natural world.

24           And I think it creates difficulties with us  
25 within the activist or advocacy world trying to protect  
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1 the environment and that we find ourselves divided by  
2 these different practices.

3 And, therefore, we think we need a systems  
4 based approach, not only to protecting the natural world  
5 but in how we conduct our own advocacy to do so.

6 MR. GILL BOEHRINGER: Thanks. That's  
7 really important.

8 DR. MICHELLE MALONEY: Thank you, Mari  
9 I'm aware of time and our time allotment so we might  
10 move on but I can't really thank Mari enough for  
11 elaborating on the approach that they have been using  
12 and the work they've been doing and really the tragic  
13 consequences that they see in communities of the impacts  
14 of fracking.

15 And I guess I would also like to validate the  
16 approach that CELDF used and had shared with us and told  
17 us about which is this local law making approach, the  
18 blanket recognition of the rights of communities and the  
19 rights of nature to, indeed, challenge all environmental  
20 hazards and threats rather than breaking them off into  
21 little bite-sized chunks.

22 Mari Margil, you're very welcome to stay on  
23 this session with us. But thank you so much for your  
24 time. We'll now move on. Is that OK?

25 MS. MARI MARGIL: Thanks Michelle.  
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1 Thanks everybody.

2 DR. MICHELLE MALONEY: Thank you, Mari.

3 So thanks everyone for continuing to be with  
4 us.

5 In our next piece of video material we're now  
6 going to hear from scientist Dr. Damien Maher from the  
7 Southern Cross University based in Northern New South  
8 Wales in Australia.

9 Damien has done extensive research  
10 particularly focusing on the gas fields in Queensland.  
11 I apologize for not having a map but those not familiar  
12 with Queensland it's the big pointy bit at the top of  
13 Australia on the right-hand side. And the Surat Basin  
14 is in the middle of that big pointy bit at the top of  
15 Australia on the right-hand side.

16 I am now going to turn to my trusted  
17 colleague, Lisa Mead, to show the video. I interviewed  
18 Damien Maher last week and asked him about a couple of  
19 specific issues.

20 We were particularly interested in his  
21 research in fugitive methane emissions. So basically  
22 the gases that leak up through the coal seam wells in  
23 Queensland and trying to understand what are the threats  
24 from those methane gas emissions, the bits that leak  
25 through water and soil, its contribution to greenhouse  
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1 gas emissions and its threat to water and life around  
2 it.

3 So, Lisa, are you able to show that video for  
4 us?

5 MS. LISA MEAD: Yes.

6 DR. MICHELLE MALONEY: Thank you. It's  
7 about 15 minutes everyone.

8 MR. DAMIEN MAHER: My name is Damien  
9 Maher. I'm an Associate Professor at Southern Cross  
10 University in Australia. And I work in the School of  
11 Environmental Science And Engineering.

12 DR. MICHELLE MALONEY: Thank you, Damien.

13 Before we talk in detail about the research  
14 that you've undertaken in relation to fugitive emissions  
15 and unconventional gas extraction can you please give us  
16 an overview of how unconventional gas extraction  
17 contributes to climate change and why it's important to  
18 measure fugitive emissions.

19 MR. DAMIEN MAHER: So one way of talking  
20 about unconventional gas we're talking about extracting  
21 methane and methane is more potent as a greenhouse gas  
22 than carbon dioxide.

23 So if we have to look at the global warming  
24 potential of methane it's gotten 86 times more potent  
25 over a 20-year time frame and about 34 times more potent  
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1 than carbon dioxide over a 100 year time frame.

2 So essentially if we have leaks of that  
3 methane during the mining process or the transportation  
4 process then we need to account for that in terms of the  
5 affect on climate change because we're increasing the  
6 atmospheric concentration of methane.

7 DR. MICHELLE MALONEY: Thank you, Damien.

8 So now can you please turn to your own  
9 research and can you give us an overview of the research  
10 that you have carried out within Southern Cross  
11 University regarding fugitive greenhouse gas emissions  
12 from unconventional oil and gas extractions.

13 We're quite interested in knowing the nature  
14 of the research, your focus areas and the geographical  
15 location and what the key research parameters and  
16 questions were.

17 MR. DAMIEN MAHER: Okay. So the research  
18 that we've undertaken is primarily in the Surat Basin in  
19 Central Queensland.

20 The research questions that we were interested  
21 in were do we have higher methane concentrations in the  
22 atmosphere in the gas field as opposed to outside of  
23 those gas fields.

24 We've also done work looking at ground water/  
25 surface water connectivity and how coal seam gas  
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1 development may influence that in the Clarence Morton  
2 Basin, which is also in New South Wales.

3 So some of the research questions that we were  
4 really interested in is there a distinct enrichment of  
5 the methane in the atmosphere in those coal seam gas  
6 fields compared to nearby areas?

7 If so, what are the potential pathways of  
8 those emissions?

9 So is it coming just from the wells and the  
10 infrastructure or are there other pathways for that  
11 methane to enter the atmosphere?

12 We're also interested in whether or not we can  
13 use stable isotopes which are essentially a chemical  
14 fingerprint of that methane to determine if it's coming  
15 from the coal seam or if it's coming from other  
16 pathways.

17 So for the ground water/surface water  
18 connectivity work we did we're really interested in  
19 undertaking baseline studies to understand how important  
20 ground water is in surface water and river hydrology and  
21 ecology.

22 DR. MICHELLE MALONEY: Thank you, Damien.

23 So particularly in terms of the fugitive  
24 emissions can you talk to us a little bit about the  
25 findings of your research so far?

1                   MR. DAMIEN MAHER: Yes. So essentially  
2 what we found was much higher concentrations of methane  
3 in the gas field, in the Surat Basin, than outside of  
4 the gas fields.

5                   So we used instrumentation that allowed us to  
6 also measure the stable isotope ratio of those methane  
7 emissions and we compared that to the stable isotope  
8 ratio or the chemical fingerprint of the methane that is  
9 found within the coal seams of the area and we actually  
10 found that it matched as well.

11                   So not only do we have higher concentrations  
12 in the gas field but that methane is coming from the  
13 coal seam. So it can be, obviously, other potential  
14 sources of methane.

15                   So in that area there are large cattle feed  
16 lots and wetlands and so on but we were able to kind of  
17 narrow it down to emissions coming from the coal seam.

18                   So another bit of work that we were interested  
19 in was kind of characterizing the pathways for that  
20 methane to enter the atmosphere. And to do that we  
21 measured radon concentrations in the atmosphere. So  
22 radon is a radioactive gas that is formed in the soils.

23                   So our hypothesis was that, you know, some of  
24 these gases may be coming up through the soils rather  
25 than by the infrastructure. And through our radon  
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1 measurements we actually found a very strong  
2 relationship between radon concentrations and the number  
3 of nearby wells.

4 So it appears that this methane is not only  
5 leaking through or leaking through the infrastructure  
6 but also potentially coming up through the soils as  
7 well.

8 DR. MICHELLE MALONEY: Thank you, Damien.

9 So I guess to recap for a layperson, someone  
10 who is not a scientist, what you're telling us is that  
11 your research has demonstrated a process for identifying  
12 specific types of methane coming from specific sites.

13 You can actually tell through your process  
14 that it's coming from the gas fields.

15 MR. DAMIEN MAHER: Yes. We can use  
16 isotope fingerprinting techniques to differentiate the  
17 different potential sources so through doing that we can  
18 say that the dominant source of methane that was in the  
19 atmosphere came from the coal seam originally.

20 DR. MICHELLE MALONEY: Thank you. That's  
21 very helpful.

22 And another question, I guess, from a  
23 layperson's point of view, a non-scientific point of  
24 view, are you able to explain or quantify to what extent  
25 or to how much of the methane that's coming out of the  
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1 soil is different to what would be in the background  
2 atmosphere? Like what kind of volume are we looking  
3 at?

4 MR. DAMIEN MAHER: An excellent  
5 question. And certainly our research we couldn't  
6 quantify that yet and that's an ongoing area of research  
7 that we're looking at to kind of take those initial  
8 measurements where we can see that there are leaks and  
9 to actually quantify how large those leaks are.

10 So we're certainly still working on that but I  
11 couldn't give an answer to you now.

12 DR. MICHELLE MALONEY: Okay. Well,  
13 perhaps something that would help particularly as we  
14 have an international audience, can you estimate how  
15 many wells we have in Queensland at the moment or in  
16 Australia.

17 MR. DAMIEN MAHER: So looking as of about  
18 2014-2015 I believe there were about 6,000 or 7,000  
19 wells, coal seam gas wells but, yeah, since then I'm not  
20 sure. But certainly the number of wells has been  
21 expanding exponentially since the early 2000s.

22 DR. MICHELLE MALONEY: Yes. So if every  
23 well has been proven to be leaking methane we already  
24 have 7,000 to 10,000 of them in certain regions of the  
25 Australia and it's only growing then, obviously, the  
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1 total amount of methane fugitive emissions are  
2 increasing.

3 MR. DAMIEN MAHER: Yes, it's quite  
4 possibly the case but not all of the wells are leaking  
5 but, you know, there certainly hasn't been analysis on  
6 all of the wells. But what we can say is that there are  
7 leaks and widespread leaks occurring in these gas  
8 fields.

9 So other research in the US, for example, has  
10 found that a lot of the leaks are coming from a smaller  
11 number of the wells but, you know, I don't think we're  
12 in a position here in Australia to kind of make those  
13 judgments yet.

14 DR. MICHELLE MALONEY: Thank you, Damien.

15 So do you believe that given these leakages,  
16 these impacts on climate change, these leaks of methane  
17 into the atmosphere, can they be mitigated or completely  
18 eliminated from the industrial practices of the gas  
19 fields?

20 MR. DAMIEN MAHER: Well, my personal  
21 opinion is that you can not stop all the leaks. There  
22 will always be leaks. No matter how good the management  
23 is there will always be leaks.

24 So all that can be done is that things are  
25 monitored and measured and, you know, those leaks are  
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1 addressed as soon as they've kind of found.

2 I guess one thing that our research suggests  
3 may be happening are these methane leaks through the  
4 soils. So this could be due to changes in the  
5 geological structure through fracking and so on that  
6 actually increases the connectivity of the coal seams  
7 and the atmosphere. So we may have created cracks and  
8 fissures that actually allow that gas to flow from the  
9 coal seam into the atmosphere.

10 Now these leaks are far more difficult to deal  
11 with. And there's an example in the Surat Basin where  
12 we've done work of large methane seams in the Condamine  
13 River, for example.

14 Now whether those leaks are natural or due to  
15 industrial development in the area we may never know  
16 because we didn't undertake baseline studies in the area  
17 prior to the industry going ahead. But if these large  
18 seams are due to dewatering of the coal seam and  
19 fracking and so on then they may be occurring  
20 elsewhere. And trying to seal up these fugitive leaks  
21 is far more difficult than fixing up a leaking pipeline  
22 or well, for example.

23 So, yeah, my opinion is we can't stop all the  
24 leaks and it takes a lot of monitoring and good  
25 management to minimize those leaks.

1 DR. MICHELLE MALONEY: Thank you.

2 And, in fact, picking up on the absence of  
3 baseline information, would you say that this area is  
4 under researched in Australia?

5 MR. DAMIEN MAHER: That is certainly  
6 something that myself and my colleagues have been  
7 calling for is the extensive baseline studies prior to  
8 the development of an industry in area.

9 And certainly historically they haven't been  
10 done extensively enough and, you know, it's something  
11 that you really have to do to assess any changes. So I  
12 would certainly say that, you know, we need to be doing  
13 it and it's probably not being done as well as it should  
14 be.

15 DR. MICHELLE MALONEY: Yes. Thank you  
16 Damien.

17 It's obviously one of the many concerns is  
18 that the industry is underresearched and we do not  
19 understand its full impacts in many places.

20 So a final question is really your opinion,  
21 based on the work and the places you've been and the  
22 impacts you're seen, in your opinion, given our  
23 understanding and the current practices in the gas  
24 fields, do you think that fracking and unconventional  
25 oil and gas extraction should be banned?

1                   MR. DAMIEN MAHER: Well [indiscernible]  
2 need to make those decisions but certainly in particular  
3 areas, say, where we have ground water dependent  
4 ecosystems, very valuable ecosystems that may be  
5 affected by fracking and unconventional gas extraction  
6 then, yes, certainly in some areas it should be banned.  
7 But a whole industrywide ban, you know, that's not for  
8 me to kind of make a decision on.

9                   I would say that certainly we need to be  
10 assessing and accounting for the fugitive emissions when  
11 we're kind of weighing up unconventional gas in terms of  
12 it being a breaching fuel.

13                   So a lot of the push towards using  
14 unconventional gas as an energy resource has been based  
15 on the fact that at the end point of combustion we  
16 produce less greenhouse gases than if we were before  
17 using coal or other fossil fuels.

18                   However, if we start hitting on the global  
19 warming potential and the leaks of methane on top of  
20 those end point of combustion greenhouse gas emissions  
21 then we start to see a bit of a leveling of the playing  
22 field between other fossil fuels and gas.

23                   So we need to kind of look at the big picture  
24 scenario here when we talk about using unconventional  
25 gas as a breaching fuel.

1 DR. MICHELLE MALONEY: Absolutely. Okay  
2 Damien, thank you, so much for your time and we'll leave  
3 it there for now. Thank you.

4 Thank you very much, Lisa, for showing that  
5 video interview of Damien Maher.

6 I'm now going to return to sharing the screen,  
7 just bear with me while I fiddle with the technology and  
8 we'll move on to our next part of our presentation.

9 That was just a segue from the comments that  
10 Mari was making about the natural world not being  
11 property and the fact that around the world communities  
12 like the Australian Earth Laws Alliance community and  
13 others are hosting their own Rights Of Nature Tribunals.

14 We'll be holding our Rights Of Nature Tribunal  
15 in October on Saturday the 27th in Australia. We'll be  
16 looking at a range of issues to do with big Ag and the  
17 impacts on the Great Barrier Reef and forests.

18 I'm now very pleased to hand it over to Lisa.  
19 She's going to give an overview of some of the research  
20 that is connected to our submission that looks at the  
21 violation of the rights of nature due to earthquakes and  
22 seismic activity that is believed to be caused by  
23 unconventional oil and gas extraction.

24 So, Lisa, I'll move the slides for you. That  
25 might make it easier but if you would like to begin.  
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1 MS. LISA MEAD: So, yes, another very  
2 dramatic and immediate threat from unconventional oil  
3 and gas extraction to the living world is the industry's  
4 causation of earthquakes and seismic activity. And  
5 these are often caused by the waste water that remains  
6 after drilling activities being injected back  
7 underground at high pressure.

8 Now this waste water may contain chemicals,  
9 many unknown or untested chemicals, heavy metals and  
10 radioactive materials.

11 So in Appendix 1 of our written submission as  
12 well as in our main submission document we've set out a  
13 non-exhaustive list of some of the seismic events that  
14 have occurred as a result of various kinds of  
15 unconventional oil and gas extraction.

16 And just to give you several examples when it  
17 comes to nature that we're talking about this first  
18 example took place in 2011. There was a 5.3 magnitude  
19 earthquake in Colorado which was ascribed to waste water  
20 injection wells from coal bed methane production.

21 And the research that was carried out in the  
22 Raton Basin of northern New Mexico and southern Colorado  
23 but Justin Rubenstein and his colleagues in 2014, which  
24 we've referenced in our Appendix 1, showed clear  
25 evidence that the earthquake sequence was induced by  
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1 fluid injection from that coal bed methane process.

2 So the abstract of that research stated that  
3 they investigated the ongoing seismicity in the Raton  
4 Basin and found that the deep injection of waste water  
5 from the coal bed methane field was responsible for  
6 inducing the majority of the seismicity since 2001.

7 Many lines of evidence indicated that this  
8 earthquake sequence was induced by waste water  
9 injection.

10 First there was a marked increased in  
11 seismicity shortly after major fluid injection began in  
12 the Raton Basin in 1999. And from 1972 through July  
13 2001 there was one earthquake of a magnitude of greater  
14 than 4.0 in the Raton Basin whereas 12 occurred between  
15 2001 and 2013.

16 And they said that the statistical likelihood  
17 that such a rate change would occur if earthquakes  
18 behaved randomly in time is just 3%. So they said more  
19 of this rate change was limited to the area of the  
20 industrial activity and that earthquake rates had  
21 remained low in the surrounding area.

22 And so secondly that the vast majority of the  
23 seismicity was within five kilometers of the active  
24 disposal wells and the seismicity was shallow, ranging  
25 in depth from 2 to 8 kilometers.

1           And in our second example in 2006 mud began  
2 erupting from the ground in volcano-like fashion in an  
3 urban area of Java in Indonesia. And this was 2006.  
4 And as of 2015 so it was still flowing. This loosey mud  
5 flow it caused almost 40,000 people to be displaced and  
6 nearly three billion dollars in damages and disaster  
7 management.

8           And a study in 2015 concluded that the likely  
9 cause was nearby gas drilling which forced fluid into a  
10 clay layer via the open well. And I think there's a  
11 photograph on the next slide, or back one.

12           This was the first day it happened so you can  
13 sort of see the area that got some. Just a disastrous  
14 impact on that particular area.

15           So in our submission to the Tribunal we draw  
16 on the rights of nature set out in Article 2.1 of the  
17 Universal Declaration Of The Rights Of Mother Earth and  
18 assert that the rights of the land and the subsurface  
19 are being violated by these activities and, in  
20 particular, the following specific rights are being  
21 violated;

22           The right to well-being;

23           The right to continue their vital cycles and  
24 processes free from human disruptions;

25           The right to integral health;



1           And right to be free from contamination, pollution  
2 and toxic or radioactive waste.

3           And just to say I think Cormac Cullinan  
4 touched on this yesterday that the concept of integral  
5 health in the Declaration Of The Rights Of Mother Earth  
6 reminds us of the essential interrelatedness of every  
7 aspect of the earth's community and that the health of  
8 the whole system affects the health of any aspect or  
9 being within it, and vice versa.

10           So this understanding is also reflected in  
11 Article 1 of the Universal Declaration which states that  
12 each being is defined by its relationships as an  
13 integral part of Mother Earth.

14           And in this case it's clear that earthquakes  
15 and seismic activities disrupt the capacity of nature to  
16 provide a stable, safe place for life exist, to thrive  
17 and to flourish.

18           Thank you.

19           DR. MICHELLE MALONEY: Thank you, Lisa.

20           Because of time unless, anyone has a pressing  
21 query we might keep moving.

22           All right. We'll keep moving.

23           Thank you so much, Lisa. In a moment we'll go  
24 to our final piece of video evidence.

25           So we were very interested when we were  
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1 putting together the arguments and case that  
2 unconventional oil and gas extraction violates the  
3 rights of nature, to understand why communities were  
4 banning or creating moratoria to stop fracking in their  
5 communities.

6 So the next piece of video information is  
7 basically enabling us to learn from Scotland's approach  
8 to prohibiting gas fields in their communities and only  
9 the most extensive review of evidence undertaken.

10 We will hear, in a moment from, Professor  
11 Andrew Watterson from the University of Sterling in  
12 Scotland and Dr. Wil Dinan also from the University of  
13 Scotland.

14 Professor Andrew Watterson is the head of the  
15 Occupational And Environmental Health Research Group and  
16 a member of the Center For Public Health And Population  
17 Health Research at the University of Sterling in  
18 Scotland.

19 So he works in the areas of risk assessment,  
20 risk management, risk regulation, in energy and  
21 agricultural sectors. So his evidence is very  
22 important.

23 Dr. Wil Dinan is a lecturer in Communication  
24 Media And Culture at the University of Sterling. And

25 he's published on various aspects of political and  
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1 environmental communication and regulation.

2 So I will unshare and, Lisa, if you could run  
3 this video that would be terrific. Thank you.

4 DR. ANDREW WATTERSON: I am Andrew  
5 Watterson. I work at the University of Sterling in  
6 Scotland and I am in the Occupational And Environment  
7 Health Research Group which functions within the Center  
8 for Public Health and Population Health Research at the  
9 university.

10 DR. WIL DINAN: I'm Wil Dinan. I am from  
11 the faculty of Arts And Humanities Communication And  
12 Media Culture. I am affiliated with the health center  
13 that Andrew just mentioned.

14 DR. MICHELLE MALONEY: Can you please  
15 briefly outline the research that you've carried out in  
16 relation to fracking and unconventional oil and gas  
17 extraction?

18 DR. ANDREW WATTERSON: In the last four  
19 or five years we've been looking at unconventional gas  
20 extraction that's been linked to various proposed  
21 projects and developments in Scotland relating to coal  
22 bed methane and also underground coal gasification, but  
23 our focus has been primarily on fracking. And in that  
24 context we've got a range of interests initially linked  
25 to looking at health impact assessments that have been  
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1 done on fracking, both in England but also further  
2 afield and to get an idea about what the hazard are,  
3 what the risks are.

4 DR. MICHELLE MALONEY: Can you confirm  
5 the countries the research that you were looking at?

6 DR. ANDREW WATTERSON: American  
7 research. We looked at Canadian research. We looked at  
8 Australian research. We looked at some German research  
9 as well. So we cast our net fairly widely.

10 Obviously fracking is going on in a limited  
11 number of countries. And the US is the major source of  
12 information and there is quite a lot of paradoxical  
13 things for us because the industry was constantly saying  
14 we've learned from the lessons of Pennsylvania and now  
15 things are better.

16 And we were frequently reading, of course,  
17 about a whole series of problems still in Pennsylvania.  
18 But obviously you're looking at where the activity has  
19 gone on although different countries might have had  
20 different settings.

21 DR. WIL DINAN: We also looked at, just  
22 very briefly, what we could find just in terms of policy  
23 debated places where they were considering fracking  
24 too. So, we were just looking at where public opinion  
25 was on this issue in different countries to summarize a  
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1 bit about the research as well.

2 DR. ANDREW WATTERSON: And we were also  
3 interested in looking at the total picture surrounding  
4 fracking with regard to the health of the life cycle  
5 analysis of fracking.

6 So that means when the materials come in what  
7 are the health implications. The technology, the  
8 machinery that's developed, what are the implications?  
9 The transport in and materials. The removal of products  
10 and the removal of waste products at the end,  
11 decommissioning and so on, the total picture.

12 We find that there are often life cycle  
13 analyses of the economic impacts of energy activities  
14 but there isn't one for fracking, or at least not yet.

15 And we were concerned that some of these  
16 impact assessments were limited but they could be skewed  
17 towards industry rather than take full note of the  
18 position of the communities. And that they might even  
19 reflect the view of government that had already  
20 prejudged the issue of fracking and effectively was  
21 engaged in gathering evidence to approve a particular  
22 policy option other than making policy on the basis of  
23 the evidence.

24 So we looked at scientific and governmental  
25 papers. We looked at toxicology and epidemiology  
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1 papers. We looked at industry and regulatory practices.

2 We were also concerned with possible  
3 implications for climate change and public health,  
4 mental health and well-being and where the precautionary  
5 principle fitted into all of this.

6 DR. WIL DINAN: Yes. And I should just  
7 add to what Andrew said there. The way that this comes  
8 from studying, I suppose, that the policy process and  
9 communication around this issue looking at how industry  
10 would seek your consent for operating and for fracking.  
11 But also I suppose how scientific expertise and  
12 different forms of expertise were translated into the  
13 policy debate.

14 So the results of those kind of interests  
15 Andrew were laid out and that kind of formed the basis  
16 for a series of articles that were published over the  
17 last few years.

18 MS. MICHELLE MALONEY: Would you  
19 summarize the main findings of your studies?

20 DR. ANDREW WATTERSON: Okay. So,  
21 together we've done three peer reviewed papers in  
22 scientific journals and we've produced two reports and  
23 we've also offered information to governments and  
24 others.

25 So our concern was about how that risk that  
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1 related to the established hazards and some of the  
2 suspected hazards that the fracking were dealt with.  
3 And to do that we needed to look at a range of  
4 scientific literature and, as Wil said, to look at some  
5 of the policy materials to give us an idea of what was  
6 going on.

7           So at the end of the day we had 14 projects or  
8 papers that were looking at fracking and were providing  
9 information about both public health and related issues.

10           And we looked at the processes that were used  
11 to create policy. And within those paper and reports we  
12 looked at 10 key characteristics linked to public  
13 health.

14           So that would include occupational health. It  
15 would include climate. It would include transport. It  
16 would include seismicity. It would link in with the  
17 economic benefits and disbenefits. And I think Wil will  
18 say something about sort of the broader elements about  
19 that. We also looked at regulation and industry.

20           And what we found was that, firstly, Scotland  
21 was the only national assessment that had ever been done  
22 of fracking. So there had been assessments in states  
23 the US. There had been some assessments made in  
24 provinces in Canada. There had been some studies done  
25 in towns and municipal regions but the only global  
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1 national assessment of fracking had come out of  
2 Scotland.

3 And Scotland also addressed all of the key  
4 areas that have been mentioned and brought them together  
5 in the context of engaging the public as well. So they  
6 had the findings. There was the evidence. They got a  
7 view from the scientific community, from regulators and  
8 then they presented out to the public and communities.  
9 But in that sense it was quite unique.

10 But at the time it was done it was the most  
11 extensive review of the literature, the most up to date  
12 review of the literature. Not perfect and Wil will  
13 perhaps say something about that a little bit later.  
14 But, nevertheless, the best thing that we had to offer.

15 DR. WIL DINAN: Yeah, I would just add to  
16 that, I mean I think really two features to that in  
17 terms of the depth and the detail of the Scottish case.

18 One was the analysis of public health research  
19 and public health impact strand. And that was very, very  
20 detailed.

21 I think it was conducted in a way that allowed  
22 other research-makers to make a serious evaluation of  
23 the work that had gone into our opinion, the advice that  
24 was given to government. So that was one aspect that  
25 stood out that led into.



1           The other I think really outstanding aspect in  
2 terms of comparatively understanding which was that the  
3 public consultation element was very, very strong. Very  
4 few of the other integrated assessments we looked at had  
5 such an element of public engagement.

6           Some of them had elements early in the process  
7 where they kind of consulted key stakeholders and then  
8 carried on.

9           The Scottish study which, I suppose, is  
10 remarkable for its effort of those stakeholders early in  
11 the process and then returned with this evidence to the  
12 public later on for kind of a wider differentiation  
13 about what this all means and then that fed into  
14 policy-making. Of course policy-makers weren't bound by  
15 this but it certainly informed their thinking and I  
16 think that was a real, you know, a real striking  
17 characteristic of the Scottish case.

18           DR. MICHELLE MALONEY: Do you think that  
19 there were any things that you would have improved in  
20 the way they would have approached it?

21           You said it was outstanding in some ways.

22           DR. ANDREW WATTERSON: I think they can't  
23 justify their conclusions but there were big gaps in the  
24 evidence about the tangent effects but it was also, from  
25 our point of view, evidence of significant problems in  
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1 the literature. And not all of that literature was  
2 necessarily -- that was available was necessarily  
3 covered at the time.

4 So at the time and since we've seen more  
5 evidence about the neurological effects, about the  
6 reproductive effects, about developmental effects, about  
7 carcinogenicity and possible exposures, about mental  
8 health and well-being damage. All of those things have  
9 come out and, perhaps, could have been even stronger in  
10 the reports.

11 I think we were concerned that there was  
12 probably an underclaim of the mental health and  
13 well-being impacts, both in proposals to fracking as  
14 well as fracking.

15 And we also had some concerns about probably,  
16 I think we would say, a lack of rigor in terms of  
17 looking at how well regulators could deal with the  
18 problem and how good industry practice was.

19 In a sense some of these things were taken as  
20 a given but with all of those limits, nevertheless, the  
21 conclusion of those reports was that you couldn't make a  
22 strong case for fracking linked in with the things that  
23 Wil mentioned in terms of the public engagement which  
24 was huge. Nothing like it has occurred anywhere else on  
25 the globe.

1 I think that underpinned the decision that the  
2 Scottish government took the policies issue not to  
3 pursuing fracking.

4 DR. WIL DINAN: It's kind of striking  
5 when you look at it in terms of what this debate is  
6 really about is that there was not really a dedicated  
7 Environmental Impact Assessment. So you had a really  
8 striking quite detailed -- I can go into some of the  
9 minutia later on but still I would say it was globally  
10 quite an impressive public health impact assessment.

11 And for some reason the Scottish government  
12 decided not to have an Environmental Impact Assessment.  
13 They would argue it was assumed under an opinion that  
14 came from the climate commission about climate impacts  
15 and stuff but you still -- there wasn't the depth in  
16 that approach that you saw in terms of public health.  
17 So I think that's quite striking.

18 DR. MICHELLE MALONEY: What poses the  
19 biggest health risks, either to humans or to animals?

20 DR. ANDREW WATTERSON: I think there's  
21 probably international agreement about what the risks  
22 will be. There will be air pollution. It's what level  
23 will the pollutants be there?

24 The hazard is there. Nobody disagrees about  
25 that. It's what the risks will be. What the exposure  
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1 will be.

2           The same would be true of water, and we're not  
3 just talking about accidental spills there, we're  
4 talking about waste water treatments and indeed the  
5 capacity, certainly in Europe and this has been flagged  
6 by other researchers, the capacity to deal with fracked  
7 water. So that would be an issue.

8           And then there is the problem afterwards about  
9 to what extent do we understand the geology, bearing in  
10 mind particularly in the central belt of Scotland is a  
11 coal mining area with lots of seams and shafts, that  
12 could be a major issue. I think that could be within  
13 England.

14           And then we've got the soil pollution issues.

15           So I think there is, even in industry, there  
16 is a recognition that there are hazards. The argument  
17 is that the industry will be able to control soil, water  
18 and air pollution, and it will never be at levels that  
19 create a problem.

20           But that seems to ignore, from what we have  
21 seen and again, perhaps, it was underplayed in some of  
22 these Scottish government reports, it seems to ignore  
23 the issue of low level exposure, you know. And if  
24 people are focusing on parts per million or parts per  
25 billion they're missing the picture because if we're  
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1 looking at endocrine disruptors and some of the other  
2 effects we're looking at parts per trillion having an  
3 effect.

4           So the argument, well, there will only be very  
5 low exposure, it won't be a problem, simply isn't the  
6 case.

7           And what's perfectly clear from the work of  
8 environmental scientists in the UK, highly respected  
9 ones, is that the view that if we pursue this as an  
10 energy source then the climate impacts are going to be  
11 considerable and those impacts will adversely affect  
12 public health.

13           So I think our focus has always been public  
14 health. And the big global picture will come back to  
15 Scotland. People in Scotland won't escape the  
16 implications -- about the public health implications of  
17 climate change. So the big picture is that it's a  
18 no-no.

19           There are alternatives that are likely to be,  
20 certainly in the middle term, again, leading to greater  
21 prosperity, you know, tourism and the green image of  
22 Scotland. So all of these things would be damaged by  
23 having hundreds or thousands of wells. And, you know,  
24 there is the threat of livelihood as a public health  
25 issue.

1           The benefits perhaps, the economic benefits,  
2 that have been identified seem to be very, very small.  
3 And it's not a sustainable approach even in terms of the  
4 industry for more than a decade or two.

5           DR. WIL DINAN: I think I would like to  
6 jump back to his last point being that the economic  
7 analysis I think, but even the best projections that  
8 were estimated on the impact, long term impact of  
9 fracking in Scotland were still disappointingly low, in  
10 fact disproportionately low I thought.

11           But, you know, it really made it difficult for  
12 the Scottish government to make a case based on kind of  
13 the benefit in terms of economics. So I think all these  
14 issues that Andrew raised around the difficulties --  
15 you know, it would almost force government into a  
16 precautionary approach.

17           And I think what's really striking in terms of  
18 the Scottish posture on this compared to the UK posture  
19 is that the Scottish government has kind of adopted,  
20 they don't use that language precisely, but there's very  
21 definitely precaution in our policy-makers who have  
22 proceeded with this whereas you compare it to  
23 Westminster it's kind of an economical dash for cash and  
24 they're doing it in the face of quite, you know, public  
25 opposition. And, as Andrew pointed out, actually a huge  
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1 amount of questions and evidence, comments before, that  
2 really questions the sense of this in terms of  
3 sustainability, economics and the kind of global  
4 impacts.

5 MS. LISA MEAD: That's the end of the  
6 video. Do we have Michelle there?

7 DR. MICHELLE MALONEY: Yes, I'm still  
8 here. Thank you, Lisa. Thank you very much for showing  
9 that video material.

10 I'll just bring up our slides again so that we  
11 can move into our closing statements. Okay.

12 So I really want to thank Lisa for having that  
13 discussion with the researchers in Scotland. I think  
14 it's very important that we learn about all this  
15 analysis the reasoning that they used to actually impose  
16 this moratorium or a ban on fracking. It's a very  
17 valuable report as well for the rest of us.

18 So we're very pleased to be coming to the end  
19 of basically the four hours of discussion about earth  
20 rights within the context of this Permanent Peoples'  
21 Tribunal on the impacts of fracking.

22 What I would like to do is give a brief  
23 summary of the overall case that we've presented to the  
24 Tribunal and then I'll hand over to Lisa to talk about  
25 what we would request the Tribunal consider and  
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1 recommend.

2           So in a very brief overview of the session  
3 today we've heard from Mari Margil at CELDF about the  
4 work they've been doing in the United States to not just  
5 activate bans on specific areas related to fracking but  
6 to actually look at transforming the system by using  
7 community rights and nature rights to, I guess, to  
8 impose a local law that actually bans those activities  
9 but also protects the right of nature.

10           We have also heard evidence about linking to  
11 greenhouse gas emissions and other aspects that I'll  
12 talk about. But in summary by drawing on the Universal  
13 Declaration of The Rights of Mother Earth, the UDRME, we  
14 argue that nature's rights are being violated by  
15 unconventional gas and oil extraction in four main or  
16 four significant areas.

17           It violates the rights of rivers, aquifers and  
18 waterways and by linking specifically to the wording of  
19 the UDRME we believe fracking violates waterways and  
20 rivers in that it violates their right to continue their  
21 vital cycles and processes free from human disruptions;

22           It violates the right to integral health, which  
23 Lisa spoke about before as a way of explaining or  
24 articulating the interconnectedness or the vital inter-  
25 connectedness of the good ecological health;



1           It also violates the right of water systems to be  
2 free from contamination, pollution toxic or radioactive  
3 waste;

4           We heard from Gavin Mudd in Australia where the  
5 Condamine River has now quite famously been set alight  
6 because it had so much gas or methane bubbling up into  
7 the waterways, this in an extremely arid area.

8           We also heard that sometimes when the fracking  
9 and coal seam gases process takes place no one can  
10 guarantee that they can repair the aquifers, the actual  
11 structural damage to the rocks and the soil and earth as  
12 they break through.

13           And the interconnectivity of the waterways  
14 means that when you violate the rights of a river in one  
15 place that water flows and interconnects to ground water  
16 and other places. So we strongly believe fracking  
17 absolutely violates the rights of rivers, aquifers and  
18 all things liquid in the living world.

19           We also just today heard from Damien Maher  
20 about the research that's been undertaken to look at  
21 fugitive emissions from coal seam gas in Australia but  
22 research around the world shows that methane, which is  
23 the most damaging greenhouse gas emission, is leaking  
24 from coal seam gas and other forms of fracking.

25           I think the thing that was perhaps most scary  
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1 about Damien's evidence is that they've got a very  
2 specific process of proving that methane emissions are  
3 coming from the industrial gas processes. It's not  
4 background -- in the background of nature.

5 There is an absence of information. There are  
6 no baseline studies undertaken about what's going on in  
7 the atmosphere or many other aspects earth before these  
8 coal seam gas and other gas fields are constructed.

9 We can not, at the moment, quantify the volume  
10 of methane that is entering the atmosphere.

11 I find this particularly worrying that  
12 scientists have been continuously stating that they can  
13 prove methane is coming out, they don't know how much,  
14 and if we've got 7,000 to 10,000 gas wells in Australia  
15 that's tiny in proportion to what's in the US,  
16 therefore, the greenhouse impacts of fracking and  
17 unconventional oil and gas exploration is absolutely  
18 without doubt the extent to which we don't even  
19 understand.

20 This is a horrific violation of global efforts  
21 to reduce greenhouse gas emissions. And it's also a  
22 violation of the rights of the climate system that has  
23 evolved over billions of years to provide life, to have  
24 a right to integral health, to be free from  
25 contamination and to support life.

1           The third and second to last area is the  
2 violation of the rights of land and subsurface.

3           Again, in today's session Lisa Mead gave a  
4 good overview of some of the research presented in our  
5 submission that indicates fracking and the violence of  
6 pushing down through the land has created seismic  
7 activities, earthquakes and some of those really  
8 devastating mud pools and mud slides in other places.

9           The evidence that's emerging around the world  
10 of the violation of the land and subsurface definitely,  
11 from the point of view of the UDRME, violates the right  
12 to well-being, the right for the land to be a place to  
13 support Mother Earth, the right to continue vital  
14 cycles, integral health and, again, to be free from  
15 contamination, pollution or radioactive and toxic waste.

16           Finally we saw devastating information from  
17 Michelle Bamberger about the impact of fracking in the  
18 US on animals.

19           We heard from David Paul about, again, the  
20 absence of information and significant research that can  
21 prove that there is no harm from gas wells and others to  
22 natural systems.

23           The impacts on water alone can have a  
24 devastating impact on plants and animals. So we would  
25 argue or put to the Tribunal that unconventional oil and  
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1 gas extraction absolutely violates the rights of animals  
2 and plants in terms of their right to well-being, the  
3 right to a place, somewhere safe to live, to play their  
4 role in the ongoing evolutionary functioning of the  
5 earth. A right to continue their vital cycles and to be  
6 free from contamination.

7 About the only other thing I wanted to mention  
8 was that throughout the evidence, particularly from the  
9 scientists in our session, we have seen not only the  
10 violation of the natural systems but really some very  
11 fundamental violations of existing international law  
12 including the precautionary principle.

13 We have seen a plethora of evidence that shows  
14 no baseline studies, no real understanding of the impact  
15 of these stresses and in the face of a principle as  
16 simple as a precautionary principle, if we are uncertain  
17 as to the extent of damage but we know that there could  
18 be damage we simply shouldn't go ahead.

19 When you combine the precautionary principle  
20 with some of the information that Damien Maher suggested  
21 at the end of his testimony, which is in light of the  
22 methane emissions alone the argument used by the  
23 industry to support the expansion of fracking that  
24 fracking and gas is our bridging fuel I think have been  
25 actually shown to be erroneous. It cannot be a bridging  
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1 fuel if it's actually leaking methane into climate  
2 change processes.

3 And, in fact, as Mari Margil said by having  
4 these industries in place we are preventing our  
5 communities and societies from shifting to clean energy  
6 and clean fuel.

7 So with that I am going to hand over to Lisa.  
8 We believe that the rights of nature are extremely  
9 violated. We feel that the UDRME, if it was the basis  
10 today of current and existing law globally and in  
11 Australia, we would have legal grounds to ban fracking  
12 and coal seam gas.

13 I would now like to hand it over to Lisa to  
14 talk about what we would like to recommend to the  
15 tribunal.

16 MS. LISA MEAD: Thank you, Michelle. Can  
17 I shift down to our request to the Tribunal?

18 So we ask the esteemed judges of the Tribunal  
19 to acknowledge and recognize nature's rights as  
20 fundamental to the health of nature of which humans are  
21 a part and of ecosystems. And we ask the Tribunal to  
22 declare the continued exploitation of unconventional oil  
23 and gas as entirely indefensible from the perspective of  
24 climate change and we ask the Tribunal to condemn the  
25 devastating impacts of unconventional oil and gas  
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1 extraction on the natural world in all jurisdictions  
2 where it takes place.

3 And we lastly ask the tribunal to call for a  
4 cessation of all unconventional oil and gas immediately  
5 and for a worldwide ban on the industry for all the  
6 reasons we've stated.

7 And the next slide. So furthermore, in terms  
8 of restorative measures, which is a fundamental  
9 principle of earth jurisprudence, we ask the Tribunal to  
10 call for a full and prompt restoration for the  
11 violations of the rights recognized in the Declaration  
12 Of The Rights Of Mother Earth caused by human  
13 activities.

14 And we also ask the Tribunal to order that  
15 governments and corporations in all affected  
16 jurisdictions create a special fund which communities  
17 can use to, wherever possible, restore the natural world  
18 to the conditions that it was in before the industry's  
19 actions took place where this is possible.

20 And in closing just a couple of final  
21 thoughts. Of course, we are nature. We humans are a  
22 part of nature. And this just reminded me of the street  
23 slogan that emerged during the Paris Climate Change  
24 talks which said we are not fighting for nature. We are  
25 nature defending itself.

1           And if we look beyond ourselves, beyond the  
2 planet to the wider picture, we see that we need to  
3 think systemically because everything we do needs to  
4 operate within the limits of the system we are in.

5           So, of course, our economic system is just a  
6 subsystem of a much larger planetary system and we  
7 simply cannot keep behaving as if we can have endless  
8 growth on a finite planet.

9           And, of course, the dash for gas and oil in so  
10 many places at the moment is part of this ignorant  
11 dinosaur thinking, with all due respects to dinosaurs.

12           So really it comes down to us recognizing that  
13 nature has non-negotiable constraints that must be  
14 respected and complied with. And, of course, we ignore  
15 this at our continuing peril.

16           So I would like to thank the judges who have  
17 been present today who have stayed with us and also for  
18 the PPT for giving us the chance to present these  
19 arguments and ideas on behalf of nature to allow us to  
20 speak on behalf of nature.

21           So thank you also to our witnesses, our fellow  
22 lawyers, to Phoebe and Cassie who helped us put our  
23 evidence together. They were amazing. And really to  
24 everyone who has been part of this.

25           Thank you and good night.  
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1 DR. MICHELLE MALONEY: Or, in my case,  
2 good morning.

3 As closing remarks if the Tribunal would like  
4 to explore any of the documentation or the evidence  
5 we've presented in our submission please e-mail us at  
6 anytime. We would be very happy to provide you data or  
7 details but on that I guess we'll close, is that right?

8 DR. THOMAS KERNS: We have time for  
9 questions.

10 MR. GILL BOEHRINGER: Just one comes to  
11 mind. You talked about a special fund. Did you have  
12 any particular targets from whom you wanted to attract  
13 the money or extract the money?

14 DR. MICHELLE MALONEY: I personally think  
15 that's quite a complex issue because some of the  
16 companies in Australia and the government liability  
17 would have to be kind of thought through.

18 And particularly in the US it's been an  
19 industry that is now incredibly extensive. So I think,  
20 quite frankly, if we were to succeed in some kind of ban  
21 any company anywhere that has been engaging in that  
22 industry activity would be targeted.

23 MR. GILL BOEHRINGER: Yes, I agree. It  
24 certainly shouldn't be the taxpayers.

25 DR. MICHELLE MALONEY: Oh, definitely  
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1 not.

2 DR. THOMAS KERNS: I have a response to  
3 that. Just something that I had hoped we'd been able to  
4 enter in to the Tribunal. Maybe this is the place to do  
5 it.

6 Mary Wood teaches law at the University of  
7 Oregon who initiated the whole idea of the Public Trust  
8 Doctrine that led to the our Children's Trust Cases.  
9 Are you familiar with her?

10 She has a new prospectus that directly  
11 addresses your suggestion there Lisa. She refers to the  
12 carbon majors and that there are suits already underway  
13 against some corporations for billions of dollars for  
14 reparations.

15 And her prospectus put it together and I heard  
16 her outline this at a law conference a couple of months  
17 ago and she's summarized it into a little three or four  
18 page prospectus that I would have liked to be part of  
19 the Tribunal as one of the things that we could ask the  
20 Tribunal judges to recommend.

21 MR. GILL BOEHRINGER: Is that available?

22 DR. THOMAS KERNS: It's available, yeah,  
23 and I would be happy to enter it into the record.

24 MR. GILL BOEHRINGER: I think we'd be  
25 happy to see it.

1 DR. MICHELLE MALONEY: And we can add it  
2 as an addendum to our submission as well. And I think  
3 she looks more broadly across the fossil fuels and not  
4 just at fracking. So I think it would be an excellent  
5 suggestion. Thank you.

6 DR. THOMAS KERNS: That's right. And the  
7 whole focus of it is the public trust which she sees,  
8 and I kind of agree, as a human rights issue. And I  
9 would be interested to hear your thoughts as to the  
10 public trust ideas notion, how that connects with rights  
11 of nature, if at all.

12 DR. MICHELLE MALONEY: Well, it does, and  
13 I'll go first but if Lisa would like to comment too.

14 The Public Trust Doctrine is particularly used  
15 in the US. It has limitations in other jurisdictions  
16 because it's either not historically used or there's no  
17 structure for it. So for many people in the US they  
18 think it's like a generic legal thing. It's not. In  
19 Australia it's very rarely engaged.

20 From the point of view of the rights of  
21 nature, if I was to be a purest, I would say that the  
22 Public Trust Doctrine in the US and in a few other  
23 places that it engages with it's predominantly focused  
24 on the government as the holder of the trust of the  
25 people.

1           So it's actually very, very powerful and very  
2 useful. But if, in fact, the government is the holder  
3 of the so-called property rights over nature the Rights  
4 Of Nature Movement, in a way, challenges that notion and  
5 looks for more ecologically democratic and guardianship  
6 based structures to support the rights of nature.

7           So that's a very simple, as you can imagine,  
8 simplified analysis. It's very powerful but if you're  
9 to be a purest it's not the most effective way.

10           DR. THOMAS KERNS: If you were try to make  
11 them compatible in some way do you think that's even  
12 possible?

13           DR. MICHELLE MALONEY: Yes, of course.

14           DR. THOMAS KERNS: Because, in some ways,  
15 the Public Trust Doctrine is basically that governments  
16 are the holders of a trust for future generations that  
17 they will be able to have the same resources that this  
18 generation has.

19           So it kind of looks at public lands as stuff,  
20 you know, things, to be held in trust for future humans.

21           It seems like it would be hard to fit them  
22 together but if there was some way to make all three of  
23 those things, human, rights of nature and public trust  
24 fit together that could be a powerful --

25           DR. MICHELLE MALONEY: I would agree.  
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1 But I would also suggest that you don't need public  
2 trust to create powerful mechanisms to support the  
3 natural world.

4 For example, what's happened with the  
5 Whanganui River has nothing to do with the public trust.  
6 The Maori people who see their world view as deeply  
7 connected to the spirit and material values of that  
8 river are now guardians in conjunction with the Crown.

9 There's no need for public trust because --  
10 but, you know, the essence at the end of the day, a  
11 trust structure created in western legal concepts was  
12 always about creating a beneficiary and a distance  
13 between the people managing it and the folks who would  
14 benefit from it.

15 So we can definitely create a manner of  
16 frameworks to support better custodianship of the  
17 natural world and human rights. I think public trust  
18 has a lot of offer.

19 And in the same way as we see legal personhood  
20 as, in some ways, an easy step for western legal systems  
21 to comprehend and understand or act, public trust  
22 mechanisms are similar. They can be a system that can  
23 move away from the excessive privatization of everything  
24 and hold things in a public trust.

25 However, I would suggest that in this day and  
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1 age we can't rely on governments to be the public trust  
2 holders because they are so often influenced, and I'm  
3 being polite here, by corporate interests. So community  
4 land trusts, indigenous structures of custodial  
5 responsibility enshrined in modern legal systems are  
6 actually what's most exciting in the rights of nature  
7 space I would suggest.

8 DR. THOMAS KERNS: Thank you.

9 DR. MICHELLE MALONEY: Thank you. I do  
10 actually have to run. I'm so sorry. We've got a very  
11 tight time frame this week for my activities but then if  
12 you've got one more quick question and I'm happy to take  
13 it or I can jump off with great humility and gratitude  
14 and leave you with Lisa.

15 DR. THOMAS KERNS: Other questions?

16 Okay. Shelly is probably going to come back  
17 on here in a second and say --

18 DR. MICHELLE MALONEY: Well, I think  
19 we've all done marvelously. I'm very impressed that  
20 it's 8:30 my time and we're finished.

21 DR. THOMAS KERNS: You even started three  
22 or four minutes late I think.

23 DR. MICHELLE MALONEY: I think it was  
24 more like ten minutes late.

25 [youtube.com/watchv=mwtwjse8SuU]  
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