

# DÁIL ÉIREANN

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## AN COMHCHOISTE UM THALMHAÍOCHT, BIA AGUS MUIR

## JOINT COMMITTEE ON AGRICULTURE, FOOD AND THE MARINE

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*Dé Céadaoin, 14 Meán Fómhair 2022*

*Wednesday, 14 September 2022*

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Tháinig an Comhchoiste le chéile ag 5.30 p.m.

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The Joint Committee met at 5.30 p.m.

Comhaltaí a bhí i láthair / Members present:

Teachtaí Dála / Deputies	Seanadóirí / Senators
Martin Browne,	Paul Daly,
Matt Carthy,	Tim Lombard.
Michael Fitzmaurice,	
Joe Flaherty,	
Brian Leddin.	

I láthair / In attendance: Deputy Kieran O'Donnell.

Teachta / Deputy Jackie Cahill sa Chathaoir / in the Chair.

## **Nitrates Derogation and Nitrates Action Programme: Discussion**

**Chairman:** The purpose of today's meeting is to examine the nitrates derogation and nitrates action programme. The committee will hear from a number of expert witnesses and officials from the relevant Departments.

Before we do so, I remind members, witnesses and those in the Public Gallery that they must, for the duration of the meeting, switch off their mobile phones completely or switch them to airplane or flight mode depending on the device. On 28 February, the legal requirement for mask-wearing in all settings was removed. However, it is still good practice to continue to use face coverings, particularly in crowded areas. The service encourages all members of the parliamentary community to wear face masks when moving around the campus or in close proximity to others.

Witnesses giving evidence from within the parliamentary precincts are protected by absolute privilege in respect of the evidence they give to the committee. This means that witnesses have full defence in any defamation action for anything said at a committee meeting. However, witnesses are expected not to abuse this privilege and may be directed to cease giving evidence on an issue at the Chair's direction. Witnesses should follow the direction of the Chair in this regard and are reminded of the long-standing parliamentary practice to the effect that, as is reasonable, no adverse commentary should be made against an identifiable third person or entity.

Witnesses who are giving evidence from a location outside the parliamentary precincts are asked to note they may not benefit from the same level of immunity from legal proceedings as witnesses giving evidence from within the parliamentary precincts. They may, therefore, consider it appropriate to take legal advice on this matter. Privilege against defamation does not apply to the publication by witnesses, outside the proceedings held by the committee, of any matter arising from the proceedings.

Members are reminded of the long-standing parliamentary practice to the effect that they should not comment on, criticise or make charges against any person outside the Houses or an official, either by name or in such a way as to make him or her identifiable. Parliamentary privilege is considered to apply to utterances of members participating online in this committee meeting when their participation is from within the parliamentary precincts. There can be no assurance in relation to participation online from outside the parliamentary precincts. Members should be mindful of this when they are contributing.

This will be our first session on the nitrates derogation and nitrates action programme. In the first session today, the committee will hear from representatives from the Irish Creamery and Milk Suppliers Association, ICMSA, Mr. Pat McCormack, president; Mr. Denis Drennan, deputy president and chairperson of the farm and rural affairs committee; Mr. John Enright, general secretary; and Ms Alisha Ryan, the policy advisor. I will now call on the witnesses to make their opening statement.

**Mr. Pat McCormack:** I thank the Chair. Never was it more important to get the opportunity to address the Joint Committee on Agriculture, Food and the Marine. I sincerely thank them all for attending today. We have made a submission and committee members will have gone through it, so I will not go through it word for word. I have been involved in farming politics for ten to 12 years and never before has our industry been under such scrutiny. We are facing climate change and there is a perception out there that there is not a cap. It is fair to say that

directly, there is not a cap at this point in time, even though my colleague, John Enright, and I sit on the Food Vision beef and sheep group, as well as the Food Vision dairy group. Time will tell as regards a cap.

There is a huge challenge out there and it is upon us without much consultation, which is the nitrates, the nitrates derogation and the nitrates action programme. There is a perception out there that this may affect some large farmers. However, the reality is that it affects the family farm model. There is the model that is used by some of larger institutions, such as Bord Bia or Ornuia to promote and advertise our products right around the globe.

At the outset, I give the committee an example of a 30 ha farm with 84 cows, which is the average-sized farm. By the time this presentation is finished, they could find themselves back with 62 cows. For many young and middle-aged farmers, that may be the difference between being viable and not. That is the challenge that is there for us. If it undermines the viability of our family farm model, over a short period of time, it will ultimately undermine the viability of our industry at a processing level. It will cause severe economic carnage for many family farms.

Water quality is very often mentioned. One would think that the farmer had no cognisance about or interest in water quality. However, the reality is that farmers, whether they are dairy or otherwise, are more dependent on water quality not just than most people, but than anyone.

We have invested heavily in slurry storage in recent years. We have invested in low-emissions slurry spreaders. There is ongoing investment into and huge uptake in the use of protected urea. Our State advisory service, Teagasc, has strongly indicated that it will take between 18 and 24 months for a change in practice in order to deliver results. That relates to the message that we want to drive home here today, which is that we need time for the change in practice in order to deliver results. Unfortunately, there seems to be one regulation after another in that regard. The opportunity of time is not afforded to the industry.

I mentioned earlier that climate change is here and that we are involved in the Food Vision dairy group and the Food Vision beef and sheep group. There is an opportunity to embrace new technologies that can deliver from an emissions perspective, but also from a nitrates perspective. The nitrates regulations are upon us here and now, it is fair to say, without consultation with the farm bodies. The most disappointing thing for me as a farm leader was that we took a delegation to Brussels to meet with officials of the agri-environmental group, the Directorate-General for Environment. The message that seemed to come from Ireland was that we need to target intensive farmers. It was hugely disappointing that Irish men or women would say that. Some of our most intensive farmers are our family farm models. They have modest holdings that need to be intensive in order for them to make a living, because the margin had been eroded. Change is coming with the chemical fertiliser sales and register and the reductions in fertiliser use, both of which help our water quality and our opportunity from a nitrates perspective. However, we need those 18 to 24 months of time. When it comes to farmer supports, most recently, we have seen in the agri-climate rural environment scheme, ACRES, that a 1990s payment in an era where inflation has eroded farmer margins is not at all attractive to commercial farmers, irrespective of whether they are in the area of dairy or beef.

One of the greatest threats of all to the dairy industry is cow banding. If a cow weighs approximately 6,500 kg, a farmer with a 30 ha farm will have to reduce his or her numbers significantly by approximately 14 or thereabouts. That is hugely challenging and undermining. On the issue of the potential reduction from 250 kg to 220 kg, what exactly will that carry

in the catchment area? If the harbour in Waterford is in bother does that mean that Tipperary, Kilkenny, Waterford, Laois, Carlow and Kildare will be all affected? These are the questions that have not been answered, even though the regulation is on its way.

There is a whole challenge around eutrophication. How much of it comes from agriculture and how much of it comes from elsewhere? That is a challenge that is out there, as are the effects that this is likely to have on our industry. We have given various different examples throughout the presentation, but the two changes, which are the cow banding and the potential move down to 220 kg will see that 30 ha farmer actually reducing his or her cow numbers by 22. That is a 26% reduction. That is huge at a time when farmers have invested heavily, borrowed heavily with the potential to make their payments. This will be the difference between farmers making a financial payment or not. I guarantee the committee, just as night follows day, that farm organisations will be back here in four, five and six years' time with financial pressures on farms as a result of these. That is why the challenge is out there for us all, and indeed for this committee in particular, to drive home the message that we need time to deliver the changes that have been implemented at farm level.

Another example of restraint and restriction is the slurry export rules and the volume has to double in order to remain within the same query. Do the nitrogen and the phosphorus double in the tank over a period of time? Did I miss something on New Years Day? I do not say that lightly, because it is a huge issue. What is necessary, and we have looked for this at the Food Vision group on dairy, is that an economic assessment should be carried out on the impact on farm families and, indeed, the wider rural and national economy as a result of these changes. We need to see proper supports in place, including a meaningful ACRES scheme, because the solutions are within. Yet, the more farmers that can be brought into an agri-environmental scheme in a meaningful way, the better. We look forward to a question-and-answer session, but the issue here is the survival of the intensive, modest family farm unit that is severely undermined by this nitrates change.

**Senator Tim Lombard:** I welcome the witnesses to the committee. It is important that they bring up this timely issue regarding the nitrates action plan and how it could have a huge impact on rural Ireland in particular. Mr. McCormack mentioned banding. The nitrates issue comes down to several issues, namely, that we will potentially reduce our nitrates by 250 kg to 220 kg, which will take a rotation out of the majority of farms. That will have a huge affect on the stocking rate of the majority of farms. There was a debate a few months ago regarding climate change and where we will be regarding potentially reducing stock numbers. If this goes wrong, this will be a cull on the national herd. That is effectively what will happen if banding comes in, as well as the reduction of the nitrates action plan, which will bring nitrogen down to 220 kg. Throughout the country, that reduction on dairy herds will see anything up to 15% of the herd being wiped away. Dairy farmers throughout the entire country could see up to 15% of their herds wiped out between now and 2025. The timelines are crucial.

I am interested in the witnesses' interactions with the Department. There have been major changes in the Department over the past six to eight months. Are they happy with the level of information they are receiving regarding, for example, the volume of organic nitrogen being used? Are they happy with the statement that is issued on a six-monthly basis? It was issued yesterday for the first time. Are they happy that the farming community has been kept informed of these issues and has enough information for this year? I have a great fear that we do not have enough information on nitrates, given that the figures were only published yesterday.

I am also interested in the future. We have had industrial levels of investment in production.

If we were to have a 15% cut in the national herd, which is potentially what is required, do the witnesses believe the stainless steel industry will stand still, with nothing happening? Has there been investment in manufacturing plants that might not get enough raw materials to do its job?

The most important point made today is on the economic impact this will have on the entire rural economy. In a town such as Bandon, or any other town in rural Ireland, the economic effect could be enormous. We need to get a figure for what it could mean for rural Ireland.

**Mr. Pat McCormack:** The Senator made a lot of interesting points. The reduction from 250 kg to 220 kg of nitrogen per hectare will have a significant impact. Farmers will either have to destock or shorten their grazing season somehow, which would be hugely frustrating. We are renowned as the best in the world for growing grass and the length of our grazing season has a significant part to play in the promotion of our products as we move forward. The figures for organic nitrogen were published yesterday, which is far too late in the year. They should be issued at least on a quarterly, if not monthly, basis to give farmers an indication of where they are.

The Senator mentioned stainless steel. There is a huge fear that we will have unutilised or under-utilised stainless steel. That will create inefficiencies at processor level and will undermine our competitiveness on export markets. The growth in exports from the agricultural sector had a significant part to play in the past decade, in particular, in bringing this country out of recession. There were opportunities for expansion in the dairy sector with the abolition of quotas and that drove a huge stimulus in the rural economy from a construction and service-provider perspective. There was huge demand among young people to study agricultural courses. While in 2022-23 those agricultural courses will be filled, the same level of demand was not evident, and that has to be a concern and an indication of where we are going.

The Senator asked about the Department and the level of interaction. We have never made a secret of the fact that we were not happy with the level of interaction and consultation on the nitrates regulations. Key personnel changes were made in the Department at a critical time in the context of fighting this country's cause. Experienced heads and people who had been around the block and who had been out interacting with farmers and farm organisations were moved from the nitrates area at a critical time. If I was in management, that is not a move I would have made. Perhaps my colleagues would like to comment further.

**Mr. Denis Drennan:** The Senator asked some excellent questions. The shock is that farmers could receive letters this time next year telling them that they will have to reduce their herds by up to 26%. That will depend on water quality results for this year and next year. The water quality results are normally released in July but for some reason, the Environmental Protection Agency, EPA, has not released them yet. Here we are, in the middle of September and we have no idea where water quality trends have gone for 2021. This time next year we will be getting water quality results for 2022 and if there is a significant change in either direction, a decision will be made, sent to Europe and will come back to farmers by the end of next year. Farmers could end up getting letters in November or December next year telling them they have to destock by 26% by 1 January 2025. It is not like this is way out in the distance; it is critically close.

As our president said, we are not happy with the volume of information on banding coming from the Department. At the moment we are not certain which band any of us, as farmers, will fit into because the banding system is based on 2021 and 2022 stocking rates versus the volume of milk produced on a holding. We are still seeking clarity on which cows will be counted in that system but we cannot get that. We cannot even establish which band we would have fitted

into for the past three years or for this year and the previous two. There is huge uncertainty. People are not sure where they are going or what they are doing, yet they are being asked to make huge investment decisions on their farms and co-operatives are making huge investments on their behalf as well.

The Senator mentioned an excess of stainless steel. The issue, as our president has said numerous times, is that farmers have spent huge amounts to be compliant with regulations but those regulations keep changing every year. We have banding this year and we have cuts in the nitrogen allowance this year that are going to have a significant effect. The number of cows in the country could be cut by between 15% and 20%, as the Senator suggested and which is probably pretty accurate. Not only have farmers made investments on their own farms that will have to be paid for from fewer cows and less milk, but the co-operatives have also spent money on behalf of farmers that will have to be recouped from a smaller milk pool. There is a double-whammy coming if the number of cows in the country is cut and the production of milk is reduced.

**Mr. John Enright:** To add a few points to that, we have members who are milking cows and supplying milk to their local co-operatives today. Next November or December when they are drying off their cows, it will be decided whether they are going to be in band 2 or band 3 and that will have a very serious impact on the number of cows they have. People need to realise that this is the first time ever that dairy farmers are going to be forced to reduce stock numbers. In a lot of cases, these are very sustainable farmers. They can produce the grass for the number of cows they have in a very sustainable way but a decision has been taken that effectively completely undermines their ability to earn a living from farming. These are farmers with between 40 and 70 cows. People have a notion in their heads that derogation farmers are all very larger farmers but that is not the case. A large number of them have between 50 and 70 cows on small holdings and the derogation is critical if they are to continue in business. If they have to reduce cow numbers by between 10% and 25%, that is it for them; they are gone. I am not sure the politicians realise that, to be quite honest.

**Deputy Brian Leddin:** I welcome our guests. I read through their opening statement, in which they say that the ICMSA is confident that water quality trends will move in the right direction in the near future. As committee members, we have the benefit of seeing in advance the statements from departmental officials who will be before the committee later and they say quite the opposite. They say that we are going in the wrong direction currently. Previously they have said to this committee that we are not going to meet our obligations under the EU water framework directive, which has been in place for more than 30 years. What would the witnesses say to that? I am getting a sense that they see a slow glide path here but a glide path that would take the dairy sector way beyond the directive target of 2027, which is the end date for all our watercourses and water bodies to achieve a “good” water quality standard. It does not seem that what they are saying aligns with where we need to get to.

**Mr. Pat McCormack:** I thank the Deputy for his question. Maybe we gave that impression but the figures that are being discussed at the moment include 2018, which was a challenging year. If the Deputy attended a discussion group meeting of farmers in 2018 and talked about protected urea, he would have been talking about something they knew very little about it. Now, if one talks about protected urea at discussion group meetings, it is the norm. Equally, there is low-emissions slurry spreading and the benefit it can have. The utilisation and the value put on animal nitrogen at this time is significant. For one reason or another, 2022 has been a watershed year for the utilisation of organic nitrogen on the farm. The difficulty is that Teagasc,

the State's scientific farm advisory service, indicates to us it will be late 2023 or 2024 before the evidence will be found of the change in practice. In the mean time, we will have two significant regulations brought upon us that will affect the family farm model.

**Deputy Brian Leddin:** That terminology, "the family farm", is peppered throughout the opening statement. The ICMSA has strongly given the impression the average family farm is going to be severely impacted by the fifth nitrates action programme and the derogation but is it not true that just 5% of holdings are derogation farmers, or some 6,000 farms?

**Mr. John Enright:** It is 5% of total farms.

**Deputy Brian Leddin:** Yes.

**Mr. Pat McCormack:** However, of full-time farms and of dairy farms you are probably talking about 33%.

**Mr. Denis Drennan:** Or more, even, 7,000 farms.

**Mr. Pat McCormack:** Yes. This perception that it is a guy with 300, 400, 500 or 600 cows is out there. I went to a local football match about three weeks ago on a nice, quiet Saturday evening and a man came up beside me in the stand. I did not ask him to come and sit beside me but his issue was the nitrates; it was going to finish him. He was going from 76 cows down to 63 cows and that was going to be curtains.

**Deputy Brian Leddin:** The association is getting at an issue of fairness, which is the right thing to do but is it not true that all farmers are subject to the nitrates action plan, when it is not all farmers who are contributing to the reason we have the nitrates action plan? What if I were a farmer who did not have an intensive set-up but who was being required to fulfil the needs of the action plan because of my neighbour, who as an intensive farmer is the person whose practices are actually leading to the deterioration of water quality? Is that a fair thing to say?

**Mr. John Enright:** I will read out the decision from Brussels on the nitrates derogation. It states:

98,5 % of all monitoring stations for groundwater in Ireland had mean nitrate concentrations below 50 mg/l, and 81,5 % of those monitoring stations had mean nitrate concentrations below 25 mg/l. All monitoring stations for surface water in Ireland had mean nitrate concentrations below 50 mg/l ...

I emphasise it states "all" stations.

**Deputy Brian Leddin:** Most of those are in the north, west and midlands.

**Mr. John Enright:** Yes but to be fair, people give the impression that we have very poor water quality here in Ireland. If you compare us with the quality across Europe, we have a very good quality of water. We accept we have challenges but look at it from a dairy farmer's perspective. The agri-climate rural environment, ACRE, scheme was introduced recently. It is absolutely irrelevant to assisting those family dairy farms. People can criticise dairy farmers and they can criticise farmers in general but they are not getting the required supports. The ACRES would be an opportunity to help farmers along that line but it is not being supported and they are being completely excluded from that scheme. We have an agricultural sustainability support and advisory programme, ASSAP, scheme in which farmers have voluntarily participated. They have gone to meetings and listened to our advisers, and that scheme is shown to work.

Our concern here is we are putting regulation on top of regulation on top of regulation. We are not giving the regulations time to work. What we are doing is absolutely hammering family dairy farms. People have the impression, as our president said, these are all large farms but they are not. A lot of these farmers have 50, 60 or 70 cows and we are going to put these people out of business with the direction we are going in. We are giving them no support whatsoever.

**Deputy Brian Leddin:** Would the association agree the problem is largely caused by a small number of farmers in a particular part of the country where the very intensive farming is and that in most of the country, where Mr. Enright says the water quality is good, farmers are subject to the nitrates action programme even though they are not the cause of the deteriorated quality in the south and east particularly?

**Mr. John Enright:** What the Deputy is saying there is that because I am a derogation farmer, I am polluting. I think that is completely wrong. Derogation farmers can farm at that level of farming very sustainably from the environmental perspective. To generalise like that is unfair, to be quite honest.

**Mr. Pat McCormack:** To follow on from that, they are probably two decades ahead of other farmers in a way, from the point of view of soil sampling and matching organic and chemical requirements to soil sampling results.

**Deputy Brian Leddin:** On organic farming, it seems to me the challenge is farmers getting a fair price for their produce. The model in the last number of years has been the low-margin, high-volume one and that is intensive farming. There is an alternative model in the organic one. It is higher-margin and low-volume. Is this not the critical point? We want farmers to produce food. We want farmers to have sustainable livelihoods. The effort should be mostly towards ensuring farmers get a fair price and if they did then they would not need to have such high stocking rates on their farms, would not need to be applying so much nitrogen on their land and then we would not have the knock-on effect of the polluted rivers.

**Mr. Pat McCormack:** I will take that one. There is no point in getting a fair price, like €3 per litre for your milk or €15 per kilogram for your bullock, if you can only produce 100 l and one bullock. It is about having a sustainable economic living from a family farm model. I have sat here before when we have condemned and talked about the power of the retailer. Margins have been eroded but there needs to be a certain level of output to have a viable family income from the agricultural sector and from the family farm.

**Deputy Brian Leddin:** Okay. I thank our guests.

**Mr. John Enright:** To follow on from our president's comments, he and I were at a European Milk Board recently in Brussels and met organic dairy farmers from Germany. They pointed to how they are now selling organic milk into an oversupplied market and it causing them huge problems with their viability.

**Mr. Pat McCormack:** With a premium of 2 cent per litre.

**Deputy Brian Leddin:** Would the association agree Bord Bia probably is not marketing the product well enough? It is getting going but is it not part of the problem that the organic product is not being marketed?

**Mr. Pat McCormack:** It is ironic it has come up for discussion today. Discussion is good. We are talking about consumer affordability and that is a key question at this point in time.

**Chairman:** We should go back now to the nitrates and the derogation.

**Mr. Pat McCormack:** It comes in as part of it, Chairman. Is the consumer in a position to be able to pay a premium of 2 cent per litre, I think it was, for the German organic milk?

**Chairman:** With respect, that is an argument between organic farmers and commercial farmers. We are here to talk about the derogation and its impact on dairying so we will stay off the organics. We can have another session on that.

I call Deputy Fitzmaurice.

**Deputy Michael Fitzmaurice:** I thank our guests for coming in. The term “family farm” is being kicked around and our definitions of it might be totally different. What is the ICMSA’s definition of a family farm? Tell me what is the number of cows. Our guests have referred to 30 ha fairly regularly. Is it under 100 cows? That is what I gather from what the association is saying.

**Mr. Pat McCormack:** The average dairy size is between 85 and 90 cows.

**Deputy Michael Fitzmaurice:** We are then talking about under 100 cows being a family farm.

**Mr. Pat McCormack:** No two farms are the same.

**Deputy Michael Fitzmaurice:** Yes, I know that but I am asking what is the definition of a family farm in this line.

**Mr. Pat McCormack:** It is where the unit can maintain a quality of life for the family farm.

**Deputy Michael Fitzmaurice:** Would that be 100 cows?

**Mr. Pat McCormack:** From an economic perspective, you could be in a dry part of the country, you could have a wet farm, there could be high costs-----

**Deputy Michael Fitzmaurice:** Yes, I know. On average, I know dairy guys who have between 80 and 100 cows and they feel they are doing fairly well. Is that fair to say?

**Mr. Pat McCormack:** Some would, depending on the cost structure.

**Deputy Michael Fitzmaurice:** Would it alarm the association then that 3,642 derogation farmers are above 200 cows?

**Mr. Pat McCormack:** Look, I suppose-----

**Deputy Michael Fitzmaurice:** This is when we are talking about the family farm model.

**Mr. Pat McCormack:** We can look at statistics on cows, which I do not have in front of me-----

**Deputy Michael Fitzmaurice:** I am going by what the Department figures show. They indicate that of farms with more than 500 units, 529 are in derogation; of those with more than 400 units, 411 are in derogation; of those with more than 300 units, 928 are in derogation; and of those with more than 200 units, 1,074 are in derogation. These are some of the figures the Department has given us. I was trying to get my head around them. I agree fully with Mr. McCormack that a farmer with 30 or 40 ha should not have to reduce the number of cows by

the amount referred to. It would make the farms unviable. We need to keep dairy farms at the level Mr. McCormack talked about, which is between 80 and 100 cows for a family farm. That would be my definition of a family farm in the west where farms are smaller. If we add up the numbers for farms with more than 200 cows, there are nearly 6,000 farmers who will be over the threshold. I consider a 500-cow dairy herd to be a commercial operation. Unfortunately, in many places, these are over villages.

**Mr. John Enright:** I suspect those figures are for livestock units, not dairy cows. That could be my cows-----

**Deputy Michael Fitzmaurice:** A cow is a unit at the moment, unless it changes.

**Mr. John Enright:** That could be my cows, my calves and my in-calf-----

**Deputy Michael Fitzmaurice:** Generally a dairy man does not hold the calves. They get rid of the calves and hold replacements, at 20%.

**Mr. John Enright:** A certain proportion of our farmers do keep their calves, to be fair. I would be very surprised if there are 3,842 dairy farmers above 200 cows. That does not sound correct to me.

**Deputy Michael Fitzmaurice:** I am only going by the figures I have just given. They show there are 928 farmers with over 300 units. There are 411 farmers with more than 400 units and then there are those with more than 500 units. A farm with more than 500 cows is not an ordinary family farm.

**Mr. Pat McCormack:** Those figures need to be analysed because very often here will be parents and maybe two or three sons involved in the farm, which is keeping three or four households going. No two farms are the same.

**Deputy Michael Fitzmaurice:** As Mr. McCormack will have seen in his local area, there are farmers with 80 or 90 cows who are farming under the derogation. They are not going near the derogation and they farm under the 170 threshold. Mr. McCormack is right that they are now being put into an awkward position by going from 80 or 85 cows to 105 cows, depending on the output of the cow. That is going to affect smaller farms. An exception should be made for smaller farms. Given some of the figures I have provided, we need to look hard at farms with 400, 500 and 600 cows if they are on derogation. A living is what we want to make out of farming, not a multinational company.

On the derogation, is 20% not an awfully high figure? I tallied up the figures and the derogation covers about 300,000 cows. How many cows would be taken out if the derogation was removed? Does Mr. McCormack have any idea? A figure of between 15% and 20% was mentioned. I tallied this up. If there are 1.5 million dairy cows in the country, 10% of that is 150,000 cows.

**Mr. Pat McCormack:** Is the Deputy referring to the-----

**Deputy Michael Fitzmaurice:** I am referring to the derogation. Has any analysis been done on how many cows would be gone if the derogation was removed? If the new figures, whereby the number may increase from 80 or 85 cows to 105 cows, are applied, it will affect everyone. That is the problem. Whether a farmer is in derogation or not, it could put push the farmer over. Have the groups before us done any analysis on that?

**Mr. John Enright:** Is the Deputy referring to moving from 250 kg to 220 kg of nitrates per hectare?

**Deputy Michael Fitzmaurice:** If there was no derogation in place, how many cows would farmers be forced to remove? On the other side, when we increase from 80 or 85 cows to 105, what type of figure would that be? Going by the figures I have looked at, is it fair to say that nearly any farm would go to 105 cows, given the way it is being done? All farms, those with under 170 cows and those with over 170 cows, will be brought into the new bands. Has any analysis been done on that?

**Mr. Denis Drennan:** There are two different things happening here. In the year from 1 January 2023 the banding will come in. Forget about the derogation. Many farmers who use less than the 170 will be driven above the 170 figure and into derogation if they have high production cows. That is going to be a huge issue. It is a massive problem. Looking then at what is coming down the line next year, if we go from 250 kg to 220 kg of nitrates per hectare, using the numbers the Deputy mentioned, the position would be catastrophic were the derogation to go.

**Deputy Michael Fitzmaurice:** Has any analysis been done?

**Mr. Denis Drennan:** It would be impossible to analyse it. We would have to look at the amount of land involved in dairying and the number of cows we would be able to-----

**Deputy Michael Fitzmaurice:** The figures I have from the Department, which I presume are accurate, show that 691 farms with under 100 cows are in derogation. The figures for those with more than 100 cows keep going up.

**Mr. Denis Drennan:** With the banding coming in, the number of farmers who will be driven into derogation will increase. We will probably go from 7,000 farmers to 8,000 or 9,000 farmers in derogation.

**Deputy Michael Fitzmaurice:** The family farm is going to be badly affected when that comes in. Does Mr. Drennan agree?

**Mr. Denis Drennan:** Yes. People are going to get caught. There is a perfect storm coming. Depending on the productivity of the cow, the nitrogen excretion from the cow is increasing. In most cases, the family farm is an efficient and well-run system producing-----

**Deputy Michael Fitzmaurice:** I have a fear about this new litre measure coming, whether the figure is 85 or 105. Is there a danger that farmers may shift to a type of cow whose offspring may not be as good? That could be very problematic for this country down the line.

**Mr. Pat McCormack:** There is a huge danger that this could happen. There may be opportunity to concentrate on the black-and-white herd. The Deputy asked about moving to the 106 figure. We estimate that in excess of 25% of dairy farms would come in excess of that. On a rough figure, there are now some 6,300 litres because it is 6,500 kg. It is actually worse. There are farmers sitting on-----

**Deputy Michael Fitzmaurice:** Will Mr. McCormack give that figure again?

**Mr. Pat McCormack:** It is some 6,300 litres.

**Deputy Michael Fitzmaurice:** What percent?

**Mr. Pat McCormack:** It is about 25%. The difficulty is that herds are still maturing and have not reached their full potential. In two years' time, that could be 40%.

**Deputy Michael Fitzmaurice:** With genetics and that.

**Mr. Pat McCormack:** With maturity. There was a phase of expansion and now there is a phase of maturing coming on. The fifth and sixth lactation cows can have significantly more volume than a first and second lactation animal. That will have huge consequences.

**Deputy Michael Fitzmaurice:** The witnesses are right about the colleges and being in for the longer haul and that is good to see for young farmers. Thankfully, a lot of young farmers are doing the green cert. I know a few places that are booked out for another while and it is good that they are doing it.

What is Mr. McCormack's vision going forward for the family farm as against the bigger farm in the context of derogation and all of these figures? What needs to be done to keep the family farm viable?

**Mr. Pat McCormack:** There needs to be a significant level of support. My colleague Mr. Enright alluded to the agri-environment scheme that would be enticing for all commercial farmers. In the 1990s, we had REPS, a scheme that had a significant value for farms.

**Deputy Michael Fitzmaurice:** I am sorry for interrupting but for any poor dairy farmer out there, my honest opinion is that anyone who is spreading fertiliser will not get much out of this agri-environment scheme because farmers will not be growing the flowers people are on about growing.

**Mr. Pat McCormack:** There is opportunity and there is potential to put measures in place that can have a significant impact from an environmental perspective. That could include our habitats etc. Unfortunately, we believe that no effort was made to entice these farmers in from a policy or options perspective and that is regrettable because we should be trying to bring these farmers on board. The more farmers who come in under the umbrella of an environmental scheme the more progress can potentially be made.

**Deputy Michael Fitzmaurice:** I want to correct a point because I was looking at the figures. It is 6,113 farmers who have more than 100 cows and for those who have between 100 and 200 cows you can take-----

**Mr. Pat McCormack:** The difficulty is if you take 100 cows in 1983 they provided a significant level of income. If you take 100 cows in the late 1990s they provided a significant level of income. However, if you take 100 cows today it is hugely challenging to make a living as the margin has been eroded.

**Mr. John Enright:** In fairness to people out there we would have members and they would have gone to 130 or 140 cows. This might be a husband and wife, a father and son, a father and daughter or a mother and daughter and they have done that in good faith. They have taken out debt to go to that level and the debt is based on having a certain number of cows at a certain level of production and that has been completely undermined. That debt will not go away; it still has to be paid and overnight we are taking-----

**Deputy Michael Fitzmaurice:** You cannot do something overnight because if people have commitments you cannot just take them out.

**Mr. John Enright:** Unfortunately that is what is happening.

**Deputy Michael Fitzmaurice:** You cannot do that. Plenty of notice has to be given. For example, if you are changing the type of dairy cow you have then a phased transition has to be done, otherwise you are in trouble.

**Mr. Pat McCormack:** This is as significant as 2015 and that was indicated five, six and seven years in advance.

**Deputy Martin Browne:** I welcome the guests. Most of the questions I was going to ask have been answered already. I know the ICMSA has been raising this during the summer with the Department and, as has been said, the economic consequences for rural Ireland can be huge. Have all the changes in the Department led to some of the confusion that has been described so far in the meeting? Could the witnesses speak more about the practicalities involved in meeting the demands that are made as part of the derogation, such as the timeframe concerned? If the water quality report is issued in June 2023 and the derogation for some of the farmers will have changed in 2024 then what will those affected face in that intervening period?

**Mr. John Enright:** From our perspective the decision has been taken last March and that is the decision that is in place. Our concern is that we need to look at the impact of that decision on individual farmers. It will be severe on individual farmers and rather than looking back at history we need to examine how we will resolve this issue for the farmers concerned. That is our issue and our deputy president made the point that we need to give time for these measures to have an impact and we believe we have not been given sufficient time. All we have done is put new and severe regulations on people and we need to look at that again. We need to look at the economic impacts of that and try to resolve the issue going forward rather than looking back at history.

**Deputy Martin Browne:** Have all the changes in the Department during the summer created some of the problem? I imagine it has not helped with trying to come up with solutions on it. Have those changes been of any benefit to anybody?

**Mr. John Enright:** We have ongoing discussions with the Department on these issues and we hope an effort will be made to recognise the concerns we are raising and to see if the regulation can be tweaked to take account of the people who will be vulnerable under this. We have discussions and we would be hoping progress will be made. Progress on this matter is needed because if that is not done there will be a severe impact on individual farmers and their rural communities.

**Senator Paul Daly:** I welcome the representatives from the ICMSA. For the purpose of my questions I will play devil's advocate. Assuming this new banding is in and we have the worst case scenario, more needs to be done to highlight the consequences, not just for the farmers involved. Does the ICMSA have any idea of the impact the final result - if it is as we seem to be picking up this evening - will have on small rural economies off the farm, including hardware shops and suppliers? There would be a serious knock-on there but do the witnesses have any idea what the effect would be?

Along that line and again playing devil's advocate, the solution to a decrease in cow numbers is to increase land. If enough farmers who will be caught by this took that approach, where would that land come from and what other sectors would the dairy demand for land effect, be it forestry, tillage or farmers in other sectors? Has the ICMSA gone as far as pinpointing how

this can have a ripple effect beyond the people it directly affects? Does the ICMSA have any information on that?

The ICMSA is aware of the following point because it is its business. A lot of milk is coming over the Border for processing and rivers and watercourses along the Border do not know any border. Is there a possibility that the co-operatives or processors in the South could be on an uneven playing field? What similar conditions are being implemented in the North or are there any changes? Could we end up with a situation where the co-operatives or processors could fill the vacuum that would be created if there was a reduction in cows here with milk from the North?

**Mr. Pat McCormack:** I will make an attempt at answering some of those questions and my colleagues can come in as they wish. It is hard to quantify the wider rural effect because that could change on an ongoing basis. In answering Deputy Fitzmaurice I said the herd was maturing and that it would bring more and more people into the loop from the perspective of having 106 cows or more in their herds. In effect, that could provide the industry with an ongoing cull, which would be a huge issue. It would particularly undermine those processors who have invested substantially in stainless steel in recent years and find themselves still paying for it. They would find themselves particularly vulnerable if they are not getting the milk and it could bring into question the viability of some of our processors. That would have a hugely detrimental effect on our rural towns and villages because in the vast majority of cases where they are fortunate enough to have a dairy processor near them it is probably the best employer they can have and it is the heartbeat of that rural area. If the heart is turned off there is little life left.

The availability of land is a huge issue and there is the potential for farmers to go down that avenue but the opportunities are very slim. If it was to happen there would be a significant impact for other farmers. The Senator mentioned forestry and there is huge ambition among this Government for afforestation but with nitrates and the single farm payment, as it was in olden times, it is very hard to see those targets being met with this level of regulation. The Senator mentioned cross-Border issues and he said that water knows no bounds. Hopefully there will be no bounds because that would create other issues for our industry as an island nation that is exporting. Mr. Enright might come in on the regulations in the North.

**Mr. John Enright:** The regulations in the North would be broadly similar. There is a lot of discussion on what a family farm is etc. but if we undermine that and co-operatives cannot get milk supply from the existing stock of dairy farmers then the only alternative they have is to go far large-scale new entrants that would not be family farms. That is the reality.

**Senator Paul Daly:** Will the proposed changes not happen in the North?

**Mr. John Enright:** No. They will not.

**Senator Paul Daly:** That would create an uneven playing field.

**Mr. John Enright:** They are outside of the EU and they have their own water quality legislation at this stage. My understanding is there is no cow banding in Northern Ireland. I am open to correction on that.

**Mr. Pat McCormack:** Their supply would be very different. In the Republic, a lot of cows come in between 6,000 and 8,000 l, whereas in the North it would be 10,000 to 12,000 l. They are talking about a very different animal and not near as dependent on the pasture base as we are.

**Deputy Joe Flaherty:** I thank the speakers for coming in and giving us an informative overview. I will follow on from Deputy Fitzmaurice and Senator Daly and try to get a picture of the full impact of this. The speakers have given a worrying indication of the impact of cow banding and the reduction to 220 kg. In the tables they have given, have they expanded that to include the full herd? Do they have a final picture based on the analysis they have given or is that just an indicative picture? Can they give an industrywide figure for the total reduction in cow numbers?

**Mr. John Enright:** At the moment we cannot give an indicative figure for the country because we are not certain what cows will be included in the calculation to decide whether a farmer is band 1, band 2 or band 3. Going from 250 kg to 220 kg, there will have to be further analysis done on that in terms of cow banding and the number of farmers above the 220 kg level. That calculation is not available at the moment.

**Deputy Joe Flaherty:** Based on what the witnesses have, in terms of lost production, would they have a figure for the economic value of milk that is lost?

**Mr. John Enright:** We could do a calculation on the individual farm level. We could give that figure no problem. The countrywide figure is still up in air because we are not certain what cow numbers are included in the calculation, etc. We will have to get additional data from the Department on that matter.

**Deputy Joe Flaherty:** The bigger issue is banding. That seems to have a bigger impact than the reduction to the 220 kg, based on the analysis the witnesses have given, does it not?

**Mr. John Enright:** It does for individual farmers. The fact you go from 250 kg down to 220 kg is the second hit. The change in slurry export rules is hitting individual farmers as well. Each is significant but the two together are very significant.

**Mr. Pat McCormack:** There are farmers out there farming at 165 kg of organic nitrogen and banding will bring them in excess of 220 kg. They are totally unaware that they will be part of this national cull.

**Senator Tim Lombard:** The slurry exports have also doubled. If you were exporting slurry and were not in derogation, the volumes have changed so you are automatically brought back in. Slurry is a huge issue.

**Deputy Brian Leddin:** There is no national cull proposed. That is quite inflammatory language. There is no national cull proposal.

**Mr. Pat McCormack:** Ultimately, for the dairy farmers of Ireland that we represent there is the potential for a huge cull at the family-farm level.

**Deputy Brian Leddin:** A reduction in stocking rate, certainly.

**Mr. John Enright:** To be fair to individual farmers, they will be faced with a cull on their farm. That is the reality of it. If there is a cull on my farm and one on my neighbour's farm, that turns into a national cull.

**Chairman:** Call it a "cull" or a "reduction", but if what is proposed is put in place, the number of dairy cows on individual farms will be reduced, though the number of cows countrywide might not because other people might get into dairying.

**Deputy Joe Flaherty:** To expand on what Senator Daly said on the threat to other farm sectors, an obvious solution for the bigger and more intensive dairy farms will be to lease more land, probably the less arable land that might have been for forestry. Do the witnesses see that an obvious consequence of this will be to make it harder for the forestry sector because the land will not be there?

**Mr. Denis Drennan:** It is becoming a huge issue in certain parts of the country where there is a divide between good and bad land. The farmer is looking at his options. He has commitments to financial institutions that have to be paid. He needs the number of cows he has to make those returns. What are his options? If he destocks, he is out of business and cannot make those returns. His only options are to destock or to get more land, and it is putting pressure on the forestry sector. We have huge aspirations for that sector but there will be, in certain parts of the country, dairy farmers who will look at leasing land that should be entering the forestry sector but will be held back because of the need for extra land in dairying.

**Chairman:** I want clarification on a few issues. You have to double the volume of slurry that is needed now to bring down organic nitrogen. Who made that decision and what was the basis for it?

**Mr. Denis Drennan:** Teagasc reanalysed the constitution of slurry. Originally, that body said there was 5 kg of nitrogen in each cubic metre of slurry; then it re-evaluated it and brought it down to 2.4 kg. We would probably dispute that figure with regard to farmers who are using low emissions slurry spreading, which all derogated farmers are.

I will make a point that is not related to the Chairman's question. Derogation farmers have much higher standards of farming than all other farmers. They are inspected at a much higher level and have to have proper storage and facilities in place. Nutrient management plans, soil testing and all those things are carried out on derogation farms but not on non-derogation farms.

**Chairman:** It was a national decision based on Teagasc advise to change the volume of slurry needed to bring down organic nitrogen.

**Mr. Denis Drennan:** Yes.

**Chairman:** Is the change to banding a national or an EU decision?

**Mr. Denis Drennan:** A national decision.

**Chairman:** Will the banding only operate in Ireland or across Europe?

**Mr. John Enright:** Our understanding is the Commission looked for it and the decision was taken by Ireland. I think only four member states in Europe have a derogation at this stage. That can be a bit misleading. It does not mean farmers in other member states cannot be above 170 kg. They can because they may not be in what is known as a nitrate vulnerable zone.

**Chairman:** If you were in parts of Belgium where there is derogation, will the banding apply there?

**Mr. John Enright:** There are banding systems in different countries, depending on the system of dairy production.

**Chairman:** When we get the water quality reports back in, who will make the decision whether the report is satisfactory enough to leave the country at 250 kg, or reduce it to 220 kg?

Is that a national or an EU decision?

**Mr. Denis Drennan:** That will be based on an EPA report.

**Chairman:** If water quality improves by 0.5%, is that enough to hold them at 250 kg? If it decreases by 0.5%, does that take it down to 220 kg?

**Mr. Denis Drennan:** Article 12 of the derogation decision is very loose. It refers to average values of nitrate concentration above 50 mg per litre, which is drinking water quality, or increasing trends of nitrates concentration compared to 2021. They are comparing this year to last year. We have not got the results for last year yet. We have asked how much of a difference would have to be there and they will not give us an accurate figure. They are saying it is generally the trend.

Part B of that is eutrophic. That is a huge issue. We could be cut from 250 kg to 220 kg because a water body or estuary becomes eutrophic or risks becoming eutrophic. Eutrophication refers to algae growth, and that is more linked to phosphorus production. Humans create as much phosphorus that ends up in wastewater treatment plants as animals do. Our president gave the example in his opening address of Waterford harbour. If the wastewater treatment plant in Waterford city was spewing, if there is no nitrogen or phosphorus recovery in that plant, as it releases the water into Waterford harbour, the phosphorus coming from humans in the city is released into the estuary. That could cause the estuary to become eutrophic, or risk becoming eutrophic, and would have a huge impact on the farmers, as our president has said, in Tipperary, Laois, Carlow, Kilkenny, Kildare and Waterford. It might have no link to agriculture but because it becomes eutrophic-----

**Chairman:** We all want to see water quality improving. There is unanimity in the room on this. The Department of the Environment, Climate and Communications will come before the committee shortly. A week ago we had torrential rain. The waste treatment plant in my home town cannot handle the rain water. The sluice gates are opened and it ends up in the River Suir. This happens on a regular basis. How can we know there is an improvement in water quality? How can we attribute it? Perhaps the scientists can do so. There is reference to urban waste and agricultural disimprovement. We all want water quality to improve.

I will speak about the county I know best, which is Tipperary. In that county there are 68 settlements with no waste treatment plant of any description. Some of these are on the banks of the River Suir. The capacity is insufficient for the population in some of the larger towns. We will make major economic decisions that will have a serious impact on economic viability. This is also with regard to our climate change targets. The point has been made that land availability for forestry will disappear. Forestry will not be able to compete for land and this will have significant economic consequences. I will not speak about the impact at individual farm level as it has been well emphasised at the meeting. Important decisions will be made. When officials from the Department of the Environment, Climate and Communications come before the committee, I will ask how water quality issues are determined between municipal and agricultural causes. Major decisions are being made but our water quality infrastructure is not at the level it should be.

**Mr. Denis Drennan:** I agree fully with the Chair. This is the problem. I do not know why eutrophication is mentioned in the derogation because it is more a phosphorus problem. According to EPA figures, humans in Ireland create almost as much phosphorus as animals but we have no phosphorus or nitrogen recovery in any municipal waste water plant. When the plant

in Dublin is fully upgraded it will have nitrogen and phosphorus recovery but it will not be anywhere else in Ireland. Phosphorus is so water soluble that what we think is clean water being discharged from municipal wastewater treatment plants is heavily laced with phosphorus. This is causing the eutrophic status of many of the rivers in the country, particularly the estuaries. The national settlements in Dublin, Galway, Cork, Limerick and Waterford are all on the coast. The waste ends up in the estuaries.

**Chairman:** There is an argument that we are the only country in Europe with a derogation but we have a completely different system of dairy farming from other countries. We produce our milk from grass. Grass takes nitrogen to grow. Most of the other countries have indoor systems that have their own problems with water quality. We have a completely different farming system. We have carbon sequestration in our system. I hope that the next water report we get will show that water quality has improved and it will solve the issue for everyone. As has been mentioned by others, an economic assessment needs to be done of the damage this will do to the rural economy. It is not 100 years ago that we had the troika in 2008 and 2009. If we had not had our dairy industry in rural Ireland it would have been very easy to talk to it.

**Mr. Pat McCormack:** We are unique in Europe because we have 55,000 or 60,000 farmers who are audited on a regular basis from an environmental impact perspective through the sustainable dairy assurance scheme and the beef and lamb audits. We see in Europe a move to emulate this structure. It is the structure we have and we need to retain and cherish it. We need to use it to promote what we do and its uniqueness. We must reiterate this point. Significant undermining of it is written all over the nitrates directive.

**Chairman:** There will be a push to reduce yields and protect solids. This will have an impact on our beef production. This would be very regrettable.

**Mr. Denis Drennan:** The one thing we would like to emphasise is that the Department asked Teagasc to do report in the summer of 2021 on the most efficient ways to reduce nitrates in the water. The two most significant and advantageous measures found were a cut in chemical nitrogen and increased enforcement. Both of these measures have been introduced this year. There has been a 10% cut in chemical nitrogen this year. We have an agricultural catchment programme that is better than anything in Europe, which looks at the effects of a reduction of chemical nitrogen. Eddie Burgess runs it on behalf of Teagasc. He and Teagasc say the rules and regulations introduced this year on increased enforcement and a reduction in chemical nitrogen will take 18 to 24 months to show results. We are being judged on them now. New measures have been introduced that will take 18 to 24 months to work but we are not being given this time. This is what we are pleading for. The rules and regulations that have been introduced because they were deemed by Teagasc as being the most effective are not being given the opportunity to work. We are being prejudged on them.

**Mr. Pat McCormack:** Other stakeholders that contribute to water quality have been mentioned. We need to see an urgency in what they will do to protect water quality.

**Deputy Kieran O'Donnell:** For the ordinary person, my understanding is that there are three zones in Ireland for spreading fertiliser. I am not saying one farmer is better than another but could we have a situation where one farmer, who is highly efficient in climate and carbon reduction, may be alongside another who may not be and because they are in the same zone they will both be hit with the same penalty? Mr. Drennan made reference to a Teagasc report. What does he propose instead as a lead-in period? What is he proposing in substance that should happen now? As a layman looking on, I want consistency and fairness. Everyone accepts we

have to move on climate action. It is just the way it is. We must move in a sustainable way. Dairying is very important. I represent Limerick city but the constituency also includes a rural area with a lot of dairy farming. The ICMSA is based in Limerick and I am very familiar with the work it does. Is everyone treated the same in the way the zones are laid out? What timeline does Mr. McCormack propose for the introduction of what is proposed in the nitrates directive?

**Mr. Pat McCormack:** To answer the question about time we want fairness but we also want time. Not alone do we want fairness among farmers but we want fairness among all the stakeholders involved who contribute to water quality. This is critical. I mentioned the embrace of low-emission slurry spreading and investment in slurry storage. I also mentioned the fact that protected urea is becoming the norm. To go back to Mr. Drennan's point, we need 18 to 24 months for results to materialise and be seen by the public. Unfortunately, we are not getting this opportunity. I can guarantee that cow banding introduced on 1 January 2023 will have a huge impact on the Deputy's constituency.

We mentioned the agri-environmental scheme, which is very important. It is a missed opportunity to get the pH of the soil right and the incorporation of clover for farmers. All of these measures can create efficiency in the fertiliser used. Efficiency is critical in any industry given where costs are.

**Deputy Kieran O'Donnell:** Am I correct that within the zones all farmers are treated the same and it is based on the overall quality of water in the zone? Am I correct in that or am I interpreting it incorrectly?

**Mr. Denis Drennan:** It looks like we are heading to a catchment-based scenario. We used Waterford Harbour as an example. That is a huge catchment area because the Barrow, Nore and Suir rivers all flow into Waterford Harbour. We cannot get a straight answer regarding all the farmers in those three catchment areas. We cannot get an answer on how big the catchment is. They are looking at coastal waters. The risky bit here is eutrophication, which is down to phosphorous and, as I said, can mainly come from wastewater treatment plants. That is the danger. That part needs to be sorted, as does our end.

The regulation for nitrates is coming this year. There is a possibility that could be increased from a 10% reduction this year to a 15% reduction next year. Even at farm level, however, if we look at the difference for farmers and how they farm, there is monumental change this year. No slurry was spread in the closed period last year. No fertiliser was spread in January and February this year. Nobody went out. The advice and science is coming through the agricultural catchments programme. The advice is coming out and farmers are really embracing it. If farmers wanted to get protected urea this year, it was unavailable at certain times. If they want to buy a low-emissions slurry spreader at present, there is a waiting list of about a year for it. If they want to get a builder to do building, it is impossible at present.

On incorporation of clover into grassland, I looked for clover this year. I could not get it locally and ended up having to get it through a man in Offaly who got it from the North. It could not be got because farmers were embracing the advice and clover seed just was not available.

**Deputy Kieran O'Donnell:** Mr. Drennan spoke about contamination from wastewater treatment plants. Has any empirical work been done on that? If someone is contaminating groundwater, whoever it is should be held accountable for it. I have no issue with that. The question is if wastewater treatment plants are bringing up the contamination levels, has any empirical work been done on that, to Mr. Drennan's knowledge? He is saying that if we deal with

all these issues over the next year or two, and we come to the directive being implemented, he believes it would then be implemented in a much fairer way. Is that a fair comment?

**Mr. Denis Drennan:** The Deputy is asking about wastewater treatment. I sit on the water forum on behalf of the ICMSA. That forum has requested information on wastewater treatment plants throughout Ireland from Irish Water. We have asked it for that for the past three years. There are approximately 54 areas where raw sewage is going straight into wastewater treatment plants but the bigger question related to the level of treatment. Is it primary, secondary, tertiary or total treatment? Is there nutrient recovery from any of the wastewater treatment plants? Irish Water will not provide us with that information.

If we look at what happened earlier this summer, there was a huge celebration because a sod was turned for Arklow wastewater treatment plant 20 years after the problem developed there. As Deputy Cahill said, how many areas are there in his constituency where sewage is being released into water? Under the old system, when floodwaters come, the gates are opened and off it goes. Everybody has to work together. We accept farmers are part of the problem. We want to be part of the solution. We are embracing any advice we get on any technology. Our general secretary, Mr. Enright, has told the committee about the ASSAP programme. I sit on the consultative group for that programme. There is some 94% engagement by farmers with ASSAP, even though it is a voluntary programme, and 91% of the measures asked of farmers are being implemented.

**Mr. Pat McCormack:** The critical term Mr. Drennan used is that we are part of the solution. We are not the entire solution. Other stakeholders need to invest in getting their house in order.

**Deputy Matt Carthy:** I will be very brief. I was attending other meetings so I have not heard everything and I do not want to repeat questions. I thank the ICMSA representatives for being here. I will ask a broad question and they can answer it in the context of what has already been dealt with. We have had many debates and a lot of public discourse on climate action obligations. For the most part, it has been shown that the broad public recognise that we need to produce good quality food, that Ireland is good at doing that, and that any climate action measures need to be taken in the context of the global situations we will face. There is a lot of empathy and support for the farming community.

When it comes to water quality, things are a little different. We cannot blame the Brazilians for poor water quality in Ireland. If watercourses are polluted, then the source is here. It is important to say that the source is not always farmers but in the context of the nitrates directive and our ambition, shared by almost everybody in the country, to have the most pristine watercourses possible, where do the representatives see actions being taken when it can be shown that individual farms are contributing to deterioration of those water sources? What is the best approach to be taken to address those issues recognising, as I said, that it is not always farmers who are responsible? There is no doubt, however, that there are instances where individual farms are contributing to that deterioration. In those instances, what measures are required to address that on an on-farm basis?

**Mr. Pat McCormack:** There is a major opportunity under the targeted agricultural modernisation scheme, TAMS, to address that from the perspective of slurry storage. Where farmers may have expanded, may not have the full required period of slurry storage and may have a significant level of debt on-farm, but find themselves virtually excluded from TAMS, that is a huge issue. The availability of 40% support under that scheme, or 60% support for the young farmer, can make a difference for young farmers in particular and for any farmer. That is a ma-

for issue. I am glad that the Deputy acknowledged in his remarks that there are other sources of contamination. We just had that discussion. We need to play our part and we are certainly prepared to be part of the solution. The move to low-emissions slurry spreading and protected urea, in particular the way it was embraced in 2022 was, as I said, something nobody really understood in 2018. By the time 2022 is over, the vast majority of farms will have seen it rolled out at farm level. There is opportunity to build on that.

Mr. Drennan mentioned clover. The incorporation of clover was huge. The rejuvenation of pastures has been critical, as has getting the pH of our soils right for chemical fertiliser utilisation, which is critical. I mentioned efficiency earlier. It is all about efficiency, which particularly comes into play when the economics and the costs associated with the raw materials are where they are in 2022. That has very much focused minds. As we alluded to earlier, the difficulty is that it takes 18 to 24 months for changes in practice to deliver results. That is the critical issue. We find ourselves two months away from cow banding and potentially moving to 220 kg, when the practice changes have not been afforded the time and opportunity to deliver from a scientific perspective.

**Deputy Matt Carthy:** I will ask a question from another angle. If a farm has not employed the type of practices Mr. McCormack talked about to a sufficient level, and it is shown that an individual farm is contributing pollution to a watercourse, is it better that that individual farm be mandated to reduce production until the stage where it has resolved those issues, as opposed to a blanket ban where all farmers, including those who have employed all of the measures Mr. McCormack talked about, are equally penalised?

**Mr. Pat McCormack:** In an ideal scenario, we would see the ASSAP programme rolled out nationally. That was a huge success. People known to individual farmers in those catchment areas came to them, whether they were co-op or local farm advisory personnel, and helped them in a proactive way. Very often, a very small thing, such as replacement of gutters and downpipes, can have a critical impact on a farm's ability to store slurry, for example. Those farms that could be causing issues may potentially be due to a very small thing. A similar programme to ASSAP, if not ASSAP itself, rolled out nationally, may significantly deliver for farmers in a proactive and gentle manner.

**Deputy Michael Fitzmaurice:** Mr. McCormack talked about the stocking rates and so on, is the ICMSA or Teagasc doing anything to see if it is workable? I always have a vision of a suckler herd where we should produce a cow that would rear two calves. One on its own is not able to do that. Is there any work being done by Teagasc and organisations such as the ICMSA that would help with the stocking rates, and all that involves, where a good quality dairy calf could be brought over? I know that there is the ordinary dairy beef side, which I understand. I would always take the view that it is tough going to make money out of one calf, one cow. I have talked to some people who have an interest in the likes of that idea. Is any research being done, or anything being done by Teagasc, to see how workable that is and if it would help both sectors? There is pressure that everybody needs to know will be coming on. I have seen full U-turns being done on such matters as exports out in Europe and there are many headwinds. Is there any sort of think tank, solution or work being done to promote certain things like that, which may help both sides?

**Mr. Pat McCormack:** We do not underestimate the challenge that is out there for the suckler calf, which has to pay for the maintenance of itself and of its mother. It is a huge task. Teagasc has done work in conjunction with the Irish Cattle Breeding Federation, ICBF, on the dairy beef index, DBI, and it is critical that the offspring of the dairy herd that will be sold is fit

for purpose in the beef industry, whether that is to double suckle, to go from calf to weanling or to go from calf to finish. It is critical and we all need, particularly given recent events, to recognise that the offspring of the dairy herd has to be fit for purpose and have a value within the beef industry.

Equally, its contribution to the beef industry needs to be acknowledged where up to 56% and 57% of the kill comes from the dairy herd. That is why, perhaps, it is very important that there is a co-operation and unity rather than the divide that has crept in to the industry in that regard in the last decade from a beef perspective. We would be very open to encouraging Teagasc, ICBF, or indeed anybody else, in such co-operation.

**Deputy Michael Fitzmaurice:** One thing we need to do as a committee, which I will propose and perhaps it may be seconded, is where Mr. Drennan mentioned earlier that the EPA report has been held up for so long and that the ICMSA did not receive it. There is a duty on the EPA to give the report to the ICMSA and to publish it for the betterment of all, in the first instance. When the Department appears before the committee to discuss the phosphorus issue, which Mr. Drennan also outlined, he is 100% correct that most of the sewage in the country is released when there is a big flood in most places. Let no one try to say that it is a foolproof system. We have to find out, as I am not aware scientifically if there is somebody else who can say that it is different, or whatever. We need to find that out when the Department appears before us later on and we will do that.

**Chairman:** I thank the witnesses for participating in the meeting. This is a topic of great importance and we all want to see water quality improving but we also want to see fair play to ensure that the salability of rural Ireland is not undermined. We are now suspending the meeting to allow the witnesses to leave and to enable the next witnesses to take their place.

*Cuireadh an coiste ar fionraí ar 7.04 p.m. agus cuireadh tús leis arís ar 7.10 p.m.*

*Sitting suspended at 7.04 p.m. and resumed at 7.10 p.m.*

**Chairman:** I wish to bring to everyone's attention some information on privilege. Witnesses giving evidence from within the parliamentary precincts are protected by absolute privilege in respect of the evidence they give to the committee. This means that witnesses have full defence in any defamation action for anything said at a committee meeting. However, witnesses are expected not to abuse this privilege and may be directed by the Chair to cease giving evidence on an issue. Witnesses should follow the direction of the Chair in this regard and are reminded of the long-standing parliamentary practice to the effect that, as is reasonable, no adverse commentary should be made against an identifiable third person or entity.

Witnesses who are giving evidence from a location outside the parliamentary precincts are asked to note they may not benefit from the same level of immunity from legal proceedings as witnesses giving evidence from within the parliamentary precincts and may consider it appropriate to take legal advice on this matter. Privilege against defamation does not apply to the publication by witnesses, outside the proceedings held by the committee, of any matter arising from the proceedings.

Members are reminded of the long-standing parliamentary practice to the effect that they should not comment on, criticise or make charges against any person outside the Houses or an official, either by name or in such a way as to make him or her identifiable. Parliamentary privilege is considered to apply to utterances of members participating online in this committee

meeting when their participation is from within the parliamentary precincts. There can be no assurance in relation to participation online from outside the parliamentary precincts and members should be mindful of this when they are contributing.

Our witnesses are as follows: from the Department of Housing, Local Government and Heritage, Mr. David Flynn, principal adviser on water, and Dr. Marie Archbold, water policy adviser; and from the Department of Agriculture, Food and the Marine, Mr. Bill Callanan, chief inspector and assistant secretary general, and Mr. Bernard Harris, agricultural inspector. I will now call the witnesses to make their opening statements, starting with the Department of Housing, Local Government and Heritage.

**Mr. David Flynn:** I am grateful for the invitation to speak with the committee today on the subject of Ireland's fifth nitrates action programme. I am joined by my colleague, Dr. Marie Archbold, who is a water policy adviser with the Department and co-chair of the nitrates expert group. The Department has policy responsibility for the implementation of the nitrates directive and the water framework directive and associated water directives. We work closely with our colleagues in the Department of Agriculture, Food and the Marine on these nitrates issues and all water quality issues. Both Departments benefit from expert support provided by Teagasc and the Environmental Protection Agency through the nitrates expert group.

On water quality, simply put, nutrient levels are too high in many of our water bodies. The draft river basin management plan, based on data from the EPA, links agricultural pressures to 1,000 water bodies out of a total of 4,842 water bodies. That is an increase of 223 over the previous period. In contrast, the number of water bodies impacted by urban wastewater is 208, which has decreased by 83 since the previous cycle. This excess of nitrogen and phosphorus compounds accelerates the growth of algae, causing an undesirable change in the natural ecology and lowering oxygen levels in waterways. This reduces biodiversity as fewer species can tolerate this change. Algal blooms impact on wildlife, drinking water and swimming areas. Excess nitrogen can cause health issues in drinking water supplies.

As a result of these trends in water quality as shown in the water quality monitoring programme, Ireland is required to take additional measures and reinforce existing measures sufficient to reduce water pollution and to prevent further such pollution. Part of this response is the fifth nitrates action programme. The programme includes several strengthened and new requirements. These requirements have been developed following stakeholder dialogue and three separate periods of public consultation. The key measures include changes to chemical fertiliser allowances, livestock excretion rate bands and expanded closed periods. My colleagues from the Department of Agriculture, Food and the Marine will provide further details on those individual measures. In addition, there will be an interim review of the entire programme after two years and a review of local authorities' agricultural inspection programmes.

On the derogations, the directive sets a universal limit of 170 kg of nitrogen per hectare per annum. Where a member state can demonstrate that a higher limit will not lead to higher pollution, the Commission may adopt an implementing decision, a derogation, that allows higher maximum limits of nitrogen subject to adherence to additional conditions. A derogation does not exempt Ireland from any of the directive's water quality objectives. Ireland recently successfully secured a derogation for the period from March 2022 until December 2025. The only three other areas in Europe that currently benefit from a derogation are Denmark, until the middle of 2024; Northern Ireland, until the end of 2022; and the Flanders region of Belgium, until December 2022. The Netherlands is currently in the process of renewing its derogation and, going by recent media reports, this will be a three-year phase-out of its derogation, although

that has yet to be decided.

Ireland's current derogation comes with conditions that include an interim review that must include a water quality assessment that compares 2021 and 2022 data. This is to be conducted by June 2023. If the assessment shows that we have eutrophic water bodies, risk of eutrophic water bodies or water bodies with increasing trends or exceeding an average of 50 mg of nitrate per litre over three years, then farms in the catchment areas feeding these monitoring points will face a cut in the derogation limit from the current 250 kg to 220 kg of nitrogen per hectare.

In conclusion, to protect water there needs to be a broad acceptance of and adherence to good agricultural practice requirements. Ireland is simply not going to maintain the current derogation facility in its current format if recent water quality trends are not addressed and shown to have been addressed by a change in water quality data.

**Chairman:** I call Mr. Callanan from the Department of Agriculture, Food and the Marine.

**Mr. Bill Callanan:** I am grateful for the invitation to speak with the committee on the topic of Ireland's nitrates action programme and nitrates derogation. My colleague, Bernard Harris, joins me here for this discussion and we hope we can address any questions members may have.

As set out by our colleagues in the Department of Housing, Local Government and Heritage, the Department of Agriculture, Food and the Marine works closely with other Departments to ensure a coherent approach to meeting agriculture's commitments to the environmental challenges of climate, air, water and biodiversity. Agriculture has a significant role to play in meeting environmental targets. Existing water protection measures must continue to be implemented and accelerated but, nonetheless, new measures will also be necessary. The strong support and work being delivered by farmers to address our environmental issues must also be acknowledged.

Ireland's nitrates action programme is the key regulatory framework by which farmers support the objectives of the water framework directive, WFD, but it is not the only mechanism to support farmers. Support is available through our targeted agricultural mechanisation scheme, TAMS, and its support for infrastructure, actions to support water quality in our agri-environment schemes and investment in the agricultural sustainability support and advisory programme, ASSAP, as well as research and monitoring, for example, through the agricultural catchments programme, ACP.

In supporting the work to improve water quality, both Departments have committed to renew the ASSAP, which works directly with farmers, industry and advisory services to protect and deliver improvements in water quality. It must be noted that industry has provided additional resources to the programme, which sets a clear intention of the ambition to reduce the impact of agriculture on the environment. From the Department's perspective, the agricultural sector is committed to stabilising and improving water quality. The review of the nitrates action programme provided a timely opportunity to review the impact of agriculture on our water environment and support agricultural ambition to stabilise and improve water quality while seeking as many co-benefits for climate, air and biodiversity as possible.

Specifically on water quality, our waters are under increasing pressure. The EPA has reported that almost half of our water bodies are not in satisfactory condition. The most significant pressures on water are from excessive nutrients, namely, phosphorus and nitrogen, and agricultural activities contribute significantly to those losses. From a policy perspective and by way

of policy response, Ireland has been a leader in the EU in protecting the environment through strong regulation that includes both nitrogen and phosphorus, unlike most other EU member states. As mentioned earlier, our Department is working closely with the Department of Housing, Local Government and Heritage in the delivery of a new nitrates action programme and related agri-environment policy measures. This has built strong relationships to collectively develop a cohesive policy response in delivering and implementing policy on water to coincide with the delivery of Ireland's next river basin management plan. Both Departments are also working closely with the Environmental Protection Agency on an ongoing basis in reviewing water quality, monitoring water quality trends and investigating and understanding the pressures from nutrients, pesticides and sediment loss from agriculture.

The fifth nitrates action programme process conducted a broad public consultation and held discussions with key stakeholders, including farm organisations and non-governmental organisations. Ireland's fifth nitrates action programme contains a number of measures for the protection of the environment. These include new requirements for slurry and soiled water storage and management, revised livestock excretion rates, new controls on chemical fertiliser, a chemical fertiliser database, green cover on tillage ground, new requirements on grazing land management, a commitment to review compliance and assurance activities by local authorities, and enforcement by local authorities.

The Department is also responsible for operating Ireland's derogation. The Commission approved Ireland's derogation in early 2022 and the terms of the decision were presented at a meeting to the EU Nitrates Committee on 11 March 2022. Member states voted to approve Ireland's nitrates derogation until 31 December 2025. Ireland's nitrates derogation was transposed into Irish legislation through SI 393 of 2022 on 29 July 2022.

Additionally, in securing a nitrates derogation for Ireland, the commission introduced additional conditionality to its approval such that an interim review must be undertaken in mid-2023 to include an assessment of water quality results for a defined period to include 2021 and 2022. This review will be considered and the terms of reference will be developed in due course. It is important always to recognise that the derogation is provided on the basis that it is a derogation to the baseline commitment of 170 kg of organic nitrogen per hectare, not a derogation from the objectives of the water framework directive. Key scientific criteria must be presented before a derogation can be sought, which, from an Irish perspective, includes a long growing season and crops with high nitrogen demand, among other criteria. Ireland easily satisfies these conditions. However, it should also be recognised that in the process of securing a derogation, it falls to the Commission to propose a vote of the committee of member states provided they are satisfied with our action programme. As was said by my colleague, only four countries have sought to avail of this facility.

In implementing the derogation, farmers availing of the facility must carry out additional actions, including the likes of a farm nutrient plan, training and using low-emission technology. It is important that the long term viability of the derogation be secured through the achievement of the requirements to secure good water-status outcomes.

If in developing the mid-term review next year, and when the assessment is complete, key criteria following the water quality assessment process are not met, there is a risk that the stocking rate equivalent of 250 kg of nitrogen per hectare, currently approved under our derogation, may be reduced to 220 kg of nitrogen per hectare from 2024 onwards in some areas.

In order to guide this assessment, and following on from the initial assessment completed as

part of the fifth nitrates action programme review, Teagasc has again been asked to review and model the impact of potential measures and the impact of reducing the stocking rate limit to 220 kg of nitrogen per hectare. This work is to conclude shortly.

Ireland's grass-based model provides many environmental benefits, and our farmers and industry have structured its development around this. While it is acknowledged that more needs to be done to reduce the agricultural impact on the environment, a strong regulation provides the bedrock to achieving this. We are on the right path to achieving environmental sustainability while balancing the economic and social aspects. I thank the members for their attention and time this evening. We will be happy to take any questions from them.

**Deputy Michael Fitzmaurice:** I thank the witnesses. The Department talks of a review. It needs to be up front and straight with farmers. It cannot just tell someone with a certain number of cows that the provision will be gone next week, month or year. Have the officials from the Department of Housing, Local Government and Heritage seen the report on water quality? The previous set of witnesses stated the report always came out in July but that it has not this time. Why is that?

**Mr. David Flynn:** I am not sure what the Deputy is referring to.

**Deputy Michael Fitzmaurice:** It is on water quality.

**Mr. David Flynn:** There is one coming shortly. It is due-----

**Deputy Michael Fitzmaurice:** Why was it always issued in July? Now, funnily enough, it is a few months late.

**Mr. David Flynn:** The Deputy would have to ask the EPA that. I do not know.

**Deputy Michael Fitzmaurice:** My next question is for the officials from the Department of Housing, Local Government and Heritage. They talk about different problems, including those associated with nitrogen and phosphorus. There are a lot of towns around Ireland where effluent from sewage-treatment plants goes into the rivers we talk about. Funnily enough, the farmer always gets kicked around the place about this. Scientifically, can it be stated whether phosphorus comes out of an animal or a person?

**Mr. David Flynn:** The EPA can conduct modelling based on-----

**Deputy Michael Fitzmaurice:** Modelling is one thing but can Mr. Flynn tell me scientifically?

**Mr. David Flynn:** Yes, you can attribute-----

**Deputy Michael Fitzmaurice:** Attributing is one thing, upstream or downstream. If I take phosphorus out of the water, can I say whether it came from a human or an animal?

**Mr. David Flynn:** You need to look at the whole context, but you can determine-----

**Deputy Michael Fitzmaurice:** Based on the sample you take?

**Mr. David Flynn:** Yes, depending on where you took it.

**Deputy Michael Fitzmaurice:** If you took it at the end of a river, at the estuary, and phosphorus was showing, could you ascertain there and then whether it came from a human or an

animal?

**Mr. David Flynn:** Not there and then. You must look at the entire-----

**Deputy Michael Fitzmaurice:** So, we could be making assumptions. There are so many things done with modelling at the moment, including some of the climate modelling, but modelling can end up blaming someone. Unless we can know for definite whether the phosphorus is from an animal or the sewage-treatment plant, we have a big problem. Many sewage-treatment plants in this country have two open gates or whatever when heavy rain comes.

**Mr. David Flynn:** The EPA conducts nationwide monitoring. It looks at everything from the water chemistry to the biology in the water. It looks at what is growing in the water, the insects in the water and the water chemistry, and from all that it can determine what is happening in each individual catchment. It considers the catchment itself, the geology, the slope-----

**Deputy Michael Fitzmaurice:** I understand that but I am trying to establish the position on algae at an estuary in which phosphorous shows up. Mr. Flynn is telling me the EPA, unless it does modelling, cannot say whether it comes from a person or animal.

**Mr. David Flynn:** The pollution can be attributed to a source, be it agricultural or urban wastewater. I am referring not to what the Deputy talks about but to the scientific approach the EPA takes.

**Dr. Marie Archbold:** May I add to this? We were listening to the previous discussions with the ICMSA. To clarify, the monitoring data used for the nitrates directive are slightly different from those used for the water framework directive in that monitoring points have been specifically picked under the nitrates directive to reflect agricultural land use. Essentially, they have been designed to try to rule out what the Deputy is talking about, namely all the other land-use impacts, including from sewage, hydromorphology and sediment. That removes the question being asked. One will find that the issue of the estuaries is not really considered in the nitrates directive monitoring dataset; it is focused primarily on river water bodies. Again, that removes the issue that was spoken about, namely that of the Waterford estuary. That is more related to what we have to report on under the water framework directive, not the reporting we are here to talk about today. The set of data is a separate one designed specifically to monitor the impact from agriculture under the nitrates directive.

**Deputy Michael Fitzmaurice:** The only thing I would say to the delegates is that down my way there are many towns that do not have a sewage-treatment plant, unfortunately. In looking for a contributing factor, the finger is always pointed at the farmer. The book would be out even with a treatment facility. It would be fine if we had the finest of treatment plants.

I have another question for the delegates from the Department of Housing, Local Government and Heritage. In all the major cities, there are big sewage-treatment plants. In these, there is sludge that has to be removed. With all that is going on in agriculture, farmers will be tightening down. Where is all the sludge going to go?

**Mr. David Flynn:** First, the sludge is a valuable fertiliser. With the price of fertiliser at the moment, it is a valuable commodity.

**Deputy Michael Fitzmaurice:** It is banned if you are in Bord Bia.

**Mr. David Flynn:** It is a valuable fertiliser so I think there will be a demand for it. There is

a demand for it at the moment.

Let me finish my earlier point. I do not believe there has ever been a suggestion by the Department or anyone that farmers are solely to blame. River basin management plans show there is a range of issues, including wastewater. I said in my opening statement that agriculture is tied to a thousand water bodies but that there are 208 with issues tied to wastewater treatment. We have been fair. In terms of attributing pollution and its causes, the data presented by the EPA and the Department are clear.

**Deputy Michael Fitzmaurice:** TAMS was mentioned. My understanding is that if a farmer does not have enough capacity and is over the stocking limit, he or she will not get a grant. Is that not counterproductive? Should we not try to bring farmers within the requirements?

I have seen Mr. Callanan in Leinster House many a time. What is his vision for what will happen? Does he agree that we cannot just bring it down to 170 kg, 220 kg or 230 kg tomorrow, next week or next month? What is the Department's opinion on derogations? Are they becoming harder to get? Will they be gone further down the line? A farmer cannot just get rid of ten or 20 cows when different rules come in just because he or she does not have the extra land that is required. There is not much extra land being made around the country at the moment. We cannot just drop a bomb on top of someone. We would nearly need a just transition. Unfortunately, the first just transition did not work too well. If we are going down this road, will the Department be straight with farmers about what is coming over the next two or five years? Farmers deserve that. Many of them have invested in making their farms better with better machinery and gear for milking or whatever they are doing.

A great deal of information is being thrown about. Is there truth in the story about the discussions on nitrates or that a body is meeting? According to the headlines in the *Irish Farmers' Journal*, X amount will be given to people to reduce. What is the story?

**Mr. Bill Callanan:** That is a wide-ranging question, but I will try to break it down. Regarding TAMS, the simple reality is that under the regulations on the availability of support under CAP someone has to be at the regulatory standard as set. Therefore, we are precluded from bringing him or her up to that standard. That has been the case for some time and it is something that I have raised with Commission officials. The Deputy is right about the opportunity to bring someone up to standard. Looking at it from the point of view of fairness, though, those who are compliant should not have their eligibility for TAMS diminished by others who are not compliant accessing it. The Deputy's understanding of the situation is the case, and it is based on clear guidance regarding the implementation of CAP. There is a requirement. Take trailing shoe technology as an example. We were aware of the absence of a grant for one year after that technology's introduction as a minimum requirement for derogation farmers. In terms of the use of derogations, there are additional requirements placed on farmers. When that is done through legislation, it precludes them after a period of grant aid. This is a matter that we consider in terms of proportionality and speed.

I have worked in this area for some time and my vision is that the derogation has to be on a sustainable footing. People are criticising the actions that we are introducing in respect of the derogation, but they are being introduced to avoid the reality or suggestion that the derogation is associated with poor water quality or negative trends. This is about taking the right steps to secure the derogation over the long term. The question of whether to apply is a political issue and I cannot answer for future Governments, given that it is a decision for the Government, but it is important that we have in place the bedrock of guidance to farmers about what actions need

to be taken to ensure that water quality is on the right trend and the derogation is not negatively impacting water quality. This means asking farmers to do more.

I have been in this area since 2010 and we have undertaken four reviews, including an interim review. We are asking more of derogation farmers now. I accept that some of our requests are challenging, but experience has taught me that most farmers will ask us what they need to do to get this right, given how important the derogation is to them.

Regarding the derogation on nitrates, I will point to a couple of matters. The directive identifies a limit of manure applied, not present, on a farm. As such, the derogation is available to a farmer who has a higher stocking rate in terms of moving manures or who has additional land. Under the directive, a derogation is available based on four specific criteria. I will not cite them, but they are based on a long growing season – in other words, whether a farm needs that nitrogen in the system in light of its capacity – the nitrification of soils, rainfall, etc. There are specific conditions that make one eligible to apply. From an Irish perspective and having presented on the tables, we have a growing season of 270 or 280 days, which is different than continental Europe's. Our availing of the derogation is happening in a different circumstance than that of many European countries where animals are permanently housed, there is cropping, which dilutes stocking rates, and so on. We must recognise these differences.

It is important that there be leadership in ensuring that the actions we are asking of farmers are proportionate and appropriate and contribute to the longevity of the derogation as opposed to just saying that we need more time or whatever.

**Deputy Michael Fitzmaurice:** We have discussed the family farm. With the excess increasing from 85 kg in dairy cows – some are increasing to 106 kg, depending on milk yield – will safeguards be put in place for the family farm, be it beef, dairy or whatever? We talked about a smaller dairy family farm as being 100 or 120 cows. Will safeguards be put in place to ensure that, unlike farms with 700, 800 or 1,000 cows, family farms are the last to be affected and some proportionality is brought so that the ordinary family farm, which has always been the model, is protected?

**Mr. Bill Callanan:** The vast majority of farms in this country are family farmed. A small minority are larger farms.

I will address the issue of banding, which is what the Deputy is getting at. From our perspective, we were operating a single band across all cows. Administratively, that was easy for us. People might not realise it, but the Department performs an administrative check on every single farm for nitrates compliance. The checks are not universal, but we perform checks comparing single farm payments versus farms' animal identification and movement, AIM, data, that is, their livestock, in respect of every farm in the country. It is a large check and quite a number of farmers are non-compliant and suffer a penalty as a consequence.

Moving from a single band will be a challenge, but we are putting our hand up to do that. At European level, most countries were working a banding system and the Commission was adamant that it was a minimum requirement in terms of discussions-----

**Deputy Michael Fitzmaurice:** It was the Commission that made Ireland introduce banding.

**Mr. Bill Callanan:** Absolutely. The Commission was clear on that. The bands, as constructed, are scientifically determined by the nitrates emissions associated with relative catego-

ries. I am aware that presentations have been made to the committee. We examined having six bands. There were complications around that. There are pluses and minuses. The structure that is being put in place maximises those in the low and middle bands. Approximately 15% of farms are in the top-----

**Deputy Michael Fitzmaurice:** I am sorry for interrupting Mr. Callanan. We spoke about this earlier. Certain breeds might have higher butter fat or higher protein. There is a fear among some in the agricultural community that certain breeds might not be as heavy milkers as some of the more Holstein-like cows. Some farmers may revert to those cows to keep under the litre-age on the banding, and that could end in worse quality offspring going into the beef sector. Has the Department looked at that side of this?

**Mr. Bill Callanan:** Yes, we are looking at that. From the point of view of breeding, we had to find creative bands that would not encourage such a practice. Farmers are at 6,500 kg before they go into the upper band. That is the major change. In the two lower bands, there is not a major change from the existing 89 kg per hectare, so for those categories there is not as big a change compared with the top-end band. Certainly, if farmers are thinking of trying to manage their herd profile out of that band, I do not believe there is a need in respect of certain breeds to which people might allude and which are required to generate that. We have plenty of capacity within our own breeding programmes to pick animals that ensure fertility, longevity and a focus on milk solids, which is available under the structure that has been put in place. Farmers are paid on milk solids to increase the solids as a percentage of the volume of milk produced. All those things were factored into our consideration as to how to structure this while minimising the negative aspects and recognising where the majority are at. I accept that it is hard in respect of the 15% in the high category. The science justifies the numbers associated with that, but the structure we have put in place has minimised the number in that category and created an opportunity to focus on improving solids, etc., within farmers' profiles, which is what they get paid for, over litres. That is all I will say about it.

**Senator Tim Lombard:** I will start with the banding. An interesting point was made about the 15% in the cohort that will be caught in respect of the banding. Has the Department done any analysis as to what reduction in numbers would be required? The majority of us would run on the basis of the life cycle of a cow being eight to ten years and, therefore, the breeding programme will have to change. That stock will have to be born. If I am stuck with a high-yielding cow, it will probably take me the bones of five, six or seven years for my herd profile to change dramatically such that I could drop the band and, therefore, in that five or six years the only way I could meet the criteria under the directive would be to have a cull. Have the witnesses any idea as to what that potential is out there at the moment?

**Mr. Bill Callanan:** The answer is "No", I do not, in respect of the impact because there are too many mechanisms available to a farmer to manage this before culling. I would not expect culling as part of this process. What I mean by that is that we have 6,500 farmers in derogation and 7,000 farmers who exceed 170 kg per hectare, but through exporting slurry, temporary grazing-----

**Senator Tim Lombard:** That is double now, though. The issue of exporting slurry has the-----

**Mr. Bill Callanan:** I agree, but there are approximately 7,000 farmers over 170 kg per hectare who are not in derogation. Therefore, managing compliance is the best way I would describe it. If you look at those who are in that situation of asking themselves whether they

manage their milk production, for those who are close they will try to ensure they are in the lower band. That is just normal. I would question, though, because of the availability of the option of exporting slurry or taking additional land or temporary grazing, opportunities that are there in respect of which I would not anticipate that the immediate reaction would be to cull. Having said that, unproductive cows etc. on the farm are maybe a different issue. It is not my figure, but I know, for example, that one of the artificial insemination, AI, companies, which is an expert in that field, has said that 10% to 15% of dairy cows were not covering their cost of production. From that perspective, I presume that somebody who is tight on their nitrates, for example, will maximise their efficiency in terms of milk produced off the farm while managing it overall.

**Senator Tim Lombard:** The Department would take it, however, that this cohort of more than 15% are probably the most efficient operators in the field. They have probably spent a generation, if not three, building up their herd profile in a certain way, usually with high-yielding cows. Some of them could be winter milk cows. With the majority of these animals that hit the 15%, it will take, if not one, two breeding seasons to bring them back down into band two. That is a significant change. Does Mr. Callanan think they would need time to change their farming practices or their breeding profile? The witnesses know themselves. The animals that are in calf at the moment are probably not in line with the nitrates directive. Next spring they definitely will be, but at the moment that work has not begun. I just question the idea that there will not be a cull. In places such as Barryroe, in west Cork, they are maximised out. The majority of the herds are only 80 cows each. The majority of farmers there are all dairy farmers. There is no room to expand in respect of any other land becoming available. The majority of them would be in that category. I, therefore, question the timelines by which they would need to change their herd profiles. Does the Department think they would need more time than 18 months?

**Mr. Bernard Harris:** To reiterate a couple of points, the regulation does not distinguish between the family farm, for example, in respect of its compliance with the regulation relating to 170 kg per hectare and whether the farmer has a derogation of 250 kg. We can look to the number of public consultations, as the Senator will be aware, around the nitrates action programme, and this action has been there nearly two years now in terms of putting it out there to farmers and saying this is the direction we are asked to go. From the person who met the Commission, where the request came around banding, it was a simple ask: have you no big or small cows in Ireland? Why are they all the same? The approach, therefore, was to evaluate the impact scientifically. Essentially, banding equalises scientifically the impact of those cows based on 170 kg or 250 kg. There is no doubt that implementation is a challenge. It has been signalled for a good number of years that implementation will be from next year. There is more work to be done in developing the system to implement it, but that is certainly work we are doing at present.

**Senator Tim Lombard:** As for informing farmers and even advisers, there has been one webinar so far. The witnesses may correct me if I am wrong. What programme of information does the Department have to roll out over the next six months to inform advisers and farmers what is required with this new derogation? Is it proposing a roadshow of some nature? I do not mean a roadshow as part of the CAP reform, but a roadshow to inform the farming community and the advisers of issues such as this? The gentlemen should not get me wrong; they will be rough meetings. However, has the Department proposals to do something?

**Mr. Bernard Harris:** To take the Senator's questions from the top, since the implementa-

tion of the regulation back in March, we held webinars with advisers in April. We advised them of the changes as part of the new NAP-----

**Senator Tim Lombard:** That is only one webinar.

**Mr. Bernard Harris:** As a start. We continued that over the summer, especially talking to farm organisations. We also contacted FAS advisors providing them with updates on any additional amendments or clarifications that are required. We plan on holding roadshows from September onwards to meet farm organisations. We are currently provisionally scheduled to meet the ICMSA across three meetings in late September.

As for other actions and banding, we developed a calculator, which is on the Department's website, into which farmers can voluntarily input their information for 2020 and 2021: milk delivered divided by the average number of cows they have. It will provisionally calculate what they anticipate their banding figure is, so it will give them an indication and the direction in which they are going as to where they sit within the three bands. We plan on having another session with advisers before the end of the year on the update. We had an amendment recently on 29 July to SI 393. It is ongoing. There is no doubt but that there is more to be done, but we will introduce a further programme before the end of the year to make more progress on this.

**Senator Tim Lombard:** Has the Department put a programme in place to have a roadshow similar to the CAP roadshow to inform the farming community what is happening with the nitrates action plan?

**Mr. Bill Callanan:** No, but there is considerable awareness of this. We have been very upfront on this. The organisation that appeared before the committee earlier is an illustration of the focus. There has been relentless focus on the impact of banding. I think there is a good awareness there. As Mr. Harris has said, the calculators are there. As we get greater knowledge of this cohort, we can write to them and be very clear with them. Something like that would be very effective. We are talking about how to get to that 15%. We have been using 89 kg on those cows. We do not know the individual herdowners. I would have no reluctance in trying to segregate them out and try to get a feel for who they are and writing to them. That might be more effective than a generalised discussion when people who might not be affected by this misunderstand its impact at farm level.

Many of the co-ops will be engaging with their own farmers. We are talking about 15% of the 16,500 dairy farmers. I would certainly recommend a targeted approach.

**Chairman:** Will the figure of 15% not increase with the banding? Mr. Callanan said 15% of herds are over-----

**Mr. Bill Callanan:** Some 15% are over the 6,500 kg. That is a cohort within 16,500 dairy farmers.

**Senator Tim Lombard:** The cohort of 15% is one issue. However, the entire nitrates directive involves many farmers, including the changes to what is allowed with the exportation in slurry. There is potential for the Department to hit the road, go to the communities and talk about the entire entity that will affect more than 16,500 farmers. We will park it today, but the Department might consider opening the door and having this conversation if possible.

**Mr. Bill Callanan:** To do a derogation plan requires having an adviser. The first port of call in many of those will be specific to the individual farm. I chaired a session with the advisers in

terms of identifying. We did it through the regular signpost series of webinars. We are happy to add information to that. People should have the information in a targeted way rather than having something like a roadshow.

**Senator Tim Lombard:** I have a question for the Department of Housing, Local Government and Heritage. It is not the Department of environment; I have been corrected on that. What is the EPA's involvement in providing the Department with information on the testing points? How were those points on the map picked?

**Dr. Marie Archbold:** The nitrates directive specifies how to pick and develop the monitoring network to report. The EPA undertook that a number of years ago under the directive. As part of the directive, every four years it is required to report on that monitoring data set to the Commission. Coming to a point made earlier in the meeting, the methodology is quite similar.

**Senator Tim Lombard:** What is the methodology?

**Dr. Marie Archbold:** Essentially it looks at the average concentrations of nitrate as part of the drinking water standard, which is 50 mg per litre. In the Irish context that is very high and there would not be very many. The areas impacted by that would be very limited. It then looks at average trends. It also looks at eutrophication or monitoring points that could face eutrophication.

**Senator Tim Lombard:** How often are those points tested?

**Dr. Marie Archbold:** They are surveillance monitoring points under the EPA. They are tested monthly in terms of chemistry, but the biology is sampled every three years. It is a three-year cycle.

**Senator Tim Lombard:** Monthly.

**Dr. Marie Archbold:** That is in terms of the chemistry, the phosphorous and nitrate concentrations.

**Senator Tim Lombard:** I believe the Department runs a catchment programme with Teagasc. I believe 28 are working on that in different locations around Ireland. I had the privilege of going to one of them yesterday in Timoleague. The people there told me they test the water on that programme every ten minutes. Are those locations part of the EPA report?

**Dr. Marie Archbold:** No, they are separate. They are not in under the monitoring.

**Senator Tim Lombard:** We have a body paid by the Department, Teagasc, that tests the water every ten minutes. Just so that everyone is working together, at a minimum should those five locations not be a part of the EPA report?

**Dr. Marie Archbold:** Mr. Harris might be able to confirm this. My understanding that in reporting to Europe ACP data are used along with the EPA data.

**Senator Tim Lombard:** Can someone explain that terminology?

**Mr. David Flynn:** Agricultural catchments programme.

**Dr. Marie Archbold:** It is the programme the Senator referred to, apologies.

**Senator Tim Lombard:** When I was down there yesterday, they informed me that I was paranoid about the 2018 dynamic that a dry year would have nitrates go through the roof. They

told me what they are coming back with is beyond belief. Yesterday's reading was 3.5 and it was below 2.6 all the way through. For part of the year the reading was 1. It gave me great hope with a catchment area that is so intensively farmed - they will definitely change farming practices - we could have a very good report coming given what is happening this year.

The EPA measurements are done monthly whereas this is done every ten minutes. We have powerful academically based information coming with a test every ten minutes which is fantastic. Are we making the most of that information when we inform the European Union what we are doing here? Is it coming across that we have a really important data centre with such powerful information? The officials from the Department of Agriculture, Food and Marine may wish to take that one.

**Mr. Bill Callanan:** I wish to be clear. We pay for Teagasc to do the ACP and it is a tremendous facility. We paid for it on time. I worked in Clonakilty years ago and I know Timoleague very well. Part of our commitment under the derogation is that we must have a monitoring programme. At the outset we chose six different soil types and farm types to be representative. That material contributes to our reporting under the derogation. I wish to allay the Senator's concerns on that. Whether it feeds into the water framework is a different question. Mr. Harris may wish to comment on that. We are required to have a monitoring system and programme as part of our implementation of that derogation and ACP delivers that for us.

**Mr. Bernard Harris:** On an annual basis we submit to the Commission a derogation report. It is a requirement under one of the articles of the regulation. The scientific basis of that is the work conducted by the agricultural catchments programme and the scientific monitoring and water-quality monitoring coming from that is very powerful in assessing the measures in the current regulation on farm and at a catchment scale. That programme has been in place for many years. We work collectively to demonstrate that. We also work in collaboration with the EPA to ensure we can scale up the potential impact of agricultural activity at a national level. There is collaboration in developing and finalising that report.

**Senator Tim Lombard:** Given that the results are so spectacular, is there a need to extend that programme? Will that be part of the solution? I know it is an expensive programme; I do not know how much it costs. The results seem to be very positive and they are not just agricultural; they catch many issues regarding the farming catchment area itself. This may be a debate for another day. We have five or six of these locations with different soil types and different farming activity - dairy, grain beef etc. Does that give us a different way of going forward rather than having a monthly test? What I am trying to say is instead of having the monthly test by the EPA, which is obviously very helpful, should we not extend this programme to make it more efficient as regards the information. As far as I have been informed, water was tested every ten minutes.

**Mr. Bill Callanan:** What we try to do on the policy side is that we have the framework of the agricultural catchment. Much is learned from that and it also a focus point for discussion groups and awareness-building for farmers. It is a huge resource in that respect. I am not sure what would be the merit is of having one for every catchment. What we learned from that was that because it was structured in such a way that there was variety of farming and soil types, it can give good indications. The translation of that into practical support for farmers is through the ASSAP. Effectively this is using and building awareness among individual farmers by having identified, using EPA data, where this programme should be rolled out first. There are about 120 areas. It uses those learnings and brings farmers to programmes such as the ASSAP. I am not sure of the particular value. It is expensive, costing more than €2 million a year to

run it. We do it at a far higher standard than is required just for the reporting under the nitrates directive. We have much more data from it so it is a tremendous source. However in terms of practical assistance for farmers, that is delivered through programmes such as ASSAP. Building on the knowledge gleaned from the ASSAP, people know what is happening in Timoleague and what similar farming styles can do.

**Mr. David Flynn:** The value from our point of view and a water manager perspective is that through the ASSAP we learn the practices that work. Because we have such high resolution monitoring, we can see almost in real time what is and is not working. It is about translating that to other catchments through the ASSAP by providing that free advice at farm level. There is a balance between cost and resolution when looking at monitoring. Obviously testing every few minutes is very expensive. That must be balanced with the resources required. The value is in what is learned from those really intensively monitored catchments.

**Senator Tim Lombard:** I realise they are part of the validation side of the programme but could these measuring points also be used as part of the measuring part of the programme? We inform the European Union about how well we are doing but as a testing location, could it not be a dual location in that scenario, taking into consideration the amount of work done over the past 14 years?

**Mr. Bill Callanan:** I will have to defer on that question. It is better for Teagasc to answer this rather than me because I know there are sensitivities around the use of data, which is voluntarily supported by the farmers in an area, for a compliance process that is run by the EPA. From history and my engagement, I know about such sensitivities. For example, with the national farm survey Teagasc has always been very sensitive and careful about its use because that is dependent on full engagement based on anonymity for farmers. In setting up the ASSAP, in my experience of this, there was considerable discussion at the time about the data, their use and what farmers were willing to support through an ASSAP on their land area. Concerns were assuaged by the reality that these data were not used from a compliance point of view by bodies such as the EPA. We got buy-in from local farmers on this basis.

**Deputy Brian Leddin:** I have a great deal of sympathy for all our guests because officials from the Departments of Housing, Local Government and Heritage and Agriculture, Food and the Marine have been set a huge challenge. The Department of Housing, Local Government and Heritage wants to see clean water and a return to pristine conditions. That is not easy. The Department of Agriculture, Food and the Marine is tasked with bringing the agriculture sector with it, which is not an easy task. As we heard from our previous guests, they are very resistant to the nitrates action programme.

I am heartened to hear there is an alignment between both Departments. If there is not an alignment, I would like to hear it. The statements chimed, as I heard them. The chair may wish to check but I think there was a divergence between what the officials said and the statements submitted. We might just check that because it would be good to capture everything that was said.

**Chairman:** The opening statement I received did not correspond with the statement made by Mr. Callanan.

**Deputy Brian Leddin:** Yes, and likewise as regards the statement I was looking at. There might have been a page missing from it. It might just be a clerical error.

**Mr. Bill Callanan:** I apologise for that. It was not in any way-----

**Chairman:** There is no issue. We did not have the full content of the opening statement.

**Deputy Brian Leddin:** I think a page was accidentally omitted. Was the statement of the officials in the Department of Housing, Local Government and Heritage as submitted?

**Mr. David Flynn:** It should be. If not, we can certainly-----

**Chairman:** Their statement was exactly as read.

**Deputy Brian Leddin:** Was it spot on?.

**Senator Paul Daly:** Mr. Callanan's statement was missing a page. He drifted out and drifted back in and we can see that a page was missing. I have a completely different statement from the Department.

**Mr. Bill Callanan:** It should be read as it was provided because it only came over after lunch.

**Chairman:** We will get that sorted tomorrow. We will resend the two statements.

**Deputy Brian Leddin:** My first question is for the officials from the Department of Housing, Local Government and Heritage. At the previous session, a very strong claim was made about wastewater. It has been addressed already but I will give the officials an opportunity to address it again. It was claimed that urban wastewater might be significantly contributing to the water quality issues we have. I am hearing that is the case to a certain extent but agricultural practices are responsible to a greater extent and, therefore, the fifth nitrates action programme is necessary. The programme is necessary because the deterioration in water quality obviously presents a risk to the environment and water courses, but also a risk to agriculture. It is certainly not good for the Irish agriculture sector if the country gets a label as having polluted water. Our guests will probably agree with that. I commend the efforts of everybody to try to turn this around.

We should be alarmed because we are hearing today from officials in the Department of Housing, Local Government and Heritage, as we have heard previously, that we are probably way off course as regards our commitments under the EU water framework directive to restore our water quality to satisfactory conditions by 2027. That is only five years away. The industry lobby does not have much of a mind to that. It would say we should go there gently and slowly. If we adopt that approach, it will certainly not take us there by 2027. We simply have to find a way of restoring our water quality to meet our EU obligations, notwithstanding that we also want better water quality for many good reasons.

My principal question is, given the likelihood that we will not achieve the obligations set out in the water framework directive and given that all the nitrates action programmes to date have not been effective, where do we go from here? The fifth nitrates programme is even more demanding for farmers because previous programmes have not been effective and because it is more demanding, we probably have less confidence that this programme will be effective. We all need to be reassured that we really are turning the tanker around. I am interested in the witnesses' views on the role of enforcement. It was planned that 5% of farms would be inspected and I understand that figure will increase to 10% in this programme. Is that enough? Even if we are monitoring 10% of farms, are we really capturing the problem?

A strong claim was made by our previous guests that it will take between 18 and 24 months to see a change in water quality based on the programme. I would like the experts from the Department of Housing, Local Government and Heritage, in particular, to comment on that. I have dipped into the issue and have done some research. From what I have read, I understand that we can see results very quickly from changing certain practices, particularly with regard to the nitrate levels in the water. I would like to give the experts from the Department the opportunity to address that claim that was made very strongly by the representatives of the ICMSA in the previous session.

I wish to raise the issue of the rhetoric around the family farm. Perhaps the officials from the Department of Agriculture, Food and the Marine have picked up on it. It was mentioned by Deputy Fitzmaurice, who has left now. Indeed, I believe Mr. Callanan himself said that farms are family farms. Do we need a proper definition of the term? We need to have an honest discussion here. If we are using that kind of emotive language, and saying that family farms are under threat because of the nitrates action programme, it is really not helpful. The reality is that a small number of farmers are derogation farmers, and I absolutely accept that most of those are not the problem. I find the rhetoric unhelpful. Perhaps there is an argument for really defining the term. While we do want to have a sustainable sector and to support family farms, we need to be very clear about what that means.

**Mr. David Flynn:** The Deputy asked quite a few questions there. If I do not get to them all, he can pick me up on it. First, the Deputy asked about alignment between us and the Department of Agriculture, Food and the Marine. There is a very close working relationship between us and our colleagues in agriculture. We work very closely, particularly on nitrates, and also on the CAP strategic plan, the water framework directive and a whole load of these issues. There is certainly common interest on all of those matters, so I have no issue with that. I hope my colleagues do not have issues either.

On the contributions, in our river basin management plan we break the country down into water bodies, which includes different aspects of rivers, lakes and groundwater. We have attributed sources of pollution that are causing issues, and causing those water bodies not to meet the status requirements, to 11 different causes of which agriculture is just one. We are able to disaggregate the causes. I will not go through them all but agriculture, hydromorphology, which is the shape and the flow in rivers forestry, urban wastewater and urban runoff are the top ones of those 11. Agriculture is 1,000 out of the 4,842, followed by hydromorphology, then forestry, then urban wastewater. We have better data now than we have ever had before. We are able to disaggregate those causes. It is not the case that there is one issue and one cause. It is usually contributory from each of the causes. We have better data now, which is largely and almost entirely down to the work of the EPA and local authorities in terms of that analysis. Now, as policymakers, we have better information than we have ever had before.

On the 2027 target, it is certainly a very challenging date. It is essentially around the corner. It is a challenge right across Europe. We are talking about a water framework directive from 2000 and a nitrates directive from 1991. These are not new issues. The Deputy talked about the effectiveness of each programme. I would not be perhaps quite as pessimistic as the Deputy was in his question. There has been a contribution on effectiveness from past programmes. I think we certainly would be in a much worse situation had we not had that continual strengthening of programmes and even the midterm reviews of those programmes that we spoke about earlier. I believe the fifth nitrates action programme is a very good programme. We were here around this time last year and I would make the same comments again. It is really about adher-

ence to the programme. We can send out inspectors and the Department of Agriculture, Food and the Marine can send out inspectors, but we cannot be everywhere. There needs to be support, adherence and acceptance that these rules are for the collective good among the farming industry itself and the industry that those farmers are supplying.

There are three layers of enforcement. Local authorities are out doing the general nitrates enforcement. Every single farmer in the country has to adhere to those general rules. A stricter set of conditions applies to the derogation for farmers, which our colleagues in the Department of Agriculture, Food and the Marine look at. There is a joint programme between our Department and the Department of Agriculture, Food and the Marine. Part of the fifth nitrates action programme is an improvement in the local authority enforcement and work through the EPA and local authorities to use risk profiling and targeting into those areas of contribution to really get the most out of the resources that will be available in that area. There is a set target as to how many derogation farms have to be inspected. The same target does not apply to the general farming population. The EPA is in the process of putting together a risk-based enforcement plan that will cover that. That covers enforcement.

The Deputy mentioned a period of 18 to 24 months. We are essentially talking about how long it will take to improve water quality. It will vary. For phosphorous, because it can adhere to the particles in the soil, it can take many years for the system to readjust once the source load has changed. With nitrates it tends to be a more linear and quicker response, but it is still very much dependent on the local geology and soil type. I might refer to Dr. Archbold to say more on that. If we think about the chain that is needed, the policy needs to be changed, that needs to be implemented, there needs to be a response in the water and that needs to be measured. There is a distance there. The previous contributors mentioned a period of 18 to 24 months. It is not an unreasonable point to make. In some cases it can take some time to show up in the environment and then to be captured by monitoring. It is a process.

**Deputy Brian Leddin:** Can it be quicker?

**Mr. David Flynn:** It can be quicker in some situations, absolutely. It can be a matter of weeks or months in certain geological settings. Certainly, it is quicker for nitrates than it would be in a phosphorous situation. Perhaps Dr. Archbold might say a word or two about that.

**Dr. Marie Archbold:** Basically it is about the pathway. If we think about nitrogen and the way it travels, it travels very quickly and landowners are pre-draining soils that may be overlying the areas of karst, the underground cave systems. If nitrogen gets into those areas, we will see a response very quickly. On the other side, looking at phosphorous, it usually flows overland in poorly-draining soils. After a flood or a rainfall event, one might see a response very quickly in the river, in terms of the concentrations going up. The response is based on the pathway, the soil type and the geology, as Mr. Flynn mentioned. On the response time, in terms of the chemistry, we can see it very quickly, but the response of the biology, which is another part of the assessment that is required as part of this review, can be slower. Also, it is monitored a lot less frequently, every three years. That monitoring lag is another problem. As I said, the chemical response can be very quick, but the biological response is probably the slowest to track.

**Mr. Bernard Harris:** Just to comment on the derogation inspections, in our fourth nitrates action programme we committed to undertake inspections of 5% of approved applicants under the scheme. Under negotiation with the Commission, that commitment was increased to 10%. We have committed significant resources to putting that on the ground. In terms of targeting to ensure we reach every farmer over the required period, a risk analysis is conducted to target

specific areas, whereby we reduce the risk. We target farmers to ensure compliance with the regulation. That has improved and it should improve compliance in the short term.

**Mr. Bill Callanan:** I will make a couple of comments. I do not think anything should be taken from the fact that there is an empty chair between us and the representatives of the Department of Housing, Local Government and Heritage. That was not at our request.

We work across Departments in our engagements. An example of that can be seen in our existing agri-environment scheme. We used mapping from the EPA on water quality as a determinant for priority entry to agri-environment schemes. Entrants to those schemes are required to pick actions appropriate to water quality. The current green low-carbon agri-environment scheme, GLAS, was based on engagement with the likes of the EPA and the Department of Housing, Local Government and Heritage. That engagement is there.

There are other examples in the forthcoming CAP strategic plan. A significant amount has been set aside to address the impact of water quality as a joint commitment. Provisions in respect of water are influenced by the food vision report, which identified the ambition of the industry. That was called out in the achievement of regular standards in water. Even Mr. Tom Arnold has spoken in the media about the importance of us, as a collective industry, in supporting his overall objectives. Those considerations and their importance influence our approach.

Senator Lombard, who has left, asked about derogation. He may not be aware that the manager of the ACP, whom I happen to know quite well, has always said that derogation farmers are the first to attend meetings he holds. They are the first to engage and to understand. He said the reality of their engagement with the environment is stark. They ask what they need to do. In our management of the derogation, we brought in a mid-term review in 2019 to look at what needed to be done. My experience of farmers is that they are very engaged. There are undoubtedly issues that are challenging in their introduction but the general direction has been towards farmers asking what they need to do. They are receptive to being honestly and openly advised in that respect. That is my experience.

**Deputy Martin Browne:** I apologise for my absence; I was attending another meeting. Some of my questions may have been asked. I will ask two quick questions, the first of which is for the representatives of the Department of Agriculture, Food and the Marine. Does the Department accept the figures provided by the ICMSA relating to the calculations of the 220 kg limit and the assertion that combined with cow banding, it will equal a reduction in herd size? Are there other variables to take into account when calculating the potential impact these measures would have on a family farm?

Different areas have different farming practices and different water qualities. Is the model that Teagasc is undertaking going to give a breakdown of the potential impact by region? Specific regions face existing challenges.

**Mr. Bill Callanan:** I will answer the first question about the Department's acceptance of the figures. To be honest, I have not seen the submission from the ICMSA so I cannot refer directly to it or its impact. The Deputy asked specifically about actions. I have referred to the suggested culling of numbers. I identified earlier that is based on the application of manure, the exporting of manure, temporary grazing and issues such as that, which have always been available and will continue to be available. I cannot give the Deputy a clear picture of the impact for the 15% who are in the higher band. I certainly assume they will take the actions legally available to them to comply before reducing numbers. That is up to individual farmers.

I will leave the question about Teagasc modelling to Mr. Harris. Is that done by catchment or by area?

**Mr. Bernard Harris:** It is currently a national level assessment. We have asked for an update based on the derogation decision. That work is ongoing and we hope to finalise it shortly. We can refine things further, if required. We take those comments on board.

**Deputy Martin Browne:** I have a further question for the Department of Housing, Local Government and Heritage. When it comes to measuring water quality, is account taken of upstream levels versus downstream levels? I am asking that for the purpose of making a distinction between farms where excess run-off drains into watercourses and others that are compliant. A blanket response to the actions of a few has the potential to penalise those who are compliant.

**Dr. Marie Archbold:** On the question of upstream and downstream monitoring, the concentrations are as monitored in the water. A sample is based on what is coming downstream so it will be impacted. That sample will also show what is coming from upstream. The EPA examines land use and flow pathways that can contribute. As Mr. Flynn said, the EPA can then determine what activities are making a contribution. It can then almost decipher the relevant sources. In addition, representatives of the local authorities water programme in a large proportion of the country go out and ground truth the EPA results to further confirm the sources. There is a disaggregation involved there. We are able to pull apart the meaning of the concentrations in a sample at a monitoring point.

**Deputy Martin Browne:** My next question is for the Department of Agriculture, Food and the Marine. Many farmers have invested heavily in expansion on the advice of successive Governments. What response has the Department to farmers who are trying to repay the debt they have accumulated?

**Mr. Bill Callanan:** The broad reality I have outlined is that we need to ensure the way we structure the derogation includes derogation farmers giving a long-term viability assessment. It is a matter for Government to decide to apply at any time. We have agreed a four-year derogation with the Commission until the end of 2025. In terms of the economic viability of those holdings, having that there is critical. It should not be taken for granted. We must deliver on water quality if we want to contribute to its long-term viability. The vast majority of farmers would accept that. In respect of the continuation of the derogation, we must do what it takes to ensure it is contributing to the overall requirements of the water framework directive. That is what I would say to those who have invested. They are putting in place the systems, in respect of storage, etc., to ensure they can be compliant to better use manure. We have seen evidence of that, particularly this year with the high price of fertiliser. Farmers are happy to have invested in storage to ensure they can use slurry at the right time because rather than managing a tank, they are managing their manure. That is the way I would describe it. This is an investment. Our objective should be to show leadership in this area.

**Deputy Martin Browne:** The rest of my questions may have been asked.

**Senator Paul Daly:** I am a sucker farmer and much of the terminology referring to cow banding and so on does not come naturally to me. On the testing scenario, I cannot get my head around how we can identify bad spots or what is causing pollution. That was the case going back to the first question from Deputy Fitzmaurice. Perhaps it is my own lack of comprehension. Perhaps we could get a breakdown in writing. If I were reading it, I might be able to get my head around it more easily. From what I have heard and observed, the words “profiling”

and “modelling” have come up a lot. It frightens me that decisions being made that are going to affect farmers in such a severe way are based on some of the figures that were given to us earlier by the ICMSA. We do not have the EPA figures this year, yet we are going gung-ho for the changes to the derogation. Has there been any indication from any of the testing, modelling or risk profiling that low-emission slurry spreading, or the use of protected urea, which have become almost sacrosanct over the last couple of years, have caused a change on any of the farms we are talking about today? Are we going for another stick to beat farmers with without knowing whether what they have been doing to date has made any change? Is the same modelling and risk-profiling being done on industry, roads, slurry or sewage treatment plants as is being done with the perceived run-off from the farm? That is more a matter for the Department of Housing, Local Government and Heritage. Why did the nitrogen value in a cubic metre of slurry change from 5 kg to 2.4 kg? Did we have it wrong before? That will have a serious effect on the people who are trying to meet the targets that are being set for slurry exportation. They will have to export twice as much to stand still. It seems like a serious change. Why did it change?

As I said to the ICMSA, being a devil’s advocate and looking at the worst-case scenario, taking its submission verbatim and its numbers for herd reduction as being correct, what compensation will be available for people who are servicing loans, trying to live a life and who have invested a lot in a business? If it comes to that, there has to be a just transition and some form of compensation. What compensation would be available if a farmer comes to a point where the only way he can meet these targets is through a reduction? As Deputy Fitzmaurice rightly said, there is not much more land available these days. The exporting of slurry will have to be doubled for these farmers to stay where they are because of the change of value. As was said about them coming to the meetings first, they are the first people to embrace science and technology. Any farmer who has benefited from a derogation has it almost down to a fine art. I do not see the wriggle room for further improvement to meet these targets that the witnesses seem to think they have. If the only way to do it is through herd reduction, what compensation will there be? They have to be compensated.

**Chairman:** The compensation matter is a different policy issue to that of derogations, so the witnesses can leave the compensation issue. We will come to that at another stage.

**Senator Paul Daly:** I have one other question, which goes back to the points made by the ICMSA. Its representatives stated they are still waiting for clarification about what cow numbers will be used to determine the band. What cow numbers are used? The Department said it has a calculator on its website. What number does the farmer enter? Is it the number for the cow or a livestock unit? The ICMSA tells us it still does not know what cow numbers are being used to calculate the bands. If the representative body does not know, I do not know how an individual farmer can get a correct calculation. Which cow numbers is the Department using?

**Mr. Bill Callanan:** I will let Mr. Harris deal with the cow numbers. I will start with the first two matters to make sure that everybody has a clear understanding. The first key benefit of low-emission spreading of slurry is ammonia reduction. It has an additional benefit of improving the efficiency utilisation of manure. That contributes to needing less bag fertiliser in reality. One gets greater efficiency from it. It is principally done through ammonia compliance, to which the dairy sector has to contribute too and was the driver of our inclusion of it as a requirement for farmers with a derogation.

Protected urea is a climate change mitigation in terms of reducing greenhouse gas emissions associated with it. It is not a major game changer with regard to water quality because the num-

ber of nitrates lost from the system is based on the amount applied, uptake and various different things, but the protection and volume of nitrogen applied does not change. To be clear, while there is a major change to the emissions factors associated with it, there is not in respect of the water quality associated with it.

**Mr. Bernard Harris:** One can put the total milk delivered to the co-operative into the calculator. We developed information for 2020 and 2021 to give farmers an indication of where they sat going into 2022. It uses average cow numbers across the year. If farmers refer to their ICBF HerdPlus account, they can see an average cow number. We are currently developing the system for banding to implement this action. It is still a number of months away from finalisation but once it is finalised, that will be clarified in the short term.

**Senator Paul Daly:** What about replacement heifers?

**Mr. Bernard Harris:** A replacement heifer will not be included in the figures for a cow that is providing milk in the herd unless it has calved, because it is not more than two years or calved.

**Senator Paul Daly:** Will it be used in the calculation for organic nitrogen?

**Mr. Bill Callanan:** On the farm, but not for banding. We have a table of an excretion factor for every single animal type, from broiler chickens to deer, to lowland and upland sheep, and various ages of beef, including sucklers, dairy, and various different categories based on scientific work. If there are in-calf heifers on the farm, they will be counted towards the overall stocking rate but not towards the banding rate. It is just cows and milk.

**Senator Paul Daly:** Where did the reduction of the nitrogen value in a cubic metre of slurry come from?

**Mr. Bernard Harris:** As part of the review of the regulations, it was clearly stated in consultations that we wanted to review all the technical tables. Any technical tables that were part of the regulation were examined. One was the nitrogen and phosphorous value in slurry. It was clear that its value was higher than in many other EU member states. A review was undertaken with clear methodology for its evaluation. It was clear that the nitrogen value was too high to reflect the current situation. The Teagasc green book made that distinction a while ago when it was published. In the review of the nitrates action programme and the amendment to the regulation, we introduced that figure of 2.4 kg for the end value in slurry to reflect the situation on the ground.

**Mr. David Flynn:** Two monitoring programmes are under consideration here. One is the monitoring programme for the nitrates directive, which my colleague spoke about earlier. The nitrates directive set out the rules and requirements of the monitoring programme in detail, including reporting and methodologies. When it comes to breaking down the wider picture, one needs to look at the water framework directive monitoring programme. That looks at 4,842 water bodies across Ireland. A significant risk has been identified in about 2,810 of those. I listed those earlier, including agriculture, hydromorphology, forestry and so on. We can provide details of both programmes to the committee in writing. That is no problem whatsoever. The requirements essentially come down to the concentration of the chemicals that one is looking at in water and the biology that one is examining. While we might be talking about modelling and attribution, when it comes down to brass tacks, the concentration of the chemical in the water and the biology in the water, as found by the EPA and local authority experts, is what matters.

**Senator Paul Daly:** I would appreciate it if we could get something in writing on this so I can get my head around it. In the same vein, and going back to the nitrogen value in a cubic metre of slurry, this has changed from 5 kg of nitrogen per cubic metre to 2.4 kg of nitrogen per cubic metre of slurry. Does this have ramifications for the calculation then of the overall output of the animal? It is the animal that produces the slurry. We were working on 5 kg of nitrogen per cubic metre of slurry and we are now down to 2.4 kg of nitrogen per cubic metre of slurry; is the same cow producing the same cubic metre of slurry now as then? Therefore, when we go back to calculating our whole 220 kg of nitrogen per hectare per year, 250 kg of nitrogen per hectare per year or 170 kg of nitrogen per hectare per year, or whatever it is, are there ramifications for these calculations if there is that much less nitrogen in the cow effluent?

**Mr. Bernard Harris:** I will take this question. The evaluation was based on a lifecycle analysis of nitrogen in the cycle. The methodology was undertaken during the evaluation period. That calculation, as I understand it, would have been included in it. We can clarify this point and respond later to the Senator, but I am sure that aspect was included in the calculation of the existing bands in the context of the next programme.

**Senator Paul Daly:** It is very funny that it changes, and that the change is only being recognised in exported slurry. If this changes, then it changes, and in my limited knowledge of the whole science of this process, then that changes the whole calculation of the 170 kg of nitrogen per hectare per year, the 220 kg of nitrogen per hectare per year or the 250 kg of nitrogen per hectare per year and the bands. Perhaps I am wrong in this regard.

**Mr. Bill Callanan:** My understanding is that it is not just changing for exported slurry, but for all slurry.

**Senator Paul Daly:** Does this not impact the calculation of the 170 kg of nitrogen per hectare per year, the 220 kg of nitrogen per hectare per year or the 250 kg of nitrogen per hectare per year? Those goalposts have not changed, but that calculation was being done off 5 kg per cubic metre of slurry and now it is being said there is only 2.4 kg per cubic metre of slurry. In my ignorance, I think this must have an impact on how all our bands are calculated, if there is this big a change?

**Mr. Bernard Harris:** The analysis was carried out at the same time. We will clarify that it was included and the 2.4 kg per cubic metre of slurry was for inclusion in respect of the current excretion rates per banding.

**Senator Paul Daly:** The 170 kg of nitrogen per hectare per year has not changed in all my time in farming.

**Chairman:** It is not 170 kg of nitrogen per hectare per year, but the 89 kg excreted per cow.

**Senator Paul Daly:** Yes, well, they are all the one now.

**Chairman:** The Senator is making a valid point. It is being said that slurry had doubled its value and now it has halved, and we are increasing the organic output from the cow by 15 kg or 16 kg. It is a very valid point that is being made in the regard.

**Mr. Bill Callanan:** We are happy to send the committee the material concerning how the calculations are done. It must be an open and transparent process. If we consider this aspect, it is a factor of the volume of slurry produced as well. If the volume increases, then, in the context of those figures, the nitrogen as a percentage of that reduces as well. Overall, however,

the 89 kg, the 106 kg, etc. is all calculated annually based on what the animals eat and the nitrogen content of that material. A factor is also taken out for maintenance in this respect, and this then generates an excretion factor as well. There is a formula concerning how this value is calculated and, as I understand the situation, this is a Europe-wide approach. Therefore, if we consider our typical bands now, and we take the existing 106 kg level, there are many production systems that are much higher. I do not have the figures in this regard, but we can get them for Dutch cows. I think the level is 120 kg or something like that for the nitrogen figure in the Netherlands, which is proportionate to its production, which is way over 6,500 l. I think that was the figure given by the ICMSA, but it could be 8,000 l or 10,000 l.

**Senator Paul Daly:** I do not know if we are on the same wavelength. My point is that 89 kg was an agreed figure, and this was being based on 5 kg of nitrogen per cubic metre of slurry.

**Mr. Bill Callanan:** No, we are basing it on the lifecycle analysis for the animal for the year in respect of total nitrogen intake, output and excretion. The volume of slurry is-----

**Senator Paul Daly:** The 89 kg is the amount of nitrogen per hectare.

**Mr. Bill Callanan:** No, it is per animal.

**Chairman:** Yes, it is per cow.

**Mr. Bill Callanan:** That is the excretion factor-----

**Senator Paul Daly:** I might be wrong, but I think there must be a difference here in these calculations if we have had to reduce the figure from 5 kg of nitrogen per cubic metre of slurry to 2.4 kg of nitrogen per cubic metre of slurry.

**Mr. Bill Callanan:** Yes, and that would be generated out in the volume of slurry produced by the animal.

**Chairman:** The volume did not double, while the calculation for the value of the slurry halved.

**Mr. Bill Callanan:** We will get some detail for the committee on this aspect.

**Chairman:** The sums here do not add up too well. I call Deputy Leddin.

**Deputy Brian Leddin:** I am just wondering when the exam is. I feel we should perhaps be conferred with a qualification in agricultural science after this session. It has been very interesting. On the derogation, which is going to be reviewed in two years, as I understand it, is it the case that whether Ireland gets a further derogation depends on the compliance with the fifth nitrates action programme?

**Mr. Bill Callanan:** We have secured a four-year derogation, subject to a review of water quality. The actions, however, are prescribed now in respect of what happens in two years' time.

**Deputy Brian Leddin:** Is it that the greater risk for the sector lies in the fact that it could lose the derogation if there is not compliance?

**Mr. Bill Callanan:** We have been clear in this regard. There is a difference here, in that a derogation is negotiated with the European Commission. It has been suggested that there is a value in this to the European Commission. If we look, for example, at compliance with the

water framework directive and if it is felt that a country is not compliant, then recourse will be had through the European courts and that is a lengthy process. When we are in derogation, though, we are subject to negotiation every two or four years. That is quite a different context. We are looking across at the whites of the eyes of our interlocutors in respect of what needs to be done. Therefore-----

**Deputy Brian Leddin:** It is a very difficult situation in negotiations if compliance is not as it was said it would be. It is not good for Ireland to go to the European Commission and ask for another derogation if we have not met our own programme.

**Mr. Bill Callanan:** The best example I can give is consideration of the Dutch situation. The process commenced at the same time. They have certainly not agreed. It is important that we are not compared to the Dutch, because the water quality issue is just phenomenally different. Considering our average nitrate levels, Dr. Archbold identified that we are in the top third in that respect. Regarding nitrates, we might have 1% or 2% at over 50 mg of our national monitoring level, whereas in the Dutch situation - and I know this because I did a presentation at the same time some years ago - it is certainly north of 50%. Therefore, the Netherlands has a fundamentally different challenge with the intensity in this regard. I describe the comparison by saying it is a country the size of Munster that has the same size of dairy herd, but with double the production. The Netherlands also has ten times the number of pigs and a huge horticultural sector. The total value of agricultural exports from that country was €60 billion annually versus our €13.5 billion. It is just a different scale of intensity, so therefore these are not comparable contexts.

This still goes back to the situation, however, that we negotiate with the European Commission concerning our next action programme. It must be satisfied before it will propose a vote to member states. It will not just do that automatically. In my experience, the process will be undergone and then the European Commission will say that it is happy with the programme being put in place by Ireland. This was conveyed at the beginning of the meeting in respect of there having been long and arduous discussions and, ultimately, the European Commission decided it was comfortable that Ireland had put a robust action programme on the table. Such an outcome then undoubtedly influences voting positions. As I said earlier, there must be a long-term commitment concerning a sustainable derogation and this is where we see it being important to ask the right things of farmers. Experience has told us that they are willing to do them based on securing long-term viability. Perhaps someone from the Department of Housing, Local Government and Heritage might like to comment.

**Chairman:** In his last comments, Mr. Callanan answered the question I was going to ask regarding who is going to analyse those results we will get from the EPA to see if they are satisfactory or not. It is the European Commission that will have the final say. Is this a correct interpretation of what Mr. Callanan said?

**Mr. Bill Callanan:** The expert group that was set up will have to consider the results. It consists of representatives of Teagasc, our Department and the Department of Housing, Local Government and Heritage.

**Chairman:** That analysis, though, will have to go to the European Commission for approval.

**Mr. Bill Callanan:** Yes.

**Mr. David Flynn:** In essence, the rules of the game are already set. When the results come

in, it will be self-evident as to what the situation is, but that will then have to be reported back to the European Commission.

**Chairman:** Fine. I thank the witnesses for participating. This is a complex subject and it has major implications for the dairy sector. I thank the witnesses for engaging so constructively with the committee. The next meeting of the committee will consider the challenges facing the aquaculture industry in Ireland.

The joint committee adjourned at 8.50 p.m. until 5.30 p.m. on Wednesday, 21 September 2022.