

## **EPA REPORT**

Synopsis of issues arising from the conference  
**Regulation and Use of Genetically Modified  
Organisms (GMOs) in technology in Ireland**

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Dublin Castle, October 2013

## ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

### The work of the EPA can be divided into three main areas:

**Regulation:** *We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

**Knowledge:** *We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.*

**Advocacy:** *We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.*

## Our Responsibilities

### Licensing

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities (*e.g. landfills, incinerators, waste transfer stations*);
- large scale industrial activities (*e.g. pharmaceutical, cement manufacturing, power plants*);
- intensive agriculture (*e.g. pigs, poultry*);
- the contained use and controlled release of Genetically Modified Organisms (*GMOs*);
- sources of ionising radiation (*e.g. x-ray and radiotherapy equipment, industrial sources*);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

### National Environmental Enforcement

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by co-ordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

### Water Management

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

### Monitoring, Analysing and Reporting on the Environment

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government (*e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports*).

### Regulating Ireland's Greenhouse Gas Emissions

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

### Environmental Research and Development

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

### Strategic Environmental Assessment

- Assessing the impact of proposed plans and programmes on the Irish environment (*e.g. major development plans*).

### Radiological Protection

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

### Guidance, Accessible Information and Education

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (*e.g. My Local Environment, Radon Maps*).
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

### Awareness Raising and Behavioural Change

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

### Management and structure of the EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Climate, Licensing and Resource Use
- Office of Environmental Enforcement
- Office of Environmental Assessment
- Office of Radiological Protection
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.



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## GMO Conference

The EPA hosted a conference on GMO Technology in Dublin Castle in October 2013, about the regulation and use of Genetically Modified Organisms (GMOs) in technology in Ireland. A range of topics from the regulation of GMO technology in Ireland, Europe and internationally, to its use in industry sectors such as healthcare, pharmaceuticals, agriculture, animal health, chemicals, paper, fuel, food and feed processing were discussed. There was also some discussion of risk management and the communication of risks pertaining to GMO technology.

The purpose of this conference was to bring together those engaged in GM technology to develop a shared understanding of the challenges and opportunities in this area for Ireland and Europe; particularly as modern biotechnology is considered a key technology of the 21st century and the EU has adopted Biotechnology as an integral part of the EU economy for job creation and sustainable development.

The following issues pertaining to GMO technology were identified and considered during the conference.

### Economic issues:

#### Importation of feed derived from GM crops for animal use in Ireland



The GMO Conference heard that a large percentage of Irish farmers are totally reliant on the importation of animal feed derived from GM crops. In 2012, >50% of grain imported into Ireland (>2.5 million tonnes) was derived from GM soya and GM maize. The EU imports 70% of its protein animal feed, mainly soybean. Approximately, 30 million tonnes of soya protein feed is imported every year into the EU, mainly from N. and S. America. Almost all of these products are GM due to the fact that > 90% of the soya cultivated in the main producing countries consists of GM varieties.

The complete segregation of GMO from non-GMO crops is virtually impossible. GM crops, like conventional and organic crops, are grown in open fields and after harvest, transportation and processing steps, there might be some inadvertent mixing. Therefore, thresholds (tolerance levels for the accidental presence of GM material in conventional seeds) enable farmers to sell organic, conventional, and GMO alongside one another.

EU Legislation was adopted in 2011, to allow for a tolerance threshold of 0.1% (lowest quantifiable level of GM material) for unapproved GM events that have entered the EU approvals process for animal feed. The tolerance is limited to GM feed material for which an authorisation procedure is pending in the EU or for which an authorisation has expired.



The cultivation in non-EU countries of GMOs for which the EU authorisation procedure is pending (so-called asynchronous authorisations) is associated with the risk of traces or low level presence (LLP) of these GMOs in imported commodities. It is expected that these difficulties will be exacerbated in future as additional new GM events come on stream. There is already some evidence that exporting countries of GM crops or derived products may choose not to lodge applications for EU authorisation in future due to the risk of further trade disruption and to the availability of alternative markets (China and India). The non-availability of such feed would have serious consequences for Irish farmers and in particular, for Food Harvest 2020, where milk and meat production is expected to be increased by 50% and 40% respectively.

The conference heard that a legal framework is required at EU level for more realistic/practical threshold levels that are consistent and appropriate to the economic reality of the food and animal feed supply chain. If this is not resolved, Irish agricultural production will be adversely affected due to the fact that Irish farmers might not be able to purchase the required animal feed that is used in feed compounds for the production of beef, milk, pork etc.

## Creating biotech jobs



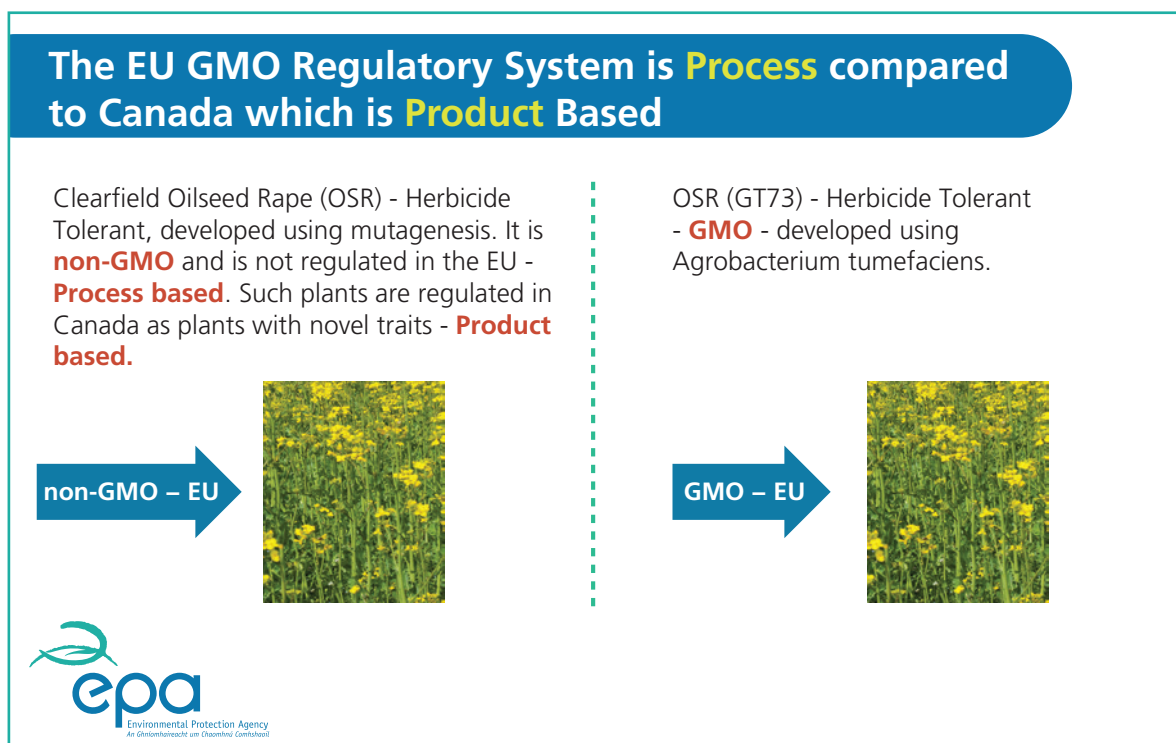
The EU has adopted biotechnology as an integral part of the EU economy for job creation and sustainable development. Several speakers stated that the use of GMO Technology is helping to drive Ireland's biopharmaceuticals exports. Nine out of the top 10 global pharmaceutical companies are located in Ireland, creating over 24,000 jobs. 50% of our exports arise from the Life Sciences industry, including biopharma. It was stated that biologics will dominate the world market by 2016. Some of these drugs are already manufactured in Ireland, for example Enbrel for the treatment of rheumatoid arthritis. GMO Technology has the propensity to create more jobs in the biopharma sector in Ireland. The conference heard that Irish academic researchers are starting to collaborate with biopharma companies located in Ireland and now for the first time have the capability to carry out clinical trials on patients in Irish hospitals, using GMM vaccines and medicines derived from GMMs. The aim here is to build capacity so that any new medicine developed through the clinical trial process could also be manufactured in Ireland. As one of the regulatory agencies, the Environmental Protection Agency has an important role to play here.

The conference heard that EU policy on the cultivation of GMO crops is paradoxical to the aims of the Lisbon strategy for growth and jobs, as the EU GMO regulatory regime is seen as highly politicised, of high regulatory cost, not proportionate to the risks, stifling technological innovation and an ineffective system which makes it almost impossible to get approval for the cultivation of GM crops in the EU. As a result of this inertia at EU level, one German-based company has 'closed shop' and has moved biotech jobs from the EU to the USA. Another international agriculture biotech seed company indicated that it will no longer be seeking approvals for GM crops cultivation in the EU owing to the stalled approval process.

Failure to radically change current EU policy on GMOs could potentially have a negative impact for biotechnology (potentially resulting in a 'brain' drain) in the EU, which in turn could impact negatively on Irish industry and agriculture.

## Regulatory issues:

A 'process based/genotype' regulatory system versus a 'product based/phenotype' regulatory system



When the EU regulations were originally adopted (1990), the main concern was that the process of genetic modification was thought to be inherently dangerous and potentially associated with risk. Consequently, the GMO Regulatory framework adopted entailed defined techniques of genetic modification which are prescribed in two (2) EU Directives relating to GMOs.

It was the view of some of the speakers at the conference that European Union (EU) GMO policy is not functioning, due in part to the fact that the regulations have been over precautionary in choosing a 'process' based regulatory system, (i.e. relates to the technique by which the GMO was developed), whereas in other jurisdictions (e.g. Canada and to some degree the USA), a 'product/phenotype' based approach is used which relates to the novelty of the characteristics of an organism (phenotype i.e. biochemical and physical characteristics). The conference heard that changing to a 'product/phenotype' based regulatory system, as a replacement for the current 'process' based regulatory system, would be logical for a number of reasons:

- Currently, there is an anomalous system in the EU where a non-GM herbicide tolerant (HT) crop<sup>1</sup> is not regulated, even though it has the same potential environmental concerns (e.g. gene flow to related weed species, weeds becoming resistant to the herbicide) as its GM HT counterpart. If a 'product /phenotype' based regulatory system were in place in the EU, then all crops, irrespective of the method used to develop them, would be subject to regulation. Apparently, these 'conventional' HT crops will be made available to Irish farmers in the near future.
- Moving to a 'product/phenotype' based regulatory system would ensure that risks associated with a new product, whether it was produced using GMO Technology, new/novel techniques (NT) (such new techniques are currently under review as regards their implications from a legislative perspective) or conventional plant breeding, would be assessed according to the properties/ characteristics of the product rather than the way (process) the product was made. This would ensure safety of all new products. This is what happens under the Canadian regulatory regimes where the primary trigger for the assessment is dependent on the novelty of the product rather than the specific means by which it was produced.
- It would allow for the possibility of de-regulation of certain novel products based on a history of safe use. Again, a system of deregulation is in operation in Canada but would never happen under the present EU 'process' based regulatory system. It was the view of a speaker that this is clearly in direct conflict with the EU's own Better Regulation principles<sup>2</sup>.

In the opinion of the UK speaker, it is not clear if a proposal to change to a 'product' based regulatory system would be acceptable to all EU Member States.

The conference heard that there is an excellent safety record pertaining to the use of GMOs. The conference heard that EU funded (€300m) research carried on over 25 years, assessing the use and risk assessment of GM crops, concluded that GMO technology is *per se* no more dangerous than conventional plant breeding methods.

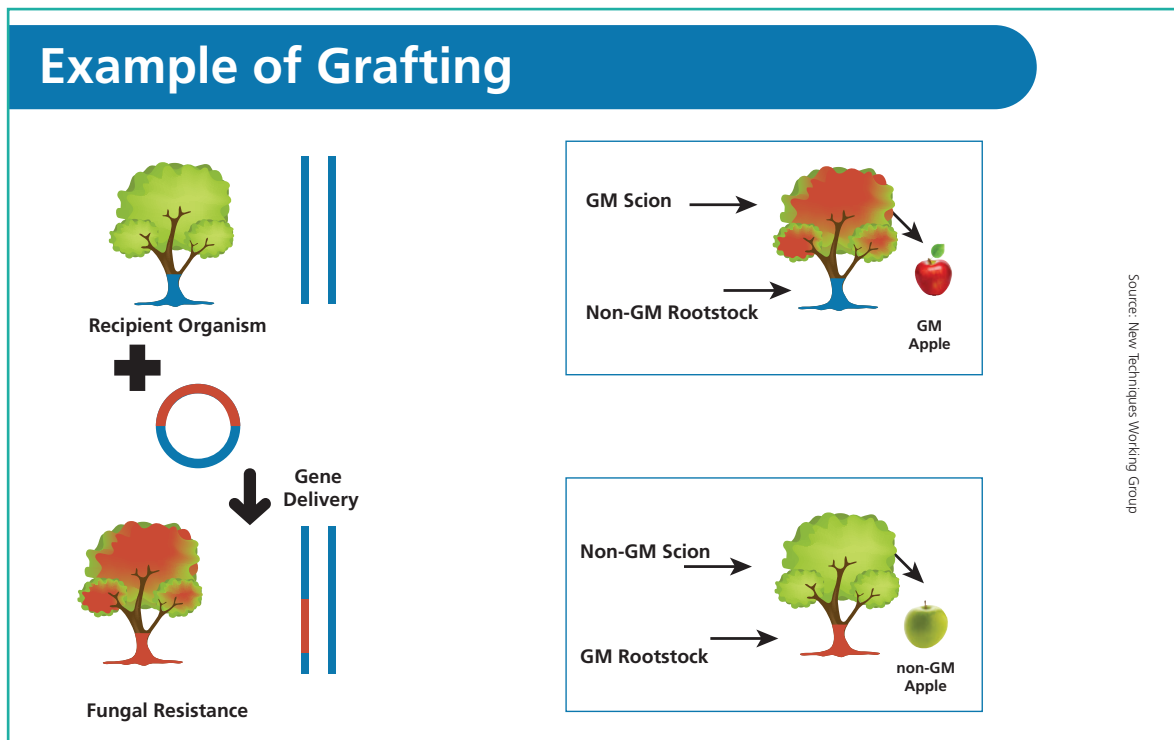
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1 Herbicide tolerant oilseed rape varieties known as 'Clearfield' have been bred to be herbicide tolerant using conventional breeding techniques. It is estimated that in 2013 around 1% of UK oilseed rape area was Clearfield.

2 This means that EU laws and regulations are well targeted, correctly implemented at the right level and proportionate to need.



## New/Novel Techniques (NTs) for plant breeding/genetic modification regulation at EU level



Since the two (2) EU GMO Directives were adopted in 1990<sup>3</sup>, new breeding and genetic modification techniques have emerged to allow the generation of plant varieties with desired traits more precisely, rapidly and efficiently than with conventional breeding. Instead of introducing new or foreign DNA, these novel techniques of genetic modification edit or alter the existing plant genes in a targeted way, to the point that frequently there is no distinction between the plant produced by conventional breeding and that produced by a novel genetic modification technique. This raises the question whether these techniques result in genetic modification, whether the resultant plants are GMOs, and whether they fall within the scope of the current GMO legislation.

Examples of new/novel techniques (NT) of genetic modification include:

- the introduction of DNA from the same crop species (cisgenesis),
- modification of the expression of existing genes (RNA interference-RNAi), and
- techniques that target changes to nucleotides in the genome oligonucleotide-mediated mutagenesis, zinc finger nucleases, TALENs and CRISPR/Cas editing.

There is no doubt that these techniques will challenge the current regulatory definition of a GMO, because many of the organisms produced by these NTs will be indistinguishable from those produced by conventional (non-GM) techniques. It is likely that some of the NTs currently under scrutiny will not be regulated as GMOs in other jurisdictions, as the final product will not contain any 'new' DNA or new protein. In contrast, it is unclear how these NTs of genetic modification might be regulated in the EU bearing in mind that it is the 'process', i.e. the technique of genetic modification, that is regulated.

<sup>3</sup> Directive 90/219/EEC on the contained use of GMMs, Directive 90/220/EC on the deliberate release of GMOs into the environment.

The conference was informed of the specialised Working Group (WG) established by the Commission in December 2007 to consider the application of new biotechnological techniques in plant breeding and/or the modification of other organisms. The following eight techniques were considered by the WG:

1. oligonucleotide-directed mutagenesis (ODM),
2. zinc finger nuclease technology,
3. cisgenesis,
4. grafting,
5. agro-infiltration,
6. RNA-dependent DNA methylation (RdDM),
7. reverse breeding, and
8. synthetic genomics.

The final report of the WG was published in December 2011 which provided technical advice pertaining to the different techniques. The European Food Safety Authority (EFSA) has issued an opinion on the Environmental Risk Assessment (ERA) of plants developed using cisgenesis, intragenesis and ZFN-3 (zinc finger nucleases) and other Site-Directed Nucleases (SDS) with similar function. No new ERA issues were raised in the EFSA opinion regarding cisgenesis and ZFN-3. EFSA concluded that these techniques are similar to conventional plant breeding techniques. Regarding intragenesis, they concluded that this technique is similar to GMO.

Changing the EU GMO regulatory system from a 'process based' system to a 'product/phenotype' regulatory system would help to overcome the current problem of determining whether new/novel techniques fall within the scope of the GMO legislation. This would also bring the EU GMO regulatory system in line with our main trading partners, for example, USA, Canada and other jurisdictions.

The conference heard that the way in which the new techniques for plant breeding/genetic modification are regulated at EU level will have ramifications for SME's in the EU, including GMO users in Ireland. Consequently, it was argued that innovation and job creation are negatively affected in the EU by the current uncertainty regarding the regulation of new techniques and by lack of clarity as to when a decision will be made on the regulatory status of these new techniques. The conference was told that moving to a phenotype-based approach would be more consistent with scientific understanding and would provide an opportunity to address problems inherent to the current process-based system. In particular, it would offer a more consistent and flexible approach to regulation.

### De-regulation of Class 1 GMMs

The possible de-regulation of Class 1 GMMs was introduced to the conference and the question asked as to whether Class 1 GMM activities (negligible or no risk) should be de-regulated under the GMM Contained Use Directive 2009/41/EC. Class 1 GMMs are usually crippled strains and therefore are unlikely to survive in the environment. They also have a long history of safe use (>40years) and are classified as having no or negligible risk. The EU Contained Use legislation also foresees exclusions for Class 1 GMM under Annex II, Parts B and C of the Contained Use legislation. To date, no exclusions have been discussed/agreed by EU Competent Authorities at EU level.

Since 2013, the EPA has ceased the requirement of annual reporting for this class of activity (no or negligible risk) to reduce regulatory burden for both the consent holder and the Agency in line with Better Regulation principles. Users are still required to submit Risk Assessments where new Class 1 GMM work is undertaken. Also, for Class 1 GMM enforcement purposes, the EPA is now carrying out site inspections on a 6 year cycle for academic users and a three year cycle for industrial users. Self-assessment for Class 1 GMM users is employed whereby the site inspection checklist for contained use

facilities is forwarded to Class 1 users for completion in advance of impending site inspections. Spot checks are then carried out on a number of such users. The de-regulation of Class 1 GMM users on a similar scale as described above is also being implemented in the UK, NL and DE at present.

## Biodiversity Issues:

### Will the commercial cultivation of GM crops in Ireland result in adverse effects on biodiversity?

A number of speakers at the Conference felt that there was probably too much concern in the EU about the potential environmental risks from using GM crops. The word 'proportionality' is key when it comes to the implementation of the GMO Deliberate Release Directive (Directive 2001/18/EC). However, after 17 years of GM commercial crop cultivation in different parts of the world (>175 million ha (equates to 25 times the land mass of Ireland) planted worldwide in 2013 by over 18 million farmers in 27 different countries), to date there is no evidence that GM crops are any different from their non-GM counterparts and there is no reported evidence relating to environmental harm. Comparison was made with how invasive species, *Gunnera* (*Gunnera tinctoria*) and Japanese knotweed (*Fallopia japonica*), where there is a significant impact on biodiversity, ecosystems and habitats in different parts of Ireland due to the lack of regulation and control.

The conference heard that the UK Advisory Committee on Releases into the Environment (ACRE) published a report (2013) entitled 'Towards a more effective approach to environmental risk assessment of GM crops under current EU legislation'. They concluded that there is potential to improve the current EU GMO regulatory framework by:

- developing a better understanding of what is meant by 'environmental damage'
- using defined 'hypotheses of risk'
- seeking options for environmental risk management as part of environmental risk assessment
- making better use of existing information.

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## NGO perspective

While it was agreed, by some of the speakers, that GM offers great economic opportunities for Ireland the NGO's are not in agreement. NGO's did not think that GM technology was precise and did not agree with the substantial equivalence concept.

The opinion was expressed that the proponents of GMO technology overly simplify the concept of the precision technology and argued that there is not just 'one gene for one trait'. Rather, each gene can be used in a variety of different ways depending on how it is regulated at the cellular level. The regulation of this industry is of paramount importance and there is concern that there was no independent testing carried out on GM food and that this should be done over longer periods of time and should include multi-generational type studies. It was suggested that GM techniques, like transgenesis, cisgenesis and mutagenesis<sup>4</sup>, however triggered, should be regulated, and this speaker was in favour of a product based regulatory system. It was also stated that there was a problem with glyphosate use on GM crops in the USA as weeds are becoming resistant. In addition it was indicated that the Irish GMO regulatory system is too fragmented, that there is a science deficit in Irish schools. There was also a need to teach scientists, medics and the general population how to evaluate statistics better so that can evaluate information and reject dogma.

4 Mutagenesis is excluded from the scope of the GMO (Deliberate Release) Regulations S.I. No 500 of 2003 and the GMO (Contained Use) Regulations (2001 to 2010) in accordance with articles 7 and 11 thereof, respectively.



## Farming perspective

The conference heard that:

- EU agricultural policy must be aligned to credible science;
- The EU has given its approval to the importation of GMOs for Food and Feed but has objected to the cultivation of GM crops. This approach is both inconsistent and unsustainable; Bioscience has a role in maximising resource use efficiency while protecting the environment - "more for less".
- Consumers and users need to be educated regarding the application of Biotechnology, plus proper scientific debate needs to take place.
- Consumer sensitivities need to be addressed using independent research.

It was concluded that 'There is an onus on European society to examine how biotechnology can be used to reduce substantially the significant crop yield/loss that growers are experiencing, while also addressing environmental concerns'.

## In Conclusion

The conference heard that:

Application of the technology in areas such as medicine and industry has been well received and is non-contentious. The same however cannot be said for agriculture where there is considerable opposition to the cultivation of GM crops in the EU.

It was evident that the use of GMO Technology is helping to drive Ireland's exports. GMO Technology has the propensity to create more jobs in the biopharma sector and for the first time Irish researchers now have the capability of carrying out clinical trials on patients in Irish hospitals (for example, Beaumont Hospital) using GMM vaccines.

It was also evident that Irish farmers rely on the importation of animal feed derived from GM soya and corn. In 2012, >50% of imported grain was derived from GM soya and GM maize. In fact the EU is only 30% sufficient in animal protein, the remainder must be imported. Irish farmers are now concerned that they could become less competitive due to the fact that they have to pay a higher price for imported commodity crops.

There was general agreement that the EU regulatory system pertaining to GM crops is cumbersome, expensive, not proportionate to the risks and is not functioning properly for the workings of the internal market. It is evident that this dysfunctional regulatory system is responsible for biotech job losses in the EU as two multinational companies have already given up on the EU regulatory regime for cultivation purposes.

There was a discussion on why Ireland should support a 'product/phenotype' based regulatory system, rather than the current 'process' based regulatory system and that it would better serve EU farmers and SME's.

Of paramount importance will be how the New Techniques (NTs) for plant-breeding and the genetic modification of microbes will be regulated at EU level. It is likely that some of the NTs currently under scrutiny will not be regulated as GMOs in other jurisdictions.

Finally, it was expressed widely that there is an urgent need for a coherent policy document regarding GMO Technology in Ireland.



## Supporting material:

The presentations from the conference can be viewed here:

<http://www.epa.ie/pubs/conferencesandevents/gmoconf/>

Media reports from the conference available on the EPA website [www.epa.ie](http://www.epa.ie)

Other pertinent reports relating to GMO in the EU:

- European Academies Science Advisory Council (EASAC);  
<http://www.easac.eu/home/reports-and-statements/detail-view/article/planting-the.html>
- Science Journal Editorial by Prof Louise Fresco, University of Amsterdam  
[http://www.worldfoodprize.org/index.cfm/24667/22650/fresco\\_editorial\\_in\\_science\\_magazine\\_the\\_gmo\\_stalemate\\_in\\_europe](http://www.worldfoodprize.org/index.cfm/24667/22650/fresco_editorial_in_science_magazine_the_gmo_stalemate_in_europe)
- Review article by G. Masip et.al, University of Lleida, Spain; <http://eprints.icrisat.ac.in/10764/>
- Prof Anne Glover, Chief Scientific Advisor to the president of the European Commission, Jose Manuel Barroso; '<http://www.scotsman.com/business/food-drink-agriculture/madness-of-opposition-to-gm-crops-says-glover-1-3102539>
- Open letter to the President of the European Commission, the President of the European Council, and the President of the European Parliament.  
<http://www.pfri.net/pfri-farmers-organisations-express-concerns-eu-gmo-policies-regulations/>
- UK Council for Science and Technology letter re GM technologies to the Prime Minister  
<https://www.gov.uk/government/publications/genetic-modification-gm-technologies>
- DEFRA: Genetically modified organisms: the case for new regulations  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/239852/genomes-and-gm-regulation.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/239852/genomes-and-gm-regulation.pdf)
- DEFRA: Towards an evidence-based regulatory system for GMOs.  
<https://www.gov.uk/government/publications/genetically-modified-organisms-review-of-current-eu-regulations>
- DEFRA: Genetically modified organisms: new plant growing methods  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/239542/new-techniques-used-in-plant-breeding.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/239542/new-techniques-used-in-plant-breeding.pdf)
- Europe should rethink its stance on GM crops  
<http://www.nature.com/news/europe-should-rethink-its-stance-on-gm-crops-1.13265>
- Should EU Legislation Be Updated? COGEM Report CGM/090626-03  
<http://www.cogem.net/index.cfm/en/publications/publicatie/should-eu-legislation-be-updated-scientific-developments-throw-new-light-on-the-process-and-product-approaches>

# AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an Gníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaoil a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaoil a chosaint ó éifeachtaí díobhálacha na radaíochta agus an truaillithe.

## Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

**Rialú:** Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun díriú orthu siúd nach gcloíonn leis na córais sin.

**Eolas:** Soláthraimid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírthe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.

**Tacaíocht:** Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaoil atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaoil inbhuanaithe.

## Ár bhFreagrachtaí

### Ceadúnú

- Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaoil:
- saoráidí dramhaíola (m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola);
- gníomhaíochtaí tionsclaíocha ar scála mór (m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta);
- an diantalmhaíocht (m.sh. muca, éanlaith);
- úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (OGM);
- foinsí radaíochta ianúcháin (m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíocha);
- áiseanna móra stórála peitiril;
- scardadh dramhuisce;
- gníomhaíochtaí dumpála ar farraige.

### Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdarais áitiúla agus le gníomhaireachtaí eile chun dul i ngleic le coireanna comhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, trí dhíriú ar chiontóirí, agus trí mhaoirsiú a dhéanamh ar leasúchán.
- Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (DTLL), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a ídionn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaoil.

### Bainistíocht Uisce

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchriosacha agus cósta na hÉireann, agus screamhuiscí; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

## Monatóireacht, Anailís agus Tuairisciú ar an gComhshaoil

- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.
- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus na n-údarás áitiúil (m.sh. tuairisciú tréimhsiúil ar staid Chomhshaoil na hÉireann agus Tuarascálacha ar Tháscairí).

## Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn

- Fardail agus réamh-mheastacháin na hÉireann maidir le gáis ceaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn

## Taighde agus Forbairt Comhshaoil

- Taighde comhshaoil a chistiú chun brúnna a shainaitheint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

## Measúnacht Straitéiseach Timpeallachta

- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaoil in Éirinn (m.sh. mórfhleananna forbartha).

## Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta, measúnacht a dhéanamh ar nochtadh mhuintir na hÉireann don radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

## Treoir, Faisnéis Inrochtana agus Oideachas

- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Faisnéis thráthúil ar an gcomhshaoil ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaoil (m.sh. Timpeall an Tí, léarscáileanna radóin).
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

## Múscailt Feasachta agus Athrú Iompraíochta

- Feasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

## Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil

Tá an ghníomhaíocht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig Aeráide, Ceadúnaithe agus Úsáide Acmhainní
- An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- An Oifig um Measúnú Comhshaoil
- An Oifig um Cosaint Raideolaíoch
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair inní agus le comhairle a chur ar an mBord.



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