Open Letter to the Chairman of the Expert Committee on Pesticides

<table>
<thead>
<tr>
<th>The Health and Safety Executive has conflicts of interest</th>
<th>Page 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Verdict of the Judges of the International Monsanto Tribunal</td>
<td>Page 4</td>
</tr>
<tr>
<td>Report presented to UN Human Rights Council about the Right to Food</td>
<td>Page 7</td>
</tr>
<tr>
<td>Disastrous effects on the environment of Roundup and neonicotinoids</td>
<td>Page 8</td>
</tr>
<tr>
<td>The Agrochemical Industry has profoundly influenced the British government since WW2</td>
<td>Page 11</td>
</tr>
<tr>
<td>Glyphosate is not only an herbicide: it is a chelator of minerals</td>
<td>Page 17</td>
</tr>
<tr>
<td>“Ecocide” in Britain should be recognized as a crime in international law</td>
<td>Page 18</td>
</tr>
</tbody>
</table>

**The Health and Safety Executive has conflicts of interest**

**Society of Environmental Toxicology and Chemistry (SETAC)**

In 2011, SETAC held a Workshop on Pesticide Risk Assessment for Pollinators January 15-21, 2011, at Pellston, Florida. It was by invitation only; ‘world experts’ of whom many were from industry. Mark Clook Chemicals Regulation Directorate HSE and Dr Helen Thompson were present from the UK. David Fischer from Bayer CropScience and Thomas Moriarty from the US EPA Office of Pesticide Programs and Team Leader, US EPA Bee Unit wrote the Executive Summary.¹

The Summary showed that the pesticides industry and all of the environmental protection agencies were aware of the following, which up until then, they had consistently denied:

- That the systemic neonicotinoid pesticides are harmful to bees.
- That the tests and protocols that had allowed registration of the systemic pesticides were not adapted to assess potential hazard and risk from this type of pesticide.
- Despite knowing all this, the Protection Agencies had allowed the pesticides industry to keep neonicotinoids on the market while they carried out further research.
- That many of the projects that were suggested for the future had already been done by independent scientists. These were merely delaying tactics.

P 12 “Many who are familiar with pesticide risk assessment recognize that the methodology and testing scheme for foliar application products (where exposure may be primarily through surface contact) is not adapted to assess potential hazard and risk from systemic pesticides”.

**Dr Helen Thompson’s interview on Channel 4 News on April 2011²**

On 04/04/2011, Tom Clarke Channel 4’s Science Editor interviewed Dr Helen Thompson Government Bee Scientist. She said: “Government has reviewed all the data on a link between insecticides and bees, and concluded they are not the primary cause of the decline. There’s been a lot of studies undertaken, across Europe and here in the UK and there’s been no strong evidence they are linked to bee losses at all.” Dr Thompson or Mark Clook never mentioned the conclusions of the SETAC conference 3 months earlier. Dr Thompson had done all her studies with scientists from industry. Syngenta commissioned research from her but when EFSA criticized her publication she left Fera and joined Syngenta.

**ECP March 2017 Item 7 for which Mark Clook CRD was present and representing HSE³**

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Several papers were discussed including ones by Bayer and Syngenta. “The Committee agreed HSE’s view that no further regulatory action should be taken until the results of EFSA’s comprehensive assessments are available (this is expected by the end of November 2017). The Committee considered that, collectively, these papers did not change their view on the weight of evidence approach it takes to assessing the risk to pollinators from the use of neonicotinoid pesticides.” Six years later, still delaying tactics for the benefit of industry.

The UK Expert Committee on Pesticides (ECP) took over from the Advisory CP in May 2015 “The UK Expert Committee on Pesticides (ECP) provides independent, impartial advice to the government on the science relating to pesticides.” The ACP had members from industry on the committee to give advice on the authorisation of pesticides even before it became the ECP. Nothing has changed except the ability to openly invite industry to give its view.

The Government delayed the report4 of the May 2016 Expert Committee on Pesticides until after the meeting: Bayer and Syngenta were going to be present to give advice. Industry representatives explained to the ECP meeting "that 79% of the oilseed rape crop was under threat or severe risk from cabbage steam flea beetle and aphids. They explained that failure to control these pests could result in significant impacts on yields. For example a significant presence of Turnip Yellow Virus could reduce yields by 6-12%. ‘High levels’ of infestation were being reported. They also outlined how the difficulty of bringing new products to the EU market meant it was unlikely that alternative pesticides would be available.”

Italy’s partial ban on systemic neonicotinoid insecticides in 2008 had been successful At a Beekeeping Conference held in Guelph University, Ontario on 12 August 2015,6 Prof Franco Mutinelli said Italy instituted a partial ban on neonicotinoids in 2008 and it had been extended each year since. No active substances are allowed in seed coatings and the use of neonicotinoids is restricted to specific cases. “It's been effective”, he said. “After the ban there has been strong improvement. The effect of the ban was immediate.” He said corn producers were worried about losing crop yield to disease, "but that didn't happen," he said. "The ban has been now seven years and crop yield is within the expected range." Christian Krupke’s (University of Purdue) research indicates that the benefit of neonicotinoid treatment to corn seeds only lasts two weeks. Then it washes away with the water and seeps into the soil. Further, he said the pests the neonicotinoids are supposed to fend off are not present in the majority of farms. “But they are really toxic to honey bees. The benefit of the seed treatments is hard to justify,” he said. "We know the status quo just doesn’t work."

Pan-European epidemiological study on honeybee colony losses EPILOBEE 2012-20147 The second and final report on the pan-European epidemiological study on honeybee colony losses (EPILOBEE 2012-2014) was prepared by the EU reference laboratory for bee health. The objective of the two-year programme was to get a state of play of honeybee colony losses on a harmonised basis in each of the participating Member States. This landmark study revealed the UK was suffering one of the worst rates of honeybee colony deaths in

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5 http://www.theguardian.com/environment/2015/jul/29/bee-harming-pesticide-firms-took-part-key-meeting-ban
7 http://ec.europa.eu/food/animals/live_animals/bees/study_on_mortality/index_en.htm
Europe. In the cold winter of 2012-13, 29% of honeybee colonies in the UK died, with only Belgium suffering a higher rate of losses (34%) of the 17 countries surveyed. By contrast, only 5% of colonies in Italy were lost. Not satisfied with this as proof that neonicotinoids are harmful to bees, Defra, Bayer and Syngenta insisted that a prospective study must be done.

Italy’s ban on systemic neonicotinoids on maize crops has continued to be successful. Healthy honeybees and sustainable maize production: why not? In this paper published in the Bulletin of Insectology in April 2017 the Italian teams in Bologna and Padova describe growing of maize without systemic neonicotinoids. The Italian Ministry of Health banned imidacloprid, clothianidin, thiamethoxam and fipronil in 2008 and maize yields were unchanged. The implementation of Integrated Pest Management for maize production is discussed in the paper.

An HSE and Defra cover up? Health & Safety Executive and Report (1990) – officially destroyed – has now been revealed: incriminating sheep dip poisoning
The UK Ministry of Agriculture, Fisheries and Food (MAFF) had made yearly sheep dips compulsory with organophosphorus compounds in 1979 and biannually in 1984 then suddenly stopped them in 1992. Farmer Tom Rigby, Sheep Dip Sufferers’ Support Group, requested a FoI in 2015. He said: “The information I want is HSE advice given to the government minister just before he decided to abandon compulsory dipping and the science behind and date of a government order that Ministry of Agriculture, Fisheries and Food inspectors must not go within 14ft of a sheep dip.” The HSE responded to the FoI request by telling Mr Rigby: “The information you requested is no longer held by the Health & Safety Executive, having been destroyed in accordance with HSE’s corporate retention policy”. A ‘well-wisher’ sent a copy to Mr Rigby.

HSE and Defra said there was no link between sheep dip chemicals and illnesses in farmers
HSE and Defra had always denied a link between organophosphate use as a sheep dip in the 1980s and neurological problems in farmers: OPs are still registered by Defra. Organophosphate Sheep Dip 10 June 2015 Westminster Hall debates: Jessica Morden MP spoke on behalf of Andy Burnham 11 “We want a full inquiry, independent of Defra, to allow us to question why farmers might have been compelled to use this chemical with no guidance if governmental research pointed to health impacts. Was compulsory dipping stopped because MAFF knew it was affecting farm workers’ and farmers’ health? If so, why did it not say so? We need an answer to that question in particular.” Organophosphorus compounds are likely to be responsible for Gulf War syndrome and may be associated with Aerotoxic Syndrome in pilots and cabin crew as a result of exposure to OPs in engine oil. Sarah Mackenzie Ross and colleagues performed a meta-analysis of 14 studies involving 1600 participants. 12 Defra claimed not to have found correlations but Mackenzie Ross discovered that there was a significant association between low-level exposure to OPs and impaired neurobehavioural function primarily involving cognitive functions, psychomotor speed, executive function, visuospatial ability, working and visual memory.

8 http://www.theguardian.com/environment/2014/apr/07/britain-honey-bee-colony-deaths-worst-europe-study
11 https://www.theyworkforyou.com/whall/?id=2015-06-10a.130.0
CRD: Is it a safety agency or a service agency? About 60% of its budget is paid by industry

Extracts from the CRD Annual Report 2008/2009:

"This has been a very busy year in the approvals group. Applications for product approvals were 9% over business estimates with a total of 1,767 applications received and 1,622 applications completed this year, 96% of which were completed within published targets. Importantly 100% of ‘fast track’ applications identified by industry as high priority to their business needs were completed within published targets. Achieving this demanding target despite the increase in applications has required diligent application and commitment of evaluating staff and their managers and represents a significant achievement. We continue to support growers and we have completed the first stage of the conversion exercise for the ‘Long Term Arrangements for Extension of Use’ on non-edible crops. Of the 401 uses requested by growers, the 131 products containing active substances that have already been fully reviewed in the EU review programme, and included on Annex I of Council Directive 91/414/EEC have been completed. The remaining product/uses identified by growers will be automatically included in the on-going re-registration process minimising the impact on industry. We also assisted in the evaluation of new products by helping companies work towards the completion of appropriate dossiers through the provision of detailed advice. This advice has covered both chemical pesticides and biopesticides that we continue to support under our biopesticides scheme. We submitted completed evaluation reports for 5 new active substances where the UK was the EU Rapporteur Member State and issued 3 UK provisional authorisations in advance of Annex I inclusion. In addition we completed 8 ‘partial dossier’ submissions. Annual Reports are no longer available for public view.

The Verdict of the Judges of the International Monsanto Tribunal

Summary of the advisory opinion of the International Monsanto Tribunal

Delivered on the 18th of April 2017 in The Hague, Netherlands

The International Monsanto Tribunal is a unique "Opinion Tribunal" convened by civil society to clarify the legal obligations and consequences of some of the activities of the Monsanto Company. In brief: the five judges of the Monsanto Tribunal agree that:

• Monsanto has violated human rights to food, health, a healthy environment and the freedom indispensable for independent scientific research.
• ‘ecocide’ should be recognized as a crime in international law.
• human rights and environmental laws are undermined by corporate-friendly trade and investment regulation.

The Monsanto Tribunal hearings allowed for the gathering of testimonies related to various impacts on human health (especially on farmers), soils, plants, aquatic organisms, animal health and biodiversity. These testimonies also included the impacts of spraying crop protection products (herbicides, pesticides). Based on the above findings and to answer Question 1, the Tribunal concludes that Monsanto has engaged in practices that have negatively impacted the right to a healthy environment.

Question 2 concerned the alleged infringement on the right to food as recognized in Article 11 of the International Covenant on Economic, Social and Cultural Rights, in Articles 24.2(c) and (e) and 27.3 of the Convention on the Rights of the Child, and in Articles 25(f) and 28.1 of the Convention on the Elimination of All Forms of Discrimination against Women.

The Tribunal heard witnesses' accounts of severe congenital diseases, development of non-

Hodgkin lymphomas, chronic diseases, Lasso poisoning or even death occurring after direct or indirect environmental exposure to products manufactured by Monsanto. The Tribunal recalls that this company has manufactured and distributed many dangerous substances. First were PCBs, persistent organic pollutants exclusively commercialized by Monsanto between 1935 and 1979 despite the fact that the company knew about their deleterious health impacts. PCBs are now forbidden by the 2001 Stockholm Convention on Persistent Organic Pollutants. This carcinogenic product also causes problems with fertility and child development, and disrupts the immune system.

Secondly, glyphosate (ingredient in Roundup) is considered in some studies as a carcinogenic product while other reports, such as the one from the European Food Safety Authority (EFSA), conclude the opposite. In an opinion issued on the 15th of March 2017 and related to the classification of glyphosate, the European Chemicals Agency (ECHA) indeed estimated that this product could not be classified as a carcinogen, as a mutagen or as toxic for reproduction. The Tribunal however stresses that this classification does not take into account the risks of exposure, with residues found in food, drinking water and even in human urine. The commercialization of Roundup-resistant GMO crop seed has resulted in widespread distribution and use of this product. It is classified as “probably carcinogenic to humans” by the World Health Organisation’s (WHO) International Agency for Research on Cancer. Other reports assert the genotoxicity of glyphosate on humans and animals. Last but not least, internal Monsanto documents released in March 2017 as a result of a court order of the U.S. District Court, Northern District of California (San Francisco) show that Monsanto has manipulated science. This makes hollow the so-called scientific controversy about the risks glyphosate pose on health.

Thirdly, the use of GMO seed raises multiple questions. There is a distinct lack of scientific consensus about the impacts of GMOs on human health. The controversy is embedded in a context of opacity on GMO studies, and even on the inability of researchers to conduct independent research. The "Monsanto Papers" cast light on practices of systematic manipulation of scientific studies, and on the influence exerted on experts by Monsanto. There is no political consensus on the cultivation of GMOs either. The UN Special Rapporteur on the Right to Food, an independent expert, calls for the need to follow the precautionary principle at the global level. The Tribunal concludes that Monsanto has engaged in practices that negatively impacted the right to health.

Question 4 concerned the alleged infringement on the freedom indispensable for scientific research, as guaranteed by Article 15(3) of the International Covenant on Economic, Social and Cultural Rights, as well as the freedoms of thought and expression guaranteed in Article 19 of the International Covenant on Civil and Political Rights. The “freedom indispensable for scientific research” closely relates to freedom of thought and expression, as well as the right to information. It is therefore key to safeguarding other fundamental rights, such as the right to health, food, water and a healthy environment. This freedom engenders the requirement to ensure that scientific researchers are able to express themselves freely and are protected when acting as whistle-blowers. Some of Monsanto’s practices mentioned in the testimonies of agronomists and molecular biologists have resulted in court convictions for the company. Among those practices are: illegal GMO plantations; resorting to studies misrepresenting the negative impacts of Roundup by limiting the analysis to glyphosate only while the product is a combination of substances; massive campaigns aiming at discrediting the results of independent scientific studies. These strategies led, for example, to the withdrawal of a study published in an international journal and to the loss of a job for a scientist working in a governmental health agency. In response to Question 4, the Tribunal concludes that Monsanto’s conduct is negatively affecting the right to freedom indispensable for scientific research. Conduct such as
intimidation, discrediting independent scientific research when it raises serious questions about the protection of the environment and public health, suborning false research reports, putting pressure on governments are transgressing the freedom indispensable for scientific research. This abuse is exacerbated by exposure to health and accompanying environmental risks, which deprive society the possibility to safeguard fundamental rights. Taking direct measures to silence scientists or attempting to discredit their work constitutes conduct that abuses the right to freedom indispensable for scientific research and the right to freedom of expression. This negatively affects the right to information.

Question 6 asked the Tribunal if the activities of Monsanto could constitute a crime of ecocide, understood as causing serious damage or destroying the environment, so as to significantly and durably alter the global commons or ecosystem services upon which certain human groups rely. Developments in international environmental law confirms the increased awareness of how environmental harm negatively affects the fundamental values of society. Preserving dignity for present and future generations and the integrity of ecosystems is an idea that has gained traction in the international community. As an evidence of these developments, and according to the Policy Paper on Case Selection and Prioritisation from September 2016, the Prosecutor of the ICC wants to give particular consideration to Rome Statute crimes involving the illegal dispossession of land or the destruction of the environment. However, despite the development of many instruments to protect the environment, a gap remains between legal commitments and the reality of environmental protection. The Tribunal assesses that international law should now precisely and clearly assert the protection of the environment and the crime of ecocide. The Tribunal concludes that if such a crime of ecocide were recognized in international criminal law, the activities of Monsanto could possibly constitute a crime of ecocide. Several of the company’s activities may fall within this infraction, such as the manufacture and supply of glyphosate-based herbicides to Colombia in the context of its plan for aerial application on coca crops, which negatively impacted the environment and the health of local populations; the large-scale use of dangerous agrochemicals in industrial agriculture; and the engineering, production, introduction and release of genetically engineered crops. Severe contamination of plant diversity, soils and waters would also fall within the qualification of ecocide. Finally, the introduction of persistent organic pollutants such as PCB into the environment causing widespread, long-lasting and severe environmental harm and affecting the right of the future generations could fall within the qualification of ecocide as well.

Our Daily Poison: From Pesticides to Packaging, How Chemicals Have Contaminated the Food Chain and Are Making Us Sick
Marie-Monique Robin is an award-winning French journalist, author and filmmaker. She is the patron of the Monsanto Tribunal and on the Steering Committee. She received the 1995 Albert-Londres Prize, awarded to investigative journalists in France. She wrote the best-selling documentary (and book by the same name), “The World to According Monsanto,” which has been broadcast on fifty international television stations, and translated into 22 languages.
Her new book: Our Daily Poison: From Pesticides to Packaging, How Chemicals Have Contaminated the Food Chain and Are Making Us Sick.14
“Pull at the corner of any recent public health scandal, and you can find the fingerprints of the multinationals that profit from lax regulation. In this muckraking exposé, Marie-Monique Robin lays bare the hidden history of the chemical industry and its long trail into the present. Unless you’re part of the international lobbying set, you’ll be shocked by the global

14 http://thenewpress.com/books/our-daily-poison
connections between regulatory agencies, the corporations that have nested into them, and
the betrayal of public health that they have licensed. For anyone concerned about
democracy, corporate power or public health, this is a gripping and urgent book.” Raj Patel,
author of Stuffed and Starved.
A Report by Pesticides Action Network-UK has shown that 46% of non-organic food in 2013
contained residues of one or more pesticides and this had increased from 25% in 2003.15 A
further Report by PAN-UK: Pesticides in your daily bread showed that nearly two-thirds of
bread contained one or more pesticides and the three most frequently found were
glyphosate, chlormequat and malathion.16

Why hasn’t the UK Media reported the International Monsanto Tribunal but the French
press has? Stéphane Foucart for Le Monde has even uncovered key Monsanto emails for
the judge on behalf of many US cancer victims in lawsuits against Monsanto17
The organization Real Media says: “Knowledge is power is a common phrase. But further
insight comes from considering how power controls knowledge. The way billionaires
manufacture news and supposed ‘facts’ is a central theme within the Real Media campaign’s
week of actions in 2015.18
• Between 70-80% of UK print media is controlled by five ultra-wealthy media
moguls: Rupert Murdoch, Viscount Rothermere (Jonathan Harmsworth), Richard
Desmond and David and Frederick Barclay
• Academia is subverted through its dependence on corporate sponsorship and
control
• Advertising infects the popular consciousness, the public face a barrage of messages
to consume and to control the way they think
• Corporate media plays a pivotal role in pushing an unjust and unsustainable system”

Report presented to UN Human Rights Council about the Right to Food

Global Agricultural Corporations are severely criticised by Hilal Elver the UN Special
Rapporteur on the right to food. 19 The Report presented to the UN human rights council on
08/03/2017 is severely critical of the global corporations that manufacture pesticides,
accusing them of the “systematic denial of harms”, “aggressive, unethical marketing tactics”
and heavy lobbying of governments which has “obstructed reforms and paralysed global
pesticide restrictions”.
The report authored by Hilal Elver the UN Special Rapporteur on the right to food and co-
authored by Baskut Tuncak, the UN’s special rapporteur on toxics, says pesticides have
“catastrophic impacts on the environment, human health and society as a whole”, including
an estimated 200,000 deaths a year from acute poisoning. Its authors said: “It is time to
create a global process to transition toward safer and healthier food and agricultural
production.”

16 http://www.pan-uk.org/files/Pesticides%20in%20Your%20Daily%20Bread%20Guide%2020-
%20FINAL%20(1).pdf
17 https://usrtk.org/pesticides/mdl-monsanto-glyphosate-cancer-case-key-documents-analysis/
18 https://www.opendemocracy.net/ourkingdom/steve-rushton/real-media-gb-takes-on-
billionaireowned-consent-manufacturing-industry
Rapporteur-on-the-right-to-food.pdf
“It is a myth,” said Hilal Elver. “Using more pesticides is nothing to do with getting rid of hunger.” According to the UN Food and Agriculture Organisation (FAO), we are able to feed 9 billion people today. Production is definitely increasing, but the problem is poverty, inequality and distribution.”

Elver said many of the pesticides are used on commodity crops, such as palm oil and soy, not the food needed by the world’s hungry people: “The corporations are not dealing with world hunger, they are dealing with more agricultural activity on large scales.”

The Report says: “excessive use of pesticides are very dangerous to human health, to the environment and it is misleading to claim they are vital to ensuring food security.” Chronic exposure to pesticides has been linked to cancer, Alzheimer’s and Parkinson’s diseases, hormone disruption, developmental disorders and sterility. Farmers and agricultural workers, communities living near plantations, indigenous communities and pregnant women and children are particularly vulnerable to pesticide exposure and require special protections. The experts warn that certain pesticides can persist in the environment for decades and pose a threat to the entire ecological system on which food production depends. The excessive use of pesticides contaminates soil and water sources, causing loss of biodiversity, destroying the natural enemies of pests, and reducing the nutritional value of food. The impact of such overuse also imposes staggering costs on national economies around the world. The experts say the use of neonicotinoid pesticides is particularly worrying because they are accused of being responsible for a systematic collapse in the number of bees around the world. For example, heavy use of these insecticides has been blamed for the 50 per cent decline over 25 years in honeybee populations in both the United States and the United Kingdom of Great Britain and Northern Ireland. Such a collapse, they say, threatens the very basis of agriculture as 71% of crop species are bee-pollinated.

**Disastrous effects on the environment of Roundup and neonicotinoids**

**Roundup and neonicotinoid insecticides have destroyed recreational fishing in Wales** Both chemicals have hazard notices warning of dangers to aquatic invertebrates on which fish feed. In 1996, the Attorney General of the State of New York, Consumer Frauds and Protection Bureau, Environmental Protection Bureau found Monsanto guilty of false advertising by Monsanto with regard to the safety of Roundup® herbicide (glyphosate). In particular, in many advertisements, Monsanto implied that Roundup® could be used safely in aquatic environments. However, the US EPA-approved label said: *Do Not Contaminate water...minute amounts of this herbicide can cause severe damage or destruction to the crop, plants or other areas on which the treatment was not intended.* But the false claim from Monsanto has not been corrected and many countries now use glyphosate freely on invasive aquatic species. The assertion that it could be used in water was repeated again in their document to European Farmers. The agronomic benefits of glyphosate in Europe [2010].

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21 [http://www.mindfully.org/Pesticide/Monsanto-v-AGNYnov96.htm](http://www.mindfully.org/Pesticide/Monsanto-v-AGNYnov96.htm)

Invertebrate declines in rivers made 2016 disastrous for salmon and trout in Wales

Leading fisheries charity, Salmon & Trout Conservation UK (S&TC UK) has brought forward its programme of river invertebrate monitoring on three rivers in Wales to support efforts by Natural Resources Wales (NRW), who are investigating the unprecedented threats facing rivers and salmon stocks in Wales. Shockingly, a recent report identifies that 61 per cent of Wales’ water bodies do not meet ‘Good Ecological Status’ as required under the Water Framework Directive (WFD). Earlier this year, S&TC UK’s Riverfly Census in England, revealed that many rivers and chalk streams across the country were in a poor state because of pollution caused by human pressure, ranging from sewage treatment works, septic tanks and agricultural run-off to abstraction and degraded river habitats.

Glyphosate on Giant Hogweed by rivers as well as Japanese Knotweed in the valleys

There was a Natural Resources Wales (NRW) 24 document about the River Usk. 25 On page 12 it described the problem of another invasive weed, Giant Hogweed. “Five spray teams are working on the project from Environment Agency Wales (now Natural Resources Wales). Extensive control work has continued in the growing season along the river between Crickhowell and Newbridge-on-Usk since 2006. A number of Forum events have been organised periodically to update and involve local riparian owners and river users on the progress of the project.” This was presumably Roundup/Dakar Pro although the chemical was not named.

On Page 55 of another NRW document there was a paragraph marked Evidence Gaps: 26 “Impacts of new and emerging chemicals and substances, such as neonicotinoid pesticides, nanoparticles and pharmaceuticals, on water quality and ecology.”

Neonicotinoid insecticides are not new. They were introduced in 1994. There is plenty of independent evidence that seeds coated with these insecticides act by causing virtually irreversible blockage of postsynaptic nicotinic acetylcholine receptors (nAChRs) in the central nervous systems of insects. 27


In 2010 I had sent Dr Henk Tennekes’ work on systemic neonicotinoids to Sir John Beddington and Lord Chris Smith Chairman of the UK Environment Agency (EA). In April 2013 I sent this ABC Report on Neonicotinoids and Birds to him to ask him if UK EA would monitor neonicotinoid insecticides and glyphosate. He declined my request.

The ABC had commissioned world-renowned environmental toxicologist Dr Pierre Mineau to conduct the research. Cynthia Palmer, co-author of the report is an environmental lawyer and Pesticides Program Manager for ABC. The authors called for a ban on the use of the neonicotinoid insecticides as seed treatments and for the suspension of all applications pending an independent review of the products' effects on birds, terrestrial and aquatic invertebrates, and other wildlife. [The Report has been updated to 2015 to incorporate more measurement data, but the majority of quotations remain the same.]

24 Formed in April 2013 from a merger of the Countryside Council for Wales, Environment Agency Wales, and the Forestry Commission Wales.
26 http://www.naturalresources.wales/media/679427/annex-chapter-3-final-for-publication.pdf
28 http://abcbirds.org/wp-content/uploads/2015/05/Neonic_FINAL.pdf
Page 4: “A single corn kernel coated with a neonicotinoid can kill a songbird. Even a tiny grain of wheat or canola treated with the oldest neonicotinoid, imidacloprid, can poison a bird. As little as 1/10th of a corn seed per day during egg-laying season is all that is needed to affect reproduction with any of the neonicotinoids registered to date.”

Page 9: “It is clear that we are witnessing contamination of the aquatic environment at levels that will affect aquatic food chains. This has a potential to affect consumers of those aquatic resources, be they birds, fish or amphibians.” These disasters have occurred all over the world but pesticides are never mentioned. The corporations ensure that these disasters in terms of biodiversity losses are blamed on global warming or ocean acidification.

Another term that avoids the use of the word ‘pesticides’ is a ‘Dead Zone’

“Dead zones—large areas of ocean water that are mostly devoid of oxygen—are a growing problem worldwide. Triggered by nutrient-rich discharges from farms, sewage treatment plants, and other sources, they pose a major threat to marine life. Of the more than 550 dead zones that form each year around the world, the dead zone in the Gulf of Mexico is thought to be the second largest one caused by humans. Scientists have been tracking the size of the dead zone in the Gulf of Mexico for the past 30 years. Data from this year’s survey indicate that the dead zone that formed in 2015 is above average in size, likely because of heavy rains in June”. Deanna Conners PhD is an expert on Dead Zones and mans the EarthSky website. “The 2015 dead zone in the Gulf Mexico was measured at 6,474 square miles (16,768 square kilometers) during a July 28 to August 3 survey cruise. For the past five years, the dead zone has averaged about 5,500 square miles (14,245 square kilometers). Hence, this year’s dead zone is above average in size.” She says “New evidence suggests that ocean acidification played a key role in the Permian–Triassic mass extinction event 252 million years ago that killed most life on Earth.” Were pesticides around then?

The 27-year decline of coral cover on the Great Barrier Reef (GBR) and its causes

Extracts: ‘Based on the world’s most extensive time series data on reef condition (2,258 surveys of 214 reefs over 1985–2012), we show a major decline in coral cover from 28.0% to 13.8% (0.53% y⁻¹), a loss of 50.7% of initial coral cover. Tropical cyclones, coral predation by crown-of-thorns starfish (COTS), and coral bleaching accounted for 48%, 42%, and 10% of the respective estimated losses amounting to 3.38% y⁻¹ mortality rate. Importantly, the relatively pristine northern region showed no overall decline. Thus, reducing COTS populations, by improving water quality and developing alternative control measures, could prevent further coral decline and improve the outlook for the Great Barrier Reef. Such strategies can, however, only be successful if climatic conditions are stabilized, as losses due to bleaching and cyclones will otherwise increase’.

Glyphosate persistence in samples of seawater extracted from the Great Barrier Reef; this chemical biocide has probably been responsible for much of the destruction of the GBR’s aquatic vertebrates and invertebrates over the 40 years it has been in use

Extracts: ‘Glyphosate is one of the most widely applied herbicides globally but its persistence in seawater has not been reported. Here we quantify the biodegradation of glyphosate using standard “simulation” flask tests with native bacterial populations and coastal seawater from the Great Barrier Reef. The half-life for glyphosate at 25 °C in low light was 47 days, extending to 267 days in the dark at 25 °C and 315 days in the dark at 31 °C, which is the longest persistence reported for this herbicide. AMPA, the microbial transformation product of glyphosate, was detected under all conditions, confirming that degradation was mediated

30. http://www.pnas.org/content/109/44/17995.full
by the native microbial community. This study demonstrates glyphosate is moderately persistent in the marine water under low light conditions and is highly persistent in the dark. Little degradation would be expected during flood plumes in the tropics, which could potentially deliver dissolved and sediment-bound glyphosate far from shore.

Why was glyphosate found in the sea and so far from shore?
Instructions for using Roundup Advance AG Herbicide by Monsanto include: “Protection of Wildlife, Fish, Crustacea and Environment. Do not contaminate dam, river or stream with the product.”

Clothianidin (Sumitomo Shield a long-acting systemic neonicotinoid insecticide) has been granted registration by APVMA for use on very low-lying sugar cane plantations.
Instructions: ‘PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT
DO NOT apply under weather conditions, or from spraying equipment, that may cause spray drift onto nearby or adjacent areas, particularly wetlands, water-bodies or watercourses.
This product is highly toxic to aquatic invertebrates. DO NOT contaminate streams, rivers or waterways with the chemical or used containers. DO NOT apply when there are aquatic and wetland areas including aquacultural ponds or surface streams and rivers downwind from the application area and within the mandatory no-spray zone shown in table 1.’

Monsanto’s document: The agronomic benefits of glyphosate in Europe [2010]

Despite having been convicted of false claims in 1996, Monsanto repeated the same lies in 2010. “Since its discovery in the early 1970’s the unique herbicidal active ingredient glyphosate has become the world’s most widely used herbicide because it is efficacious, economical and environmentally benign. These properties have enabled a plethora of uses which continue to expand to this day providing excellent weed control both in agricultural and non-crop uses to benefit mankind and the environment.” Further, it states that glyphosate has an “excellent safety profile to operators, the public and the environment” (italics added). The document outlined at least 16 use areas (p. 3) from vegetation control on land throughout agricultural production, on GM Roundup® Ready Crops and on non-agricultural land “around structures on farms, amenity and industrial areas and on railways” (page 4).

Again on page 4, Monsanto makes another fraudulent claim about the use of glyphosate to increase wildlife and biodiversity: “Increased wildlife and biodiversity: Use of glyphosate instead of mechanical weed control techniques on non-cropped/amenity land preserves wildlife like small mammals and birds. Adoption of Conservation agriculture encourages earthworms and other invertebrates as well as birds. Judicious use of glyphosate to control excessive plant growth and invasive weeds on or around waterways and lakes encourages wildfowl and much other wildlife.”

The Agrochemical Industry has profoundly influenced British government since WW2

Rothamsted Research is the longest running agricultural research station in the world

When UK Rothamsted was founded in 1843, it was an enormous tragedy that the philanthropist John Bennet Laws, owner of the Rothamsted Estate appointed a chemist as

his scientific collaborator. This set the pattern for farming in the UK: to rely totally on the agrochemical industry and the input of chemicals.

**Rothamsted developed the first chemical herbicide**
The herbicide, 2,4-D was developed during World War II at British Rothamsted Experimental Station (at the same time as in the US) by Judah Hirsch Quastel and sold commercially in 1946. ‘The low cost of 2,4-D has led to continued usage today and it remains one of the most commonly used herbicides in the world.’ But plants develop resistance to herbicides. More and more has to be sprayed on until the plant becomes a super-weed. However, on 23/06/2015, WHO International Agency for Research on Cancer classified 2,4-D as a Group 2B carcinogen (possibly carcinogenic to humans). There was strong evidence that 2,4-D induces oxidative stress that can operate in humans and moderate evidence the 2,4-D causes immunosuppression, based on in-vivo and in-vitro studies.

**The Pesticide Conspiracy: even in the 1970s the Agricultural Industry was given massive power by the British Government**
Robert van den Bosch, writing in 1978 in *The Pesticide Conspiracy:* “If one considers how dangerous these chemicals are, one would suppose that it would be Government policy to minimize their use by every possible means. However the Royal Commission on Environmental Pollution (RCEP) notes, ‘there is... no such policy in the UK, nor does the possible need for it appear to have been considered, notwithstanding the great increases in the use of these chemicals.’ The Agrochemical Industry, on the contrary, seems to be under the impression it is Government policy to encourage the maximum use of pesticides. Thus according to the Agrochemical industry, of 367,000 acres of potatoes grown in this country in 1976, 310,000 acres are treated with herbicides, 114,000 acres with granular insecticides and nematocides, 218,000 acres with foliar insecticides and 265,000 acres with fungicides. In this way one acre of potatoes, the industry boasts, can be treated from 2-11 times with different pesticides.” Van den Bosch also condemns the UK for aerial spraying. “What is particularly shameful in this country is the prevalence of aerial spraying. One million acres of agricultural land are sprayed each year, which involves 34,000 flights. Controls on this practice are practically non-existent...nor as the Royal Commission points out, does there appear to be any controls on the type of spraying equipment.” and the Royal Commission created under Royal Warrant in 1970, was closed down in 2011 as part of the Coalition Government’s spending cuts. Britain still uses aerial spraying as derogation from the EU recommendations.

**Theo Colborn’s crucial research in the early 1990s into Endocrine Disrupting Chemicals (EDCs) that were changing humans and the environment, was ignored**
The late Theo Colborn (1927-1914) was the first to research and write about EDCs, man-made chemicals that became widespread in the environment after WW II. In a book published in 1996, *Our Stolen Future: How Man-made Chemicals are Threatening our Fertility, Intelligence and Survival,* Colborn, Dumanoski and Peters revealed the full horror of...
what was happening to the world as a result of contamination with EDCs.\textsuperscript{42} There was emerging scientific research about how a wide range of man-made chemicals disrupt delicate hormone systems in humans. These systems play a critical role in processes ranging from human sexual development to behaviour, intelligence, and the functioning of the immune system. At that stage, polychlorinated biphenyls (PCBs), pesticides DDT, chlordane, lindane, aldrin, dieldrin, endrin, toxaphene, heptachlor, dioxin, atrazine and dacthal were identified as EDCs. Colborn illustrates the problem by constructing a diagram (page 105) of the journey of a PCB molecule from a factory in Alabama into a polar bear in the Arctic. Colborn says: “The concentration of persistent chemicals can be magnified millions of times as they travel to the ends of the earth...Many chemicals that threaten the next generation have found their way into our bodies. There is no safe, uncontaminated place.”


Article 9 Aerial Spraying

EU Directive Advice: Aerial spraying of pesticides has the potential to cause significant adverse impacts on human health and the environment, in particular from spray drift. Therefore aerial spraying should generally be prohibited with derogations possible where it represents clear advantages in terms of reduced impacts on human health and the environment in comparison with other spraying methods, or where there are no viable alternatives, provided that the best available technology to reduce drift is used.

Government Response: We do not consider that responsible application of pesticides by aerial spraying poses an unacceptable risk to human health and the environment, and consequently we will use the derogation. We believe that the existing legislation control regime provides a basis for meeting the Directive and this will be adapted to ensure the continuation of properly regulated aerial applications through a consent-based approach.

Article 10 Protection of water

EU Directive Advice: The aquatic environment is especially sensitive to pesticides. It is very necessary for particular attention to be paid to avoiding pollution of surface water and groundwater by taking appropriate measures such as the establishment of buffer and safeguard zones, or planting hedges along surface water to reduce exposure of water bodies to spray drift, drain flow and run-off. The dimensions of buffer zones should depend in particular pesticide properties, as well as agricultural characteristics of the areas concerned.

Government Response: Current statutory and voluntary controls related to pesticides and the protection of water, if followed, afford a high degree of protection to water courses and cover specific measures detailed in the Directive. The Government will primarily seek to work with the pesticides industry to enhance voluntary measures.

Article 11 Use of pesticides in specific areas

EU Directive Advice: Use of pesticides can be particularly dangerous in very sensitive areas such as Natura 2000 sites protected in accordance with Directives 79/409/EEC and 92/43/EEC. In other places such as public parks and garden, sports and recreation grounds, school grounds and children’s playgrounds, and in the close vicinity of healthcare facilities, the risks from exposure to pesticides is high. In these areas, the use of pesticides should be minimized or prohibited. When pesticides are used, appropriate risk management measures should be established and low-risk pesticides as well as biological control measures should be considered in the first place.

\textsuperscript{42} Our Stolen Future: How Man-made Chemicals are Threatening our Fertility, Intelligence and Survival: Colborn, Myers and Dumanoski: Little, Brown and Company, New York. 1996.

\textsuperscript{43} http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009L0128
**Government Response:** We do not consider it necessary to prohibit the use of pesticides in public spaces or conservation areas or to impose new statutory controls on pesticide use in these areas. **We believe that the UK can meet its obligations under the Directive through existing statutory and voluntary controls and develop additional voluntary measures.**

In December 2010 Lord Henley, the Under-Secretary of State for Defra, explained why the UK weren’t going legislate. He said that the British had an “ideological dislike of legislation”, there were “dangers of over-legislating.” He said that decisions by the UK government on the European Union Directive (2009/128/EC) were based on “robust scientific evidence”.

**Pesticides Forum Annual Report 2011**

An extracts from the summary: “The work of the UK Pesticides Forum in 2011 confirms that the use of pesticides is not adversely impacting on the health of UK citizens or the environment. This is testimony to the effectiveness of both statutory and voluntary controls. UK’s robust and innovative range of controls” that “deliver high standards of protection for human health and the environment.” The Government had refused to adopt EU legislation.

**Pesticides Forum Annual Report 2015**

Executive Summary Para 1

“The Directive on the sustainable use of pesticides establishes a framework to achieve more sustainable use of these chemicals by: reducing the risks and impacts of pesticide use on human health and the environment; and promoting the use of Integreated (sic) Pest Management and of alternative approaches or techniques.”

Note: the link is to the European Legislation not to the British derogations from it.

**Complete Weed Control is a nationwide contractor operating under UK legislation**

Herbicide spraying: ‘Over public parks and garden, sports and recreation grounds, school grounds and children’s playgrounds, and in the close vicinity of healthcare facilities.’

In the summer contractors sprayed 1500 km of roadsides in our city; the same pavements were sprayed in the autumn. Over Under Environmental Freedom of Information we found that they had sprayed 518 kg Dakar Pro, but 26 wards were still not completed. So the Council had suggested that they carry on if the weeds were still growing. In 2012 new rules came into force for Streets and pavements. “From 2012 new rules from the regulator, Chemical Regulations Directorate (CRD) prohibits blanket spraying of any herbicide on non-porous hard surfaces. Targeted treatment of weeds must be undertaken on roads, pavements, concrete and paved areas and drains must not be over-sprayed.”

They have sprayed the area again in March 2017 and are planning 3 sprayings this year.

**Georgina Downs** has been campaigning since 2001 on behalf of rural communities against crop spraying

She says: “The reality of crop spraying in the countryside is not merely related to exposure to one individual pesticide or to one single group of pesticides, as agricultural pesticides are rarely used individually but commonly sprayed in mixtures (cocktails) -- quite often a mixture will consist of 4 or 5 different products. Each product formulation in itself can contain a number of different active ingredients, as well as other chemicals, such as solvents, surfactants and co-formulants (some of which can have adverse effects in their own right, before considering any potential synergistic effects in a mixture(s)). Studies have shown mixtures of pesticides (and/or other chemicals) can have synergistic effects.”

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45. [http://www.pesticidescampaign.co.uk](http://www.pesticidescampaign.co.uk)
Ms Downs won a legal battle in the High Court but the Court of Appeal overturned it

Ms Downs has fought legal battles against Defra. She had a landmark victory in the High Court in November 2008 that ruled that the UK Government’s policy on pesticides was not in compliance with European legislation. It was the first known legal case of its kind to reach the High Court to directly challenge the Government’s pesticide policy and approach regarding crop spraying in rural areas. However, the Court of Appeal overturned the High Court Judgment in May 2009. Chief Executive, Kerr Wilson’s Witness Statements cited various reasons for preserving the status quo. They were related to alleged financial and economic impacts on manufacturers, farmers and distributors, or the impact on agricultural productivity. On behalf of Defra he did not display any concern whatsoever in relation to the protection of public health. His main concern was with protection of industry and business interests. “The annual market value of pesticide sales is approximately £490m which delivers benefits to farmers, significantly improving agricultural productivity...If, as a result of the Declaration, new approvals could not be granted, there would be important ramifications.”

Press reports at the time supported the Government’s stance. That if the High Court Judgment stood then the “Government’s pesticide policy would be fundamentally undermined” and that the policy and approvals system “might even grind to a halt.”

According to EU law, all agricultural pesticides have been approved unlawfully

In Ms Downs ‘Evidence to the Brexit Committee’ she says: “The fact that there has never been an actual risk assessment for the real life exposure of residents means that under EU law no pesticide should ever have been approved for use in the first place for spraying in the locality of residents homes, schools, children’s playgrounds, nurseries, amongst other areas, as EU law is clear that it must be established before a pesticide can be approved for use, on the basis of all the required risk assessments, that there will be no immediate or delayed harm to human health. Yet this has clearly not been established regarding residents and communities. This also means that all agricultural pesticides that have ever been approved have clearly been done so unlawfully.”

Food and Environment Research Agency (FERA) survey of pesticides 1988 to 2014

Graphs indicate that Pesticide Residues on British food are increasing annually. A survey of pesticide (active substances) usage on Oil Seed Rape (OSR) 1988-2014 showed that the number of active substances applied had increased from 5 in 1988 to 15 in 2014 and the number of treatments had increased from 5 in 1988 to 12 in 2014. In 2014, herbicides were used on 98.4% OSR and seed treatments on 95.8%. The total area treated with glyphosate in 2014 was 2,250,000 ha.

Pesticide usage statistics show massive increase in glyphosate between 2012 and 2014

Fera statistics showed that in 2012 the area treated by glyphosate was 1,750,000 ha. This had increased in 2014 to 2,250,000 ha. Guy Gagen, Chief Arable Adviser for the NFU, said increased glyphosate use (up one third since 2012, to an area the size of Wales) was probably due to treatment of ‘black grass.’ Black grass is a glyphosate-resistant super-weed just like Japanese knotweed. Herbicide resistant black grass, first seen in 1982 (two years after farmers started spraying glyphosate pre-harvest) and is now found on 16,000 farms in

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46 http://www.pesticidescampaign.co.uk/documents/PRESS%20RELEASE%20-%20DEFRA%20to%20appeal%20High%20Court%20ruling.pdf
49 http://www.thetimes.co.uk/tto/environment/article4528297.ece
34 counties. Gagen said that spraying wheat could result in traces of glyphosate ending up in bread sold in supermarkets but the amount was well below the maximum residue level set by the EU. A Defra spokesman said: “There are extensive regulations in place so that people and the environment are protected from pesticides. The approval of glyphosate for use across Europe is being reviewed by the EU Commission.”

The reassessment of glyphosate; the UK supports EFSA’s conclusions that glyphosate does not cause cancer
The British Government enjoys very close financial relationships with Monsanto, Syngenta, Bayer CropScience and Dow. They supported the Glyphosate Task Force (GTF), a consortium of companies joining resources and efforts in order to renew the European glyphosate registration with a joint submission (most companies produce their own formulated glyphosate products). In 2010 Michael Pragnell, founder of Syngenta and former Chairman of CropLife International, was appointed as Chairman of Cancer Research (CRUK) and by
2011 CRUK was donating money (£450 million/year) to the Government’s Strategy for UK Life Sciences and AstraZeneca (Syngenta’s parent company) was providing 22 compounds to academic research to develop medicines in the UK. One Corporation promotes cancer; the other Corporation tries to cure it. Baroness Chisholm of Owlpen in the House of Lords on 21/03/2016 said the government supported EFSA’s conclusions that glyphosate does not cause cancer. THAT IS WHY THE NGOs IN EUROPE CALL US LAB RATS

Glyphosate is not only an herbicide: it is a chelator of minerals

On May 12th 2014 I wrote to the US EPA Office of Pesticide Programs (OPP) to ask if they knew that four different patents had been filed and granted for glyphosate

- As a chelator of heavy metals (used to clean boilers) and a wetting agent in 1961
- As an herbicide in 1968
- As an antibiotic in 2002
- As an anti/protozoal agent in 2003

A member of the US EPA Office of Pesticide Programs replied on 19 June 2014 on behalf of Administrator Gina McCarthy. “Monsanto has not informed us of these claims you make and, to date, such claims have not been supported by rigorous scientific studies...The US EPA ensures that a pesticide, when used according to label directions, does not cause unreasonable adverse effects to human health or the environment.” With regard to all measurements of glyphosate in breast milk, urine and drinking water EPA dismissed them, because “there was not enough information for the EPA to assess the quality of the data.”

Marion Copley who died from breast cancer said glyphosate was originally designed as a chelating agent: she believed it is the identical process involved in tumor formation. A letter written by the late Marion Copley a US EPA toxicologist who had worked for 30 years for the EPA to her colleague Jess Rowland accusing him of conniving with Monsanto to bury the agency’s own hard scientific evidence that it is “essentially certain” that glyphosate, the key ingredient in Monsanto’s Roundup weed killer, causes cancer. The date of the letter comes after Copley left the EPA in 2012 and shortly before she died from breast cancer at the age of 66 in January 2014. She accuses Rowland of having “intimidated staff” to change reports to favor industry, and writes that research on glyphosate, the key ingredient in Monsanto’s Roundup, shows the pesticide should be categorized as a “probable human carcinogen.”

“Jess,

Since I left the agency with cancer [breast] I have studied the tumor process extensively and I have some mechanism comments which may be very valuable to CARC based on my decades of pathology experience. Glyphosate was originally designed as a chelating agent and I strongly believe that is the identical process involved in tumor formation.”

In a 1-page letter Dr Copley makes 14 observations about chelators and/or glyphosate, including that they are endocrine disruptors, suppress the immune system, damage the kidneys or pancreas which can lead to clinical chemistry changes that favor tumor growth;

50 http://www.google.com/patents/US3160632
51 http://www.google.com/patents/US3455675
52 http://www.google.com/patents/US7771736
53 "https://www.organicconsumers.org/sites/default/files/marioncopleyletter.pdf"
glyphosate kills bacteria in the gut, the gastrointestinal system is 80% of the immune system making the body susceptible to tumors.

Dr Copley ends with the statement: “I have cancer, and I don’t want these serious issues in HED [EPA’s Health Effects Division] to go unaddressed before I go to my grave. I have done my duty.”

Monsanto organised false science to say glyphosate wasn’t carcinogenic
There is plenty of evidence that Monsanto ‘ghost-wrote’ scientific studies and used those studies to influence US EPA and other regulators with regard to glyphosate not causing cancer. These shocking emails have emerged in US Courts since hundreds of plaintiffs (or relatives of victims who have already died) have been suing Monsanto alleging that their cancers were caused by Roundup.

Feb 19 2015: e.mail from Bill Heydens on to Donna Farmer. 55

“A less expensive/more palatable approach might be to involve experts only for the areas of contention, epidemiology and possibly MOA (depending on what comes out of the IARC* meeting), and we ghost-write the Exposure Tox & Genetox sections ... but we would be keeping the cost down by us doing the writing and they would just edit & sign their names so to speak.” *International Agency for Research on Cancer.

Bill Heydens suggests they add Greim and Kier or Kirkland.

“Contact Roger McClelland at CRC and see if they would be amenable to putting this publication into Crit. Rev. Toxicol. John said he knew that Roger had done such a publication in the past. David, since you have worked with Roger on other papers, would you be willing to contact him to judge his willingness to publish such a paper?”

Roger McClelland, Editor-in-Chief of Crit. Rev. Toxic. agreed to Monsanto’s request. The following review was received on 08/04/2016 and published on 28/09/2016. A Review of the carcinogenic potential of glyphosate by four independent expert panels and comparison to the IARC assessment was published by Crit. Rev. Toxicology. 56 The authors included not only Greim, Kier and Kirkland, but a number of other scientists most of whom had worked for Monsanto in the past.

‘Ecocide’ in Britain should be recognized as a crime in international law

The UK State of Nature Report 2016 includes a new Biodiversity Intactness Index
Mark Eaton of the RSPB, the Report’s first author said: “The report includes a new “biodiversity intactness index”, which analyses the loss of species over centuries. The UK has lost significantly more nature over the long term than the global average with the UK the 29th lowest out of 218 countries. Countries below are the Republic of Ireland, USA, Hong Kong and Macao. “It is quite shocking where we stand compared to the rest of the world, even compared to other western European countries: France and Germany are quite a way above us in the rankings,” said Eaton. “The index gives an idea of where we have got to over the centuries, and we are pretty knackered.”

Around 75% of the UK is managed for food production. How we manage that land is key to the state of Nature. It was therefore astounding to hear the complete denial of the National Farmers’ Union (NFU) and Defra about the UK State of Nature Report. NFU vice-president Guy Smith said “intensification of farming had ended in the early 1990s.” that farmers “were using less fertiliser and pesticides than ever” and a spokeswoman from Defra said: “Protecting our precious environment and supporting our world-leading farmers, a cornerstone of our economy, will form an important part of our EU exit negotiations.”

56 http://www.tandfonline.com/doi/full/10.1080/10408444.2016.1214677
However, the NFU, the Crop Protection Association (CPA) and the Agricultural Industries Confederation (AIC) combine to lobby the EU not to restrict the 320+ pesticides available to them. The publication they produced in 2014 is called: HEALTHY HARVEST.  

**The Wildlife Research Centres were closed in 2006: loss of biodiversity continues into 2017**

The UK Butterfly Conservation Trust wrote a blog in March 2017: “Glum in the garden” commenting on the further disappearance of butterflies from Britain. The salmon and trout numbers in Wales in January 2017 were described as ‘critical’. Aquatic invertebrates on which they feed have disappeared. Britain did not sign up to **DIRECTIVE 2009/128/EC Article 10 Protection of water** so farmers didn’t see the necessity to establish buffer zones, or plant hedges along surface water to reduce exposure of water bodies to spray drift, drain flow and run-off. In 2006 Prof David Coggan former Chairman of ACP said: *The Government is right in concluding that a statutory buffer zone would be a disproportionate response to scientific uncertainty.* In the year 2006 the government was paving the way for GM crops to be grown. The Natural Environment Research Council (NERC) and Lord Sainsbury Minster for Trade and Industry in the House of Lords (whose Gatsby Foundation funded GMOs), under Prime Minister Tony Blair, announced closure of the Wildlife Research Centres.

Britain will soon become a biological desert just as Craig Childs described in **Apocalyptic Planet** with reference to the fields of GM Roundup-Ready corn on a Farm in Iowa. Mark Cocker author and naturalist wrote on 18 April 2017 in *The Guardian* Country Diary: *Something is amiss with the Yare Valley Rooks.* "The most compelling moment was when I reached Thorpe Hall near Haddiscoe, where 340 pairs once nested. Its five-acre alder coppice is probably my favourite rookery anywhere, and in its pomp some of the trees were smothered in a continuous layer of nests. It is the only site where I’ve found rooks nesting in the tops of hawthorn bushes. Such was their urge to share the raucous, joy-filled traffic that it seemed as if birds would nest anywhere just to be part of it. *This spring there is not one.*"

Few can avoid the pollution of water, soil and air by genotoxic and teratogenic herbicides, insecticides and other industrial chemicals. Governments and Regulators only measure a small fraction of them. Human health depends on biodiversity. Food depends on natural pollinators. The devastating effects of these silent killers on us and our environment do not distinguish between farmers or city dwellers, the wealthy or the poor, between media moguls, editors or their reporters, Monsanto or Syngenta Executives, Prime Ministers or Presidents. Humans and the environment are being silently poisoned by thousands of untested and unmonitored chemicals.

What will your grandchildren experience in the way of wildlife? **Nothing.** It will all have been poisoned by chemical biocides just to make money for the agrochemical corporations and the British government. They should be prosecuted in the International Criminal Court for crimes against humanity.

Compiled by Rosemary Mason with information from a group of beekeepers, scientists, environmentalists and farmers. 02/05/2017

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57 Healthy Harvest: The impact of losing plant protection products on UK food and plant production. [http://www.nfuonline.com/assets/30597](http://www.nfuonline.com/assets/30597)


60 "Anger as top wildlife research sites are axed", Archived press release, Friends of the Earth, 13 March 2006, [http://www.foe.co.uk/resource/press_releases/anger_as_top_wildlife_rese_13032006](http://www.foe.co.uk/resource/press_releases/anger_as_top_wildlife_rese_13032006)