Northern Ireland Assembly

Committee for Enterprise, Trade and Investment

OFFICIAL REPORT (Hansard)

Shale Gas Exploration: Fermanagh Fracking Awareness Network

21 June 2012

NORTHERN IRELAND ASSEMBLY

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Members present for all or part of the proceedings:
Mr Alban Maginness (Chairperson)
Mr Daithí McKay (Deputy Chairperson)
Mr Steven Agnew
Mr Gordon Dunne
Mr Phil Flanagan
Mr Robin Newton
Mrs Sandra Overend

Witnesses:

Dr Davide Gallazzi	Fermanagh Fracking Awareness Network
Ms Isobel Leonard	Fermanagh Fracking Awareness Network
Dr Carroll O'Dolan	Fermanagh Fracking Awareness Network
Mr John Sheridan	Fermanagh Fracking Awareness Network

The Chairperson: You are very welcome. I am sorry that it has taken so long, but we will try to give you a good run at this. I am very pleased to see you.

This is a very contentious issue, and it is the first time that the Committee has heard evidence on the subject. We know that people in the community are very concerned about fracking. As the previous witnesses accepted, this is about managing risk. We want to hear your points of view, and we thank you very much for your written submission to the Committee. It has been very helpful. Would you like to make an opening statement and then we can move to questions?

Dr Carroll O'Dolan (Fermanagh Fracking Awareness Network): Yes, thank you.

The Chairperson: Would you like to introduce your colleagues, Dr O'Dolan?

Dr O'Dolan: I am a rural GP, and I live in Florencecourt, County Fermanagh. I am accompanied by John Sheridan, a farmer from County Fermanagh, and Davide Gallazzi, who is a geologist who lives just across the border in Sligo. His area will also be affected.

The Chairperson: My mother was born in Sligo.

Mr Flanagan: That is what happened to you. *[Laughter.]*

The Chairperson: That is a terrible comment.

Dr O'Dolan: Isobel Leonard runs an outdoor activity centre in County Fermanagh. Therefore, health, farming, geology and tourism are represented here. I thank you for inviting us.

We are not anti-development. We are very much for development in our county and in the whole of Northern Ireland, and lots of issues are covered. We are all local people and concerned citizens. We are professionals in our own right, but we are not professional oil and gas industry people. We have had to do a lot of research, because the information that we needed did not come to us. We have produced a document, and I will go through the graphs and the other visual material. The other information is quite detailed, and I am sure that you have read and enjoyed that.

There is a huge sense in County Fermanagh that people are being kept in the dark. The company held one single meeting in County Fermanagh. That took place in Enniskillen, which is outside the licence area. I am sure that the Department of Enterprise, Trade and Investment (DETI) and a lot of government agencies know that if you want to engage rural communities, you have to meet not only in the local county town but more locally. There has been a meeting since then, when Tamboran spoke to the Lisnaskea Chamber of Commerce last month, but that also took place outside the practice area. We feel that if the company has the time and the people on the ground to come to Fermanagh to speak to people, it should speak to people in the area about their concerns.

The issue of open debate without aggression is also very important. One local party tried to organise a debate with an invited audience to avoid hecklers, and Tamboran turned that down. That would have been a chance for debate with the company, but that was not forthcoming. The big issues are health, water, economics, farming and tourism, and fracking is nationwide issue that will affect everybody in Northern Ireland. Our country has a reputation and perception, and we need to be aware that this is not just about one part of a small piece of Northern Ireland.

The graphs from page 7 onwards are from Tamboran's website. The company gives different figures, and the scenario changes from month to month. It was mentioned that Tamboran has not made many plans, but, as we will see, it has very advanced plans on what will happen. The implication and feeling on the ground in Fermanagh is that this is at a far more advanced stage than just thinking about an environmental impact statement in 2013. The graph on page 7 shows the company's annual investment. It covers both sides of the border and is in dollars. On some of the web pages, the figures are in euros, on others, they are in pounds, and on some web pages, they are in both. The figures change, but the graph tells the story that the investment is roughly €16 billion over 50 years. Tamboran recently mentioned that the initial investment will be £300 million for cross-border development in the first few years.

The first graph on page 8 shows the typical production of a limited extractive industry that exhausts the local material. However, the job figures in the graph underneath do not follow a similar curve. In most of the mining industry, as your production decreases, your number of jobs will decrease. It would be very unusual, from an economic point of view, to maintain a high number of jobs when your volume is dropping.

The graph on the next page shows figures from Wyoming, where under peak production and development down to the maintenance, there is a drop of 7:1. The previous page mentioned 1,200 cross-border jobs, and, based on what is happening in real cases, it is implied that the figure will drop down to 160 jobs rather than 600 on both sides of the border.

There is a summary of well production in the graph on page 10. There is quite a steep drop-off in well production, which is why Tamboran will have to refrack. The volumes of water involved are very large. The company says that it can do things that other companies have not been able to do. It says that it is going to do chemical-free fracking and that it will recycle 100%. It all seems to be cutting edge and innovative. For "cutting edge and innovative", we read "experimental: watch this space". The fracking industry is not a proven industry; it is a seven-year-old industry. The reason that New York state has a moratorium on fracking is because it considers it a new industry.

Vertical fracking has been a steep learning curve for all of us. It has been about since the 1940s. Probably the easiest way to describe that is to go to appendix 2. On the right of page 2A is the typical old-fashioned gas and oil well, as we all know from our geography classes. Vertical fracking is used to get the last bit of oil and gas out that did not want to come very easily. On the left is the unconventional gas well. There is a huge difference. That is why we say that it is a new industry. Several different techniques came together in the late 1990s. They were fine-tuned, and they finally came together in the 21st century. Fracking really got its big kick-start in 2005, when it was exempted from seven environmental laws in the USA. Since then, the American Government have had a lot of

problems. Every time a problem pops up, the many companies say that they will solve it. Another problem then pops up, and they say that they will solve that. It is very much a case of regulation after the event. We are constantly trying to catch up.

Slide 1A in appendix 1 shows a fracking pad. That goes down and then across horizontally. It then cuts across again in other directions. If you were looking from above, there could be eight or 12 of them in all directions, like the spokes of a wheel. People talk about the golden age, and it was mentioned today. This report came out less than a month ago, so you cannot really consider it to be a golden age if it has not even been given time to show its long-term impacts.

Almost unique to the area of Fermanagh and Leitrim is that we have regionally important aquifers, as you can see on slide 1B. Those are important sources of water for communities, both above and below. There are other areas that are locally important, where local villages or towns may access water. However, in Fermanagh, the two areas are above and below the shale and sandstone layer, so there is a concern about gas migration and contamination.

Slide 1C shows not only risks to air and water but proven risks. These things have actually happened in the States over the past seven to 10 years. I do not know how well your slides came out, although you probably have a better printer than we have. There have been fugitive gas emissions, and water sources have been impacted on. Many different issues have come to pass. With new technologies, you have to keep coming back to the precautionary principle. If something has a possible risk of creating problems, it is up to the instigator to prove that it is safe. It should not be up to the people affected to prove that it is safe. The precautionary principle seems to have been put on hold. The industry says, "We'll see how it goes. If we run into problems, please regulate us a bit more."

I first heard of super-fracking two months ago. Slide 1D shows the pads. It is such a fast-moving industry that it comes up with a new technique and then says, "We've been doing it for years." Super-fracking has been done since 2009. It means that you frack at three or four different levels. In Fermanagh, Tamboran is going to frack at three different levels. It is a bigger pad and covers a bigger area. It means that maximum gas can be got out. It is like a mini factory every 2 kilometres, so that it what is planned for Fermanagh. The company says that it hopes to have the water contained so that when it comes back up, it will be reused in this new technique that is still open to debate.

The next picture shows you what happens with the water in the United States. It comes back up. The picture shows the sheer volumes that are involved. This is the reason that New York banned it. The old-fashioned vertical fracking used 80,000 gallons to get the last bit out from conventional gas, as we showed you in appendix 2. This type of fracking normally uses between four and eight million gallons per well per frack. If you multiply that, you are getting into seriously big numbers — hundreds and thousands of millions of gallons of water.

This is what they do in the States. Sometimes it is lined. In Wyoming, unfortunately, it was not lined. The company realised that that is not going to be an option with us, but Tamboran says that it can reprocess the volumes involved coming back up with a million gallons per frack. Its latest scenario, which has only just come out, is 24 wells per pad. That still amounts to 24 million gallons, but the company is still saying that only a quarter of that comes back up and that it can be reused.

At the end of the fracking period, however, it has to store what comes back up for the next frack, which could be six months or two years later. The volumes are massive, and no other company has done what it is saying that it can do. You cannot call this a well-established industry when the practice did not even exist in 2005. It is going to be tested in Fermanagh in the next two to three years.

Appendix 1E shows a cross-section area of a Google Earth map of the Fermanagh/Leitrim/Cavan border. The circle represents what Tamboran suggests will be its major area for initial exploration. If you draw a line across the circle from 11 o'clock to five o'clock, north of that is County Fermanagh and south of that is the Republic. In each of those semicircles, there are 60 yellow dots, each of which represents a pad. Tamboran plans to have 60 pads in that area. The picture is just a reflection of that.

Lough Melvin is at 11 o'clock, where, I am sure you will agree, you can find the best fishing in Ireland. Enniskillen is just beyond three o'clock, a little bit outside the map. Lough Macnean Upper and Lough Macnean Lower are right smack in the middle. It is a good picture of the world's first transnational geopark. That is what is envisaged. That is what is going to be on the surface.

I will come back to that later. Let us go to the next picture, at slide 1F, which is a summary. It is the graph that I showed you earlier that indicates the sudden drop in development costs and production in Wyoming, which automatically results in a decrease in employment figures.

We feel that the issues that are involved are so massive that we cannot do justice to them by way of an environmental impact statement. I had thought of talking my way through the whole document, but I felt that, if we showed you the visual material, it would give you an overview. Slide 1G shows all the issues that have come to the fore in Pennsylvania over the past four to five years. You can see that there is a massive area to cover.

There is a big impact on local communities. For every farmer who makes a wad of money, there are 19 who do not and suffer the consequences. It produces a boom-and-bust economy, and when the bust comes, the people tend to move on and the industry does not return to its pre-boom levels. There are issues around water and air, and there are health issues, which I am particularly concerned about. I will come back to those issues later.

Below the diagram is a picture of an area being fracked. Each well would usually be fracked three to five times. There are 24 wells per pad, and there will be 60 pads in Fermanagh. That is an initial estimate. The company has replied to some people who emailed it to say that things are going well and that it plans to increase its coverage from 100,000 acres of Fermanagh to 280,000 acres — almost three times that. It will leave out 20,000 acres for environmentally sensitive areas. Saying that, that could mean that one field is designated as environmentally sensitive yet the company can frack the field next door. The fracking would occur right up to the edge of those areas, and it can take place under them. As long as the surface area is not on top of an environmentally sensitive area, fracking is allowed horizontally.

In appendix 2, the first diagram, as you have already seen, shows the difference between the 50-year-old traditional fracking on the right and the seven-year-old high-volume hydraulic fracking on the left. New York State said that fracking is a new industry. As such, it has a moratorium on fracking, until we know more. You cannot compare it as like with like.

The scenario that Tamboran had initially was that that was the only area that it thought viable — the circle on page 2B. There is a smaller circle further down in Fermanagh. The latest implication from the e-mails that we have received from the chief executive of Tamboran is that, if things go well, it will do 280,000 acres in Fermanagh and increase the number of wells from 3,000 to 9,000. Those e-mails are available if you would like to see them.

The next picture is a blown-up image of the previous page, but from the Tamboran website two months later. On page 2C, as you will notice, the circle is gone, so it is no longer just that viable circle. Now Tamboran is looking at the whole of Fermanagh as a possible future 280,000-acre development site. Notably, there is not a single village named in County Fermanagh. It shows Kiltyclougher across the border, but none of the Fermanagh villages, such as Garrison, Derrygonnelly or Belcoo, is named there. It names Enniskillen, which is where the company had its one and only public meeting in Fermanagh. I put in a red dot at Lisnaskea, because that is where it had a meeting with the Lisnaskea Chamber of Commerce. We really feel that the lack of consultation has led people to believe, when they read in the papers and see things happening, that things are moving forward with the company without it waiting for the yes or no answers that we all feel are important.

Page 2D has a picture from the company's website showing a 16-drill well pad, which was a scenario approximately two months ago. At the beginning of May, the company was talking about 16 wells on one level, but the latest from it is that it is going to have 8 wells on three different levels, so there would be 24 wells in total. That would cover 40,000 acres of Fermanagh. The 80,000 acres that I mentioned initially covered Fermanagh and Leitrim. On page 2E, there is a nice picture of what looks like a forest with very big swimming pools in it. Those are the sorts of pictures that the companies use to show their ideal fracking. There are lots of wooded areas, and, as I said, you see what look like large swimming pools. Those are the containment pits for the flow-back water. Flow-back water is the water that comes back up, which the company has to deal with. If you put down pure water, what comes back up is not pure water. Rather, it is pure water plus the gas that the company is looking for, obviously, but also many other things. In some areas, the many other things are in quite a high concentration, and in some areas they are in a lower concentration. What we now know is that, even at a low concentration, some of those chemicals — heavy metals such as arsenic, chromium and lead — can have very negative long-term impacts on human health. Those studies are coming through.

We therefore have the picture-postcard fracking on page 2E, which is the impression of what could happen. The next page shows you what happens underground. Underground, everything more or less meets up. Assuming that there is a pad every 2 kilometres — we base that on the company's previous diagram showing 16 wells per pad; which has now changed to 24 — we had an architectural surveyor draw up an area that had relatively flat lands. Where could you put pads where you could have access near main roads? The picture shows pads 1 kilometre to 2 kilometres apart, and the same as the length of the wells. Underneath, everything joins up, and the reason that it has to is because, if any gas migrates sideways, you will hopefully catch it with one of the other wells. One of the problems is that, when you connect underground to have a continuous 40,000-acre factory, if you run into a problem of contamination from gas or a chemical, it can spread quite easily, because all the fracture lines have been reopened.

The next diagram, on page 2G, is very much the picture that people do not want to see: a non-picture-postcard version of fracking. The truth of the matter is that Fermanagh will lie somewhere between the two pictures, between the nice wooded areas with the big swimming pools and the image on page 2G. We will probably instead have large containers of steel or plastic to contain any flow-back water that cannot be recycled.

This is in the middle of a geopark, one of the two major tourist sites of Northern Ireland. It is in the place where we talk about sustainable long-term tourism, and where agriculture is doing very well. We are concerned about what will happen on the surface and, as we mentioned before, underground, things are happening.

On page 2H, there is an industry graph. The vertical lines are the lengths that a fracture goes. Some fractures — the best way to describe them is "rogue fractures" — go more than the expected 200 metres or 300 metres from the well head. Some of them go up to 2,000 feet, which is 650 metres. That has all been done around 8,000 feet or 9,000 feet — roughly 3,000 metres — in the USA.

If we apply that to Fermanagh — turn to the next page — we have brought this line up. It is the same graph, but now it goes from 1,200 metres to 500 metres. The company says that it will drill initially only between 1,200 metres and 750 metres. However, e-mails that we have received tell us that, if things go well after a few years, it may go shallower, to 500 metres. Obviously, the pressure that you need to frack at 500 metres is less than that needed at 3,000 metres, but the potential for rogue fracks to connect with fault lines is huge, because it is much closer to the superficial aquifer, the groundwater.

Does that matter? Yes, it does. In the States, they have had this process for seven years. In the past two to three years, more and more evidence is accruing on health impacts. The latent impact on human health is much slower than that on the health of other species. The National Farmers Union of Canada has asked for a moratorium. There is evidence, and I am sure that you can speak to me later about it, that we need to take a bigger picture and look at this in its entirety. Therefore, we ask that DETI play a role in helping with the vote on the moratorium in December. We need five to 10 years to see what the long-term impact of fracking will be in America and Canada. It has already started there. If it turns out that, in 10 years' time, we can bring this about in a safe way, that is great; but at the moment the evidence is not there. The regulation is always made after the event.

Fermanagh is known for its clean air, pure water and beautiful scenery. That benefits the whole of Northern Ireland, financially and in other ways. We feel that it is important that the bigger picture be taken. It does not boil down to chemicals and regulation but to the social and farming impact. The number of jobs lost may well exceed the number gained for a long, long time.

Thank you for inviting us. We look forward to your questions.

The Chairperson: Thank you very much, Dr O'Dolan. Any of your colleagues are welcome to intervene in the questions. In some ways, you have answered the question that I was going to ask: you are not opposed to the excavation of gas or shale gas if the contemporary techniques used in the fracking process are not to be used. In other words, were there a technique that you regarded as safe and environmentally friendly, you would have no objections to the extraction of that gas. You would see it as a benefit to the community at large.

Dr O'Dolan: We are not anti-development. We are for development, but not development at any cost. The cost at the moment is too high in many areas. People need to take on board the fact this is not a game-changer in Northern Ireland, and not a game-changer in Britain. What that means is that the volumes of gas involved are much, much lower than the companies imply. Cuadrilla said that there is

200 trillion cubic feet of onshore gas in the UK. The British Geological Survey says that that is an exaggeration of a magnitude of 40; it says that there is 4·7 trillion cubic feet of —

The Chairperson: Could I just stop you there? I understand the point that you are making and you have outlined your objections to the process, but, other than abandoning the process, is there anything else that the Department of the Environment or DETI could add to the process? The process involves an environmental impact assessment, the planning process and, possibly, a public inquiry and so forth. Is there anything else that could be added to that process to give you the confidence and reassurance that this could proceed safely?

Dr O'Dolan: They talk about baseline studies, but you need a baseline study of everything; you need a baseline study of communities, health, environment and of where farming stands. If the rest of farming in Northern Ireland gets a 20% increase a year over the next 20 years and Fermanagh notices only a 5% increase, will the companies have a fund set up to compensate farmers for their reputations being damaged? It is all to do with reputation. We need to develop our communities sustainably. The Departments could wait on the European Union and the USA studies to come out; those studies are trying to look at the bigger long-term impacts. Shale gas is, at the very best, a short-term solution to a long-term problem. It will not give us the answers that we need; it will not give us what we require. If you ask whether we can do it and whether we can have invisible pads every 2 kilometres so that the fishermen and walkers do not see them, that is a very difficult question to answer.

The Chairperson: Mr Sheridan, did you want to come in on that point?

Mr John Sheridan (Fermanagh Fracking Awareness Network): No, I just mentioned baselines to Caroll; with him being a doctor, the nearer the church, the further from God. Baselines would need to be done as far as people's health in the area is concerned, such as the levels of lead in blood, etc —

The Chairperson: I sense that you are saying that you need to have a bigger process of examination and that the process that the Department has put forward is too restrictive; it is not global enough to take into account the health issues and all the other issues that you identified.

Mr Sheridan: Yes. Obviously, from the point of view of the agriculture industry, we would have to have the water tested all over. We are talking about the Erne catchment; it goes out at Belleek, as you all know. It takes in five or six counties between the north and south of Ireland. If anything goes wrong with that water or if there is any perception whatsoever that something is going wrong with the water for our livestock industry, it does not matter whether it is Fermanagh; we are talking about the whole island of Ireland, its integrity and the quality of agriculture that it produces. It is another baseline, to an extent.

Mr McKay: Thanks for your presentation. A number of the points have already been covered. What are your views of the public inquiry? It is mentioned at the end of your paper.

Dr O'Dolan: It is such a big issue at the moment. I am sure that some of the others will talk about this. The moratorium is the way forward; there are areas in the world where it is going ahead, and we will see whether the communities there are going to rejuvenate after the companies move on. We need to wait and see what happens. If, in two years' time or 12 months' time, we are told that it will go ahead here, at the very least we need a public inquiry to explain why the precautionary principle is not being followed here. It is always a case of us trying to say what we need; we need a sustainable healthy population. Our most valuable asset under the ground in Fermanagh is water. That will be worth an awful lot of money for an awful lot of years. It is renewable if we look after it. Gas is not renewable; it has all sorts of impacts. If the UK Government proceed with shale gas development, they will run into all sorts of problems meeting their own criteria for emissions control.

I will come back to health. The reports show that the health impact is huge. They say that fracking has been widely used in 20 states. Within seven years, six states have significant problems in the animal population on farms. That is hugely significant; one in three of those states is running into problems with an industry that is seven years old.

Dr Davide Gallazzi (Fermanagh Fracking Awareness Network): There are several reasons why we need a public inquiry. In the previous evidence session, someone talked about how great the planning system is, how fantastic the environmental impact assessment process will be and how great it is that the environmental impact statement will last 12 months. The proper practice is that an environmental

impact statement should last 18 months; 12 months is the minimum. An environmental impact assessment is often carried out in two to three months when jobs are not done properly. The reason for that is very specific: you have seen what happens throughout a full year, particularly on certain aspects such as water or ecology. You have to see the full season and come back to the same part of the season to see if there was any change.

When the environmental impact statement is presented, the planning system allows four weeks for public consultation. An environmental impact statement on a project such as this, particularly one that is considered as one entire unity for the whole of west Fermanagh, is likely to be several thousand pages long. So, Joe Bloggs will have to go, without any particular expertise, through several thousand pages to make his written remarks in four weeks. Going through several thousand pages of an environmental impact statement is a very difficult job for an expert or professional: can you imagine what it is like for normal people?

There is a lot of misconception. I heard someone say earlier that there is not much of a problem with groundwater because we have 500 to 700 metres of shales between the Bundoran shale and the overlying Darty limestone. The shales are tight and impermeable, but they are not so impermeable given that they are classified as locally important aquifers, which means that they can supply water for a farm or for a small group of houses. Obviously, you cannot put down a well to supply the whole of Ballyshannon, Sligo or Enniskillen, but you can definitely supply a small group of houses using the Bundoran shales. In the south, Bundoran shales are listed as the source of water for a number of private wells. So, they are not that impermeable. The deeper you go, the more impermeable they are, but notwithstanding that, as Dr O'Dolan said earlier, fractures move where they want to go, not where you want to them to go. Once they have gone there, you cannot put down some superglue and close them up. They are there for good, and you have to deal with them. It is not a question of saying that a fracture from a particular well went where we did not want it to, so let us close down the well and move on. The next well 2 kilometres away may very well be impacted by the fracture and may well connect to it. It is not a case of, "Let us move on", as Tamboran is suggesting.

Mr McKay: You mentioned the need to see the long-term impact of fracking and said that will take five to 10 years. Is that enough time or is it variable?

Dr O'Dolan: It is variable. The agrifood industry in Northern Ireland is huge, and the reputation could be damaged. If it suffers a 10% decrease, for instance, over the next five or 10 years, is that because the Asian markets want to buy elsewhere or because the growing Chinese market wants to buy elsewhere? Is it because of the euro zone crisis or is it because they do not like the sound of Ireland no longer being the clean, green place that it was? Ireland has an incredible reputation and a clean, green image.

I heard recently that the middle classes of China, which is 350 million people, are now buying Irish dairy and meat products North and South in preference to buying from most other countries. That is a huge market, and they do that because they do not trust their Government to maintain good quality, and they want to avoid the contamination in China. So, if we were not growing as quickly as another area, such as Scotland, would we say that it is because of fracking or something else? Would a fund be set up to help compensate for the fact that the farmers are not making what was expected?

There are so many areas you could cover. Think of health: with some of the chemicals, even very low concentrations, parts per trillion, can affect the endocrine system, but that can take 20 years to manifest. So if they started fracking in 2005 in parts of Pennsylvania, it may be 2035 before you can say whether it is safe. Once you say it is not safe, what do you do?

We have had this issue before. We had lead in petrol, lead in paint and we had asbestosis. The tobacco industry knew in the 1950s what was going on, long before doctors knew, and it procrastinated because it was making money. Finally, the industry might have to put up its hands and say, " We will move on. Here is a fund to help pay for things." However, we need to be more cautious. It is the 21st century. In an ideal world, we would wait until we had a situation where, if we ever did use this, it would have zero health and environmental impacts. Well, they cannot be zero, but manageable to the extent that other areas, with a similar geological formation and similar rural communities dependent upon farming, can say that they have had it for 30, 20 or 15 years and it has not impacted on farming. Farming will be impacted on long before that.

Mr Sheridan: Can I come in on that? You ask about the length of time needed to see the impact. You have to measure 600 jobs against maybe 200,000-plus agricultural jobs on the island of Ireland.

There are 120,000 farmers in the Republic and over 20,000 in the North. By 2020, the ROI hopes to have its turnover at over €20 billion; we in the North are running at around £3·9 billion, and we hope to get it to £5 billion by 2020. This is a crucial industry, and it is only one; tourism is another.

Carroll mentioned the Chinese, who are now feeding their children three months longer on powdered milk that comes from Ireland because they trust it. Irish companies in Ireland will produce 20% of the world's milk powder using Irish water. We have to measure that against what Carroll highlighted: the potential or perceived impact of fracking. Oil companies are always very fond of overestimating what production could be because they have to get investors on board. What will come out of Fermanagh is minimal in terms of world needs and production, but the agricultural production that comes out of Ireland is very important the world over. This is why this needs a long study, before it is too late. Foot-and-mouth disease cost us 10 years to get perceptions back; BSE cost us 10 years plus, as we waited for science to restore perceptions after the food product became contaminated. In 2008, we had dioxins. None of those was the fault of the farmer. Foot-and-mouth was certainly not the farmers' fault; BSE was the result of a cheap food policy of combining meat and bonemeal — crazy stuff. For that reason, there is a huge industry at stake. That is only agriculture; we have our tourism spokesperson here.

Ms Isobel Leonard (Fermanagh Fracking Awareness Network): I will add something about tourism. I am sure that all of you have been in Fermanagh for a holiday at some stage. You probably went there to enjoy the lakes — a bit of fishing, cruising, maybe some golf, walking, outdoor pursuits or water sports. That is what tourism in Fermanagh is about. Unfortunately, tourism statistics are not great because it is very much in its infancy.

I am French. I came to Northern Ireland with no intention of staying, but I am now married with my family and grandchildren living in Fermanagh. I have been living there for 30 years. Why do I stay in this wet country when I come from the south of France? *[Laughter.]* I will tell you why: the landscape is fantastic, the people are very warm and the assets in Fermanagh are not spoilt, like they are in some parts of Europe.

In 2004, 73% of holidaymakers in Fermanagh came for a restful, relaxing holiday; that compares to about 33% for the rest of Northern Ireland. Some 70% came for the quality of the scenery; that compares to about 44% for the rest of Ireland. We do not have a Titanic Quarter or a signature project, but we do have lakes, water, forests and caves. Those are our assets. I was glad to hear Mr Dunne talking earlier about being forward-thinking on tourism. I hope that you will back tourism in Fermanagh, because there is no doubt that that kind of industry is going to damage tourism. With the amount of traffic involved, even if the industry is safe, who is going to go to Fermanagh for a restful, relaxing holiday if they have to spend hours behind lorries going from one part to the next? Just try to visualise that.

Mr McKay: On that point about tourism, we have to answer particular questions on energy provision, and I know that there is a lot of wind energy in Fermanagh. Does the group have a particular view on the use of wind turbines, for example, across the county? We are also looking at the issue of geothermal energy in places like Ballymena. There is potential right across the North to provide that as an alternative to other forms of energy.

Ms Leonard: I cannot speak for everybody. We are only a group of people representing our communities, but what I can say is that, in our tourism project, we have self-catering cottages and solar panels. We are promoting ecotourism and green tourism. We do water sports such as canoeing and windsurfing, which are non-motorised sports. The Northern Ireland Tourist Board is slowly moving towards activity tourism and green ecotourism. There is potential for that development. Instead of spending money to make the fracking industry safe, could we not invest that money in green energy, like wind farms, solar panels and photovoltaic panels in Fermanagh?

Mr Newton: Thank you for coming to the Committee. I am very pleased with the opening statement that you are not opposed to development in Fermanagh. That is a very positive way to go about it, even though you may not be in favour of this particular proposal. It would be remiss of the Ministers, if the opportunity is presented, not to explore the potential of it.

I apologise, but I have to go to a family funeral. Chair, I am happy enough if you want to leave the last article that I had on the agenda to another day.

The Chairperson: Yes, we can do that.

Mr Newton: My thinking is really the same as that of the Chairman. What form of consultation, openness and transparency about the issue would you require to convince you or confirm for you that all your points of concern are real or can be answered? You are talking about tourism and farming, but what is the attitude of the bodies that represent tourism and farming as a whole to the proposal? Perhaps it is too soon to say.

Ms Leonard: I can answer in relation to tourism, because the Fermanagh Lakeland Tourism committee will be writing to you shortly, if it has not done so already. It has totally disagreed with the development of shale gas extraction in Fermanagh. It sees that as a terrible threat for the whole of Fermanagh and further in terms of tourism, and is 100% behind a moratorium, at least. It does not see that as a good development for tourism.

Mr Sheridan: Chairman —

The Chairperson: I was going to invite Mr Agnew in.

Mr Agnew: Mr Sheridan, did you have a point to make to Mr Newton?

Mr Sheridan: Yes; Mr Newton asked about consultation with farming organisations. I am a member of the Ulster Farmers' Union (UFU), and chairman of its hill farming committee. As far as I am aware, the UFU executive, which is the decision-taking body, has not debated the issue yet. I am quite sure that the legislation committee is looking into it at the moment. It is a very big area, and it is going to take time. I am quite sure that the Irish Farmers' Association, which is our counterpart in the South, will also look at it. The Irish Creamery Milk Suppliers Association and the Northern Ireland Agricultural Producers Association, I presume, will take a look at it. Tamboran seems to be driving this particularly, and everybody else is way behind and trying to play catch-up with a moving object.

Dr O'Dolan: Tony Bazley, who is Tamboran's community environmental engagement officer, spoke at last month's SMi shale gas environmental summit. He said that the company is selecting test drill pads right now; I do not know whether you are aware of that. It is not waiting on the environmental impact assessment. Tony Bazley said:

> *"We are selecting the test drill pads right now which is why, for once in our career as a company here, we are a little bit less than transparent because there's a lot of opposition to us in these areas."*

He also said:

> *"There is opposition and opposition, I'm afraid, does try to terrorise people into not dealing with companies."*

That is Tamboran's head of community affairs, and that is his view of us. I find it shocking. The one single meeting in Fermanagh with the public was in Enniskillen. In the nine months since, Tamboran has not engaged with us. It turned down a debate in front of an invited audience, which was intended to avoid hecklers. It is pushing ahead, and it is giving people the impression that something is going to happen even if the reports comes through. If a report comes through, it will say, "We'll fix that." You cannot fix something if you have pads every 2 kilometres, affecting people's health, farms and tourism. It is a massive issue.

Tamboran will reach its peak production in 2026. If it started laying the gas pipes from Belfast to Fermanagh to give us a gas grid, it would not even have reached Fermanagh by the time that it reached its peak. If we have money spare to build an infrastructure of pipelines in the whole of Northern Ireland, we should spend that in other ways. I suggest that we should spend it on renewable energy and efficient insulation. It comes back to health, health, health. The precautionary principle and science are so important here.

The Chairperson: Mr Agnew.

Mr Agnew: Thank you.

The Chairperson: I have to caution you about time again.

Mr Agnew: I will try to be brief. I should apologise that you were kept waiting for as long as you were, but I hope that you found the previous session informative. I hope that it was not a waste of time.

A lot has been made of Tamboran's claim that it can do the process without using chemicals. Putting aside whether or not it can, even if it was in its licence, planning permission or whatever that it could not use chemicals, would you be reassured in regard to health impacts?

Dr O'Dolan: Some of the people who work in Tamboran were previously involved in a company called Southwestern Energy. I am sure that you could ask them a few questions next week. All over the States, there have been issues of contamination. We know that they have happened; some are documented and some are not. A lot of them are under non-disclosure agreements. Communities, individuals or families, in order to get some water piped in or shipped in bottles or to get the money that they need to rebuild their lives, have decided not to pursue the contamination issue in the courts. If Tamboran is really serious about engaging with local communities and encouraging us to have faith in it, it should ask its colleagues in the States to see whether those non-disclosure agreements could be released. That would make a huge impact on people's perceptions and persuade them that there is no hidden agenda. That is a long shot. Over in the States, the proven cases are proven and the unproven cases are much more worrisome because it makes you think that it is not in the interest of public health. It is different in other issues of civil law, but non-disclosure agreements should not be involved when it comes to public health and the water supply of a community.

Mr Sheridan: You mentioned chemicals. Even though chemicals are not used in the process, the 25% water that comes back up, the flow back, has to be stored above ground in a 36 inch rainfall container in Fermanagh, whether it be concrete, plastic or even earthen tanks. There is a huge danger of contamination, and if you look at the swimming pools at appendix 2E you will have an idea of the amount of pools needed to hold the contaminants.

This is not clean water. You can use clean Fermanagh spring water for fracking, but what comes back up will not be clean Fermanagh spring water. It is going to be tainted with benzene, xylene, toluene and ethylbenzene, the gas that we know from petrol. It will be contaminated and toxic, and if any of that leaks into the rest of the aquifers, we are goosed. It is incredibly dangerous.

I grew up, as did many people in Fermanagh, using water for drinking and for domestic purposes from a well in the garden. I could go nearly anywhere in my land or in my neighbour's land, find an aquifer and go down 12 feet or 14 feet to the water. What happens when 20 lorries put on the pressure to do a frack? Am I going to have benzene coming up through my old system?

As Davide will tell you, there are lots of local water systems around Sligo, Manorhamilton and Leitrim; they are everywhere. We all depend on the water, and the non-use of chemicals by Tamboran gives us absolutely no feelings of safety whatsoever. I am not a professional, but there are two fellas on either side of me who are.

Dr Gallazzi: I would like to add something if I am allowed, just briefly.

The Chairperson: Mr Agnew, do you have a quick question?

Mr Agnew: I am interested to hear what Davide has to say.

Dr Gallazzi: Tamboran will probably say to you next week that the only thing that comes back is salt. Water with salt, on the surface, is a pollutant. Water on the surface is called fresh water because there is no salt. If salty water goes into a river or a lake, it will kill all the animals and the flora in the ecosystem. So, even if it is just salt, which sounds so innocuous, it is a pollutant that is as bad as any other pollutant.

Mr Agnew: I have a yes or no question, if that is OK.

The Chairperson: That would be a new one.

Mr Agnew: It is not like me.

You mentioned super-fracking and three-level drilling. Has Tamboran stated publicly that that is what it is going to do?

Dr O'Dolan: No, but we have it in the documents here. I can leave you a copy. Do you know when you get your emails and they are all back to front? This farmer kindly put them in order. There were six emails in the middle of May 2012, between Eddie Mitchell, who is a farmer and environmental scientist in County Leitrim, and Richard Moorman. He is thinking outside the box. I will leave that with you.

Tamboran has two or three different scenarios. You might think to yourself that this is a company that is just going to wait for an environmental impact statement next year, and it might put in a well in 18 months' time and see what happens. It has very advanced plans for what is happening, and he says that if all goes well, Tamboran has plans for what is happening next.

We feel that it has not involved the local community. There is a huge feeling of anger, frustration and helplessness that we are not getting the information that needs to be given. We are here to give that information to people. People are asking why, if what we say is true, how come there has not been a moratorium. We are saying that at the moment, Tamboran is saying that it is not true, because it is waiting to do test drills. This is what it has said, however; it will be involved in multi-pad fracking.

The Chairperson: Perhaps you would leave that with the Committee staff.

Mr Flanagan: I appreciate that we are very stretched for time. There is another meeting at 2.00 pm and I know that you have to be away. I thank the group for coming all the way up here. I am sincerely sorry that you had to wait so long to get in. Unfortunately, that is the danger in being the second group to make a presentation, but I hope that you found the first session useful. If there is anything that one of the three representatives said this morning that you would like to respond to, I encourage you to correspond with the Committee to make your feelings clear. That goes for anything that Tamboran says next week.

I commend the group on the way that it has behaved today. There is a myth going around — there have been a number of myths, which people have tried to extinguish — that those who are opposed to fracking are involved in scaremongering and are using emotive language. It is plain to see, from the four people who are sitting in front of us, that there is no scaremongering going on, and that no emotive language is being used. You are trying to deal primarily in facts. To be fair, you have not got all the facts, and you are trying to get them. I think that you are doing a very good job representing the massive levels of concerns that exist in Fermanagh.

My only question is this: what engagement have you had with DETI to date?

Dr O'Dolan: We had a meeting with DETI about two months ago. We raised our concerns with Arlene Foster in her Enniskillen office. She said that she would take those concerns on board. We had a discussion, but nothing of substance changed. We hope to have further discussions in the future. It is an ongoing process. We are learning. Everything is changing. What we know and what DETI knows is very important to influence the process. So, there has been one meeting. We met some of the other parties as well. However, it is an ongoing process and a moving target. The industry is a moving target. The industry says that it has a great new idea. In medicine, when you hear there is a great new idea, alarm bells immediately start ringing. They are now going back to aspirin as the best tablet for heart attacks. In all these things, we need to be very cautious. We need to realise that it is more than just Tamboran making money and throwing some of that money back, through London, to Stormont, so it can trickle down to Fermanagh.

We have a very successful Fermanagh that we want to develop. We want to invite industry that will be in harmony with farming; industry that is in harmony with tourism; industry that is long term. Our most valuable resource is our people. Our second most valuable resource, which is long term, and immense on the world stage, is water. If there is one thing from Fermanagh that we can give the whole world, it is clean water — for now. That may not be the case in 10 years' time, and that is our worry.

The Chairperson: I thank you all for your contributions. I know it is heartfelt. I know that you are very passionate about this subject. Thank you very much for coming along. It has been very useful and helpful to hear the concerns of your group and the community. Thank you very much indeed. Thank you for your patience.