#### US Scientists sound the alarm over global mass poisoning

The British Government, the US Government, the US Environmental Protection Agency and some farmers have worked together since before WW2 to silently poison air, water and food supply with synthetic chemicals

A little more than 100 years later, on 21/12/2017, independent US Scientists sound the alarm over global mass poisoning<sup>1</sup>

**Editorial:** Regulating toxic chemicals for public and environmental health: Lisa Gross and Linda Birnbaum.<sup>2</sup>

"By the time President Gerald Ford signed the United States Toxic Substances Control Act in the fall of 1976, tens of thousands of synthetic chemicals had entered world markets with no evidence of their safety... Ford's signing statement described a law giving the Environmental Protection Agency (EPA) broad regulatory authority to require toxicity testing and reporting to determine whether the chemicals posed risks." "If a chemical is found to present a danger to health or the environment," Ford promised, "appropriate regulatory action can be taken before it is too late to undo the damage." That's not what happened. The 60,000-plus chemicals already in commerce were grandfathered into the law on the assumption that they were safe. And the EPA faced numerous hurdles, including pushback from the chemical industry that undermined its ability to implement the law. Several articles explore the failure of regulations to keep hazardous chemicals from polluting our food, air, and drinking water. Maricel Maffini and her colleagues describe the failure of regulators to account for health risks associated with the thousands of chemicals introduced into the food system since 1958, when Congress authorized the Food and Drug Administration to ensure the safety of substances added to food. Chemicals from agriculture, industry, and other commercial uses routinely enter drinking water supplies."

Joseph M Braun and Kimberley Gray: <u>Challenges to studying the health effects of early life environmental chemical exposures on children's health.</u> <sup>3</sup>

Maricel V Maffini, Thomas G Neltner, Sarah Vogel: <u>We are what we eat: Regulatory gaps in the United States that put our health at risk</u>. <sup>4</sup>

"The American diet has changed dramatically since 1958, when Congress gave the United States Food and Drug Administration (FDA) the authority to ensure the safety of chemicals in food. Since then, thousands of chemicals have entered the food system. Yet their long-term, chronic effects have been woefully understudied, their health risks inadequately assessed. The FDA has been sluggish in considering scientific knowledge about the impact of exposures—particularly at low levels and during susceptible developmental stages. The agency's failure to adequately account for the risks of perchlorate—a well-characterized endocrine-disrupting chemical—to vulnerable populations is representative of systemic problems plaguing the regulation of chemicals in food. Today, we are faced with a regulatory system that, weakened by decades of limited resources, has fallen short of fully enforcing its mandates. The FDA's inability to effectively manage the safety of hundreds of chemicals is putting our children's health at risk."

The European Commission has just renewed the license for glyphosate for 5 years despite outrage from MEPs and a petition from more than 1.5 million citizens

<sup>&</sup>lt;sup>1</sup> PLOS Biology Explores Gaps between Environmental Health Science and Policy | PLOS Blogs

<sup>&</sup>lt;sup>2</sup> http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2004814

<sup>&</sup>lt;sup>3</sup> http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2002800

<sup>4</sup> http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2003578

Regulators and some governments supported the European Glyphosate Task Force (a consortium of 22 companies trying to renew the license for glyphosate with a joint submission) despite the fact that glyphosate is never used alone but with secret 'coformulants' (glyphosate-based herbicides), such as surfactants that facilitate its entry into the plant. According to Séralini: "These chemicals make it 1,000 times more toxic to humans and the environment. They are also endocrine disruptors below toxic thresholds. All endocrine disruptors (ED) are also nervous system disruptors (ND), because they act as "spam" for cell–cell communication, in the sense that they are spurious messages (or molecules) sent to a group of organisms or cells, impeding and slowing down, and in some cases accelerating, the physiological communication system. Therefore, they should be called ENDs (endocrine and nervous system disruptors)." <sup>5</sup> That is why France is going to ban glyphosate. Monsanto was also pressing the European Commission to renew the license before the Lawsuit by Baum Hedlund against Monsanto by plaintiffs alleging that their cancers of those of their loved ones were caused by Roundup was concluded.

### What happens with glyphosate-based products, like Roundup? Are they automatically re-authorised as well? $^6$

**The European Commission replies to questions:** "No. This is up to Member States. Member States are responsible for the authorisation and use on their territories of plant protection products ('pesticides') containing active substances. <u>Only the approval of active substances is decided at EU level</u>. This division of responsibility is based on the principle of subsidiarity and reflects the differences in climatic, agronomic and environmental conditions in Member States.

Following a renewal of glyphosate, <u>Member States must re-evaluate all existing authorised</u> <u>products containing this active substance – such as Roundup</u>. If the authorisation holders request from national authorities to maintain the earlier authorisations, Member States may also decide to introduce restrictions or bans for some or all of them, where this is warranted on the basis of evidence related to the particular circumstances in their territories."

#### What are the Monsanto Papers?

59 lawsuits against Monsanto Co. are pending in U.S. District Court in San Francisco filed by people alleging that exposure to Roundup herbicide caused them or their loved ones to develop non-Hodgkin lymphoma, and that Monsanto covered up the risks. The lead case is 3:16-md-02741-VC. On March 13th, U.S. District Judge Vince Chhabria ruled — over Monsanto's objections — that documents obtained by plaintiffs through discovery could be unsealed. Other cancers have been linked to Roundup as well: Bone, Colon Cancer, Kidney Cancer, Liver Cancer, Melanoma, Pancreatic Cancer and Thyroid Cancer. It is a long (79-page) legal document but I will point out three relevant parts: <sup>7</sup>

(Page 11 line 6) The "Science" Underlying the Registration of Glyphosate "In 1964, glyphosate was patented as a descaling agent for industrial boilers, due to glyphosate's ability to combine with, and thus strip, metallic minerals. Ex. 14. Monsanto introduced it as an herbicide in the 1970s, and EPA approved its sale, based mainly on toxicology studies by Industrial Bio-Test ("IBT") laboratory that the "FDA/EPA found to generate fraudulent data." Almost all of the products tested by the IBT laboratory, including 2,4-D, glyphosate, atrazine and many of the 66 products banned on California red-legged frog habitat, are still on the market today.

<sup>&</sup>lt;sup>5</sup> http://www.amsi.ge/jbpc/31515/15-3-abs-3.htm

<sup>&</sup>lt;sup>6</sup> http://europa.eu/rapid/press-release\_MEMO-17-5192\_en.htm

 $<sup>^{7} \, \</sup>underline{http://baumhedlundlaw.com/pdf/monsanto-documents/daubert-brief/Plaintiffs-1-Response-in-Opposition-to-Monsanto-Companys-Daubert-and-Summary-Judgment-Motion.pdf}$ 

<u>Page 14 line 1</u> Dr Williams Heydens admitted that he 'ghost-wrote' an article for Gary Williams: "Roundup herbicide does not pose a health risk to humans" when their own scientists privately wrote that: "[t]he terms glyphosate and Roundup cannot be used interchangeably ....For example you cannot say that Roundup is not a carcinogen...we have not done the necessary testing on the formulation to make that statement."

<u>Page 43/44 line 28</u> Christophe Gustin (a Monsanto scientist) in 2008 wrote in an email: "everyday users of Roundup are never exposed to just Roundup but the cocktail of other ingredients in the formulated products, such as surfactants." Indeed, Monsanto's internal studies have observed that "surfactants are able to increase glyphosate absorption through the skin," but Monsanto failed to report the results to the US EPA.

(After the Public Hearing in the EU on 18/10/2017 (into the Monsanto Papers) EFSA insisted that it had little bearing on EFSA's finding that glyphosate is safe, "because its verdict was based mainly on its assessment of the original studies, not reviews of studies.")

MEPs urge the European Court of Justice to annul the decision on glyphosate 8

# Evidence that persistence of glyphosate, AMPA and neonicotinoid insecticides in soil, air and water are linked to global biodiversity declines

Glyphosate and AMPA: widespread persistence in topsoils in Europe: 2017 9
"A new research study by the European Commission's Joint Research Centre, the Dutch
University of Wageningen and Rikilt laboratories, reveals that among 317 EU soil samples
of arable land, 42% contained aminomethyl phosphonic acid (AMPA), the most toxic
metabolite of glyphosate, while glyphosate was found in 21% of the soils; 18% of the
samples had both. The study was conducted in six crop systems along 11 EU member states
comprising soils under different geographical and climatic conditions. Denmark, the UK
and Portugal are the worst in this spectrum, with the highest detection frequency, while
Italy and Greece seem to be the ones using less glyphosate on their crops. However, and
most notably, these 2 molecules could be found in every tested member state. All tested
crops presented glyphosate and AMPA residues. [N.B. In 2001, the then Danish
Government banned glyphosate because it was detected in groundwater. Subsequent
governments in Denmark, under pressure from farmers, have unbanned it, so now
Denmark has the highest detection frequency in soils on arable land.]

### British Geological Survey in 2011: Glyphosate Studies in Emerging Contaminants: degradation product four times the parent and may be problematic $^{10}$

According to the British Geological Survey (BGS) Report on Emerging Contaminants in Groundwater (2011) page 35: "Glyphosate is now the most widely used herbicide in the world, with dramatic increases in agricultural use since the introduction of glyphosate resistant crops. Microbial degradation produces aminomethyl phosphonic acid (AMPA) (Kolpin et al., 2000) and it has been anticipated that AMPA may be problematic. The high water solubility of both the parent and the metabolite has meant that their analysis has been difficult. Although AMPA has a DT50 of about 151 days and is therefore persistent it also has a relatively high Koc of 8087 and would not be classified as vulnerable to leaching by the simple method described above. Similarly for parent compounds which have non-

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 $<sup>{}^{8}\, \</sup>underline{\text{http://www.gmwatch.org/en/news/latest-news/18021-cross-party-pressure-builds-for-eudecision-on-glyphosate-to-be-annulled}$ 

<sup>&</sup>lt;sup>9</sup> http://www.sciencedirect.com/science/article/pii/S0048969717327973

<sup>10</sup> http://nora.nerc.ac.uk/id/eprint/14557/1/OR11013.pdf

agricultural applications, there will be routes to groundwater which would not be identified, such as routes which do not pass through the soil zone. Kolpin (2006) showed AMPA to be detected in wastewater-impacted surface waters about four times as frequently as the parent."

In May 2013, the Chairman of the UK Environment Agency refused to measure glyphosate or neonics in groundwater. The above Report (2011) was not published.

Ecological Armageddon after dramatic plunge in insect numbers 18/10/2017 <sup>11</sup> More than 75 percent decline over 27 years in total flying insect biomass in protected areas in Germany.

Part of Abstract: Global declines in insects have sparked wide interest among scientists, politicians, and the general public. Loss of insect diversity and abundance is expected to provoke cascading effects on food webs and to jeopardize ecosystem services. Here, we used a standardized protocol to measure total insect biomass using Malaise traps, deployed over 27 years in 63 nature protection areas in Germany (96 unique location-year combinations) to infer on the status and trend of local entomofauna.

When the total weight of the insects in each sample was measured a startling decline was revealed. The annual average fell by 76% over the 27-year period, but the fall was even higher – 82% – in summer, when insect numbers reach their peak.

Widespread contamination of soil, air, rainwater and river water with glyphosate The US Geological Survey reported widespread contamination of soil, air, rainwater and river water with glyphosate and its longer-acting metabolite AMPA ( $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid). 12 "This compilation is the largest and most comprehensive assessment of the environmental occurrence of glyphosate and aminomethylphosphonic acid (AMPA) in the United States conducted to date, summarizing the results of 3,732 water and sediment and 1,018 quality assurance samples collected between 2001 and 2010 from 38 states."

On farmland where Monsanto and DuPont's GM crops grow are biological deserts In October 2012 Craig Childs confirmed it in his book Apocalyptic Planet: Field Guide to the Future of the Earth. 13 (Chapter 6: Species Vanish). Grundy County Iowa was where Craig Childs spent a long weekend in a monoculture of GM "Roundup® Ready" corn looking for wildlife. "I listened and heard nothing, no bird, no click of insect. Mr Owen was the farmer who had given us permission to backpack across his cornfields. He grew a combination of DuPont and Monsanto stock. We were in DuPont now. It didn't look any different to me."

#### Robert Krulwich blog:

Corn farmers champion corn. Anything that might eat corn, hurt corn, bother corn, is killed. Their corn is bred to fight pests. The ground is sprayed. The stalks are sprayed again. So, Craig wondered, "What will I find?" The answer amazed me. He found almost nothing. There were no bees. The air, the ground, seemed vacant. He found one ant "so small you couldn't pin it to a specimen board." A little later, crawling to a different row, he found one mushroom, "the size of an apple seed." Then, later, a cobweb spider eating a crane fly (only one). A single red mite "the size of a dust mote hurrying across the barren earth," some grasshoppers, and that's it." Though he crawled and crawled, he found nothing else. "It felt like another planet entirely," he said, a world denuded. 14

 $<sup>^{11}\,</sup>https://www.theguardian.com/environment/2017/oct/18/warning-of-ecological-armageddon-after-dramatic-plunge-in-insect-numbers$ 

<sup>12</sup> http://onlinelibrary.wiley.com/doi/10.1111/jawr.12159/abstract

<sup>13</sup> http://houseofrain.com/bookdetail.cfm?id=1344621970977

 $<sup>^{14}\,</sup>http://www.npr.org/sections/krulwich/2012/11/29/166156242/cornstalks-everywhere-but-nothing-else-not-even-a-bee$ 

#### One hundred years ago there was a rich biodiversity of species in the US

Krulwich continues: "Yet, 100 years ago, these same fields, these prairies, were home to 300 species of plants, 60 mammals, 300 birds, hundreds and hundreds of insects. This soil was the richest, the loamiest in the state. And now, in these patches, there is almost literally nothing but one kind of living thing. We've erased everything else. We need to feed our planet, of course. But we also need the teeny creatures that drive all life on earth. There's something strange about a farm that intentionally creates a biological desert to produce food for one species: us. It's efficient, yes. But it's so efficient that the ants are missing, the bees are missing, and even the birds stay away. Something's not right here. Our cornfields are too quiet."

#### Widespread contamination of British Rivers with neonicotinoid insecticides

Buglife's new Report (December 2017) was based on the results of monitoring carried out in 2016 by the Environment Agency as part of Britain's responsibilities under the EU Water Framework Directive. Suffolk naturalists have described as "deeply troubling" the revelation that the River Waveney is the most neonicotinoid-contaminated watercourse of any in the UK that have been monitored for the presence of the highly controversial insecticide. Suffolk's leading nature experts told of their concerns over the "pervasive" and "damaging" chemicals that are often known as "neonics" and which are widely referred to as "bee-harming" pesticides. 15

"They also present a threat when applied to non-flowering crops as much of the chemical is not taken up by the crop but leeches into the soil to be taken up by nearby wild plants or heads into water courses and ultimately rivers. Many freshwater invertebrates are sensitive to neonicotinoids - in laboratory tests mayflies and caddisflies start to die off at levels of pollution ten times less than those found at the worst peaks in the River Waveney. Invertebrates are the founding blocks of nature – pollinators for wild flowers and crops as well as food source for birds, bats, fish and other vertebrates. In countries as far apart as the United States, Japan, Holland and France there is evidence that neonicotinoids are impacting on birds both through direct poisoning of treated seed and indirect effects through reductions in insect populations."

#### The UK State of Nature 2016 is almost as bad as the US, even without GM crops

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 <u>UK the 29th lowest out of 218 countries</u>. "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." Only the Republic of Ireland and the US are lower than the UK. Some UK farmers have been spraying glyphosate on crops pre-harvest since 1980 on the recommendation of a Monsanto scientist but with the endorsement of ADAS, the government's agency at that time. <sup>16</sup>

#### You don't need science to see that all the insects and birds have gone

From Letters published in *The Guardian* 23/11/2017 from ordinary citizens, a year later, it is clear that insects and birds have been silently disappearing from all around

 $<sup>^{15}\,</sup>https://www.buglife.org.uk/news-\%26-events/news/heavy-neonicotinoid-insecticide-contamination-damaging-british-rivers$ 

 $<sup>^{16}\</sup> http://cereals.ahdb.org.uk/media/185527/is02-pre-harvest-glyphosate-application-to-wheat-and-barley.pdf$ 

Britain, but not in France. <sup>17</sup> Moths, butterflies, dragonflies, bumblebees and bats have gone from many places. From much UK farmland, from those cities in which Roundup has been sprayed in a war on weeds and from riverbanks that have been sprayed to eradicate invasive weeds such as Japanese Knotweed and Giant Hogweed.

#### Industrialised farming with a vast tide of poisons is the main culprit

Following the revelation of the dramatic plunges in insects mass in German nature reserves, Michael McCarthy the award-winning Environmental Journalist says: "It is human activity – more specifically, three generations of industrialised farming with a vast tide of poisons pouring over the land year after year after year, since the end of the second world war. This is the true price of pesticide-based agriculture, which society has for so long blithely accepted. So what is the future for 21st-century insects? It will be worse still, as we struggle to feed the nine billion people expected to be inhabiting the world by 2050, and the possible 12 billion by 2100, and agriculture intensifies even further to let us do so. You think there will be fewer insecticides sprayed on farmlands around the globe in the years to come? Think again. It is the most uncomfortable of truths, but one which stares us in the face: that even the most successful organisms that have ever existed on earth are now being overwhelmed by the titanic scale of the human enterprise, as indeed, is the whole natural world.<sup>18</sup>

### The American Bird Conservancy (ABC) Report correlates measurements of neonicotinoid insecticides with the effects on birds: second edition May 2015 19

<u>Page 4</u>: "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."

<u>Page 9</u>: "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."

#### Global contamination of honey by neonicotinoid insecticides<sup>20</sup>

 $\underline{05/10/2017}$ : "We assessed the global exposure of pollinators to neonicotinoids by analyzing 198 honey samples from across the world. We found at least one of five tested compounds (acetamiprid, clothianidin, imidacloprid, thiacloprid, and thiamethoxam) in 75% of all samples, 45% of samples contained two or more of these compounds, and 10% contained four or five. Our results confirm the exposure of bees to neonicotinoids in their food throughout the world."

Contamination rates were highest in North America with 86% of samples containing one or more neonicotinoid, followed by Asia (80%) and Europe (79%). It was lowest in South America at 57%. Almost half the samples contained a cocktail of the insecticides. "The striking finding is that 75% of our samples had measurable quantities," said Prof Edward Mitchell at the University of Neuchâtel. "That was surprising to us, since our coverage included many remote areas, including oceanic islands."

Natural Resources Defense Council (NRDC) sues the US Environmental Protection Agency for green-lighting the use of neonics without first considering their harm

<sup>&</sup>lt;sup>17</sup> https://www.theguardian.com/environment/2017/nov/23/where-have-all-our-insects-and-birds-gone#img-1

 $<sup>^{18}\,</sup>https://www.theguardian.com/environment/2017/oct/21/insects-giant-ecosystem-collapsing-human-activity-catastrophe$ 

<sup>&</sup>lt;sup>19</sup> http://abcbirds.org/wp-content/uploads/2015/05/Neonic\_FINAL.pdf

<sup>&</sup>lt;sup>20</sup> http://www.sciencemagazinedigital.org/sciencemagazine/06\_october\_2017?pg=111#pg111

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#### to endangered species: November 2017 21

Despite study after study showing that neonic pesticides are harmful to bees and other pollinators, the U.S. Environmental Protection Agency continues to allow products containing these toxic chemicals to enter the market. In its approvals, however, the EPA has failed to consult with the U.S. Fish and Wildlife Service on the insecticides' impact on threatened or endangered species—a clear violation of the federal Endangered Species Act.

#### Massive declines in Monarch Butterfly numbers due to Roundup <sup>22</sup>

The NRDC Report in February 2015: "Recently, though, a dramatic change in farming practices—the widespread cultivation of genetically engineered, glyphosate-resistant Roundup Ready corn and soybeans—has triggered a precipitous decline of common milkweed, and thus of monarchs. Glyphosate, sold by Monsanto under the name of Roundup, is one of the very few herbicides that is effective on milkweed. Unlike many other weedkillers, once absorbed it is translocated (moved internally) to root tissue, where it kills milkweed at the root and so prevents regeneration. Glyphosate is particularly lethal to milkweed when used in conjunction with Roundup Ready crops. It is applied more frequently, at higher rates, and later in the season—during milkweed's most vulnerable flowering stage of growth—than when used with traditional crops. The increasingly common practice of growing Roundup Ready crops continuously on the same fields means that milkweed is exposed to glyphosate every year, with no opportunity to recover."

Roundup destroys biodiversity: ECHA confirms glyphosate is toxic to aquatic life

"ECHA's Committee for Risk Assessment (RAC) agrees to maintain the current harmonised classification of glyphosate as a <u>substance causing serious eye damage</u> and <u>being toxic to aquatic life with long-lasting effects</u>. RAC concluded that the available scientific evidence did not meet the criteria to classify glyphosate as a carcinogen, <u>as a mutagen or as toxic for reproduction</u>". I challenged Geert Dancet, the Executive Director of ECHA. He said the harmonized classification had not changed since 2002. I also challenged the classification of serious eye damage. I told him that one of Monsanto's secret studies showed glyphosate caused cataracts and eye damage. Samsel and Seneff wrote <u>paper IV</u> on Glyphosate: <u>Glyphosate</u>, <u>pathways to modern diseases IV</u>: <u>cancer and related pathologies</u> <sup>24</sup> and concluded that: "significant evidence of tumours was found during these investigations". In this paper <u>Table 11</u> Page 127 shows the distribution and bioaccumulation of <sup>14</sup> C labelled glyphosate in blood, bone, organs and other tissues of Sprague Dawley rats. The eye is included in this list. The results of the Cataract study is shown on page 126 Table 9.

#### Samsel gave Testimony to the California Environmental Protection Agency

"There are no safe levels of glyphosate. I am a US scientist and hazardous chemicals materials consultant and expert on the subject of Glyphosate. I am one of few people to have received all of the Monsanto's trade secret sealed studies on glyphosate from the US EPA. The federal agency supplied these documents in excess of 100,000 pages to me under the FOIA with special consideration for my research into this chemical. I now have six peer-reviewed papers on the subject of glyphosate and several more papers on the glyphosate in progress, a short list to some of these studies links are appended. The full series of peer-

 $<sup>^{21}\,\</sup>underline{https://www.nrdc.org/experts/nrdc/neonic-pesticides-are-killing-endangered-bees-and-butterflies-epa-keeps-approving-them}$ 

<sup>&</sup>lt;sup>22</sup> https://www.centerforfoodsafety.org/files/cfs-monarch-report 2-4-15 design 05341.pdf

<sup>&</sup>lt;sup>23</sup> Stout, L.D. & Ruecker, F.A. Chronic study of glyphosate administered in feed to albino rats. Unpublished Study, Project No. MSL-10495. Monsanto Agricultural Company (2,175 pp.) EPA MRID 416438-01 (26 September 1990)

<sup>&</sup>lt;sup>24</sup> http://www.amsi.ge/jbpc/31515/11SA15R.pdf

reviewed glyphosate papers may be found at ResearchGate in the author file under Anthony Samsel.

Babies and young children are now stricken with cancers and these have not a chance at a normal life, with many not cured but extinguished. Something is causing these maladies and I suspect N-nitrosamines of glyphosate may be to blame. This is not chronic long-term exposure. I strongly believe that long-term exposure is not necessary for the induction of cancer." <sup>25</sup>

#### Salmon and trout fry have disappeared from some Welsh Rivers<sup>26</sup>

A glyphosate-based herbicide was used on the River Usk for eradication of Giant Hogweed.<sup>27</sup> Monsanto's contractor Complete Weed Control defends the use. <sup>28</sup> "Although the Environment Agency has banned the use of herbicides in lakes and ponds they can still be used on emergent plants such as bull rushes and lilies." Natural Resources Wales (NRW) said there were many pollution incidents from farms. <sup>29</sup> At a seminar in Builth Wells in April 2017, the National Officer for Salmon &Trout Conservation (S&TC) Cymru said: "S&TC started working in Wales last year with our Riverfly Census, sampling and analysing water insects down to species level on priority rivers such as the Usk, Cleddau and Clwd. This data, which accurately measures water quality and the local stressors that may be impacting on individual river reaches, helps fishery managers to understand the threats in order to reverse the degradation of Welsh rivers.<sup>30</sup>

#### Corporate greed is poisoning food and destroying biodiversity 26/12/2017<sup>31</sup>

Vandana Shiva trained as a physicist but she has fought for the rights of small farmers in India tells an identical story of corporate poisoning as 2017 transitions into 2018: "Two decades of corporate driven globalisation has destroyed the biodiversity and cultural diversity of our indigenous food systems.

The ecological crisis, the agrarian crisis, the food crisis, the health and nutrition crisis, the crisis of democracy and sovereignty are not separate crises. **They are one.** And they are connected through food. The web of life is a food web. When it is ruptured by chemicals and poisons that come from war, and rules of "free trade" that is a war declared by corporations against the earth and humanity, biodiversity is wiped out, farmers are killed through debt, and people die either because of hunger or because of cancer, diabetes, heart problems, hypertension and other environment and food related chronic diseases. Everyone is paying a very high price for corporate greed and dictatorship and collusion of corporate states to spread the toxic empire of corporations in the name of "reforms".

#### Evidence that human health is deteriorating in the UK and US

#### UK Mortality rates from 2014 the highest for 50 years: they continue to rise<sup>32</sup>

"The period July 2014 to June 2015 saw an additional 39 074 deaths in England and Wales compared with the same period the previous year. While mortality rates fluctuate year-on-

<sup>&</sup>lt;sup>25</sup> https://oehha.ca.gov/media/dockets/8594/8767-anthony\_samsel/letter\_ca\_epa\_june\_32017\_draft.pdf

<sup>&</sup>lt;sup>26</sup> http://www.salmon-trout.org/river-invertebrates-could-hold-the-key-to-abysmal-state-of-rivers-in-wales/news/403

 $<sup>\</sup>frac{27}{http://www.naturalresources.wales/media/679394/2016\_updated\_usk\_catchment\_summary\_nrw.pdf$ 

<sup>&</sup>lt;sup>28</sup> http://www.completeweedcontrol.co.uk/weed/services/aquaticweedcontrol

<sup>&</sup>lt;sup>29</sup> http://www.bbc.co.uk/news/uk-wales-mid-wales-38366208

<sup>30</sup> https://www.salmon-trout.org/2017/04/10/wild-fish-of-wales-\_-threats-and-opportunities/

<sup>31</sup> http://www.asianage.com/opinion/oped/261217/food-sovereignty-is-need-of-the-hour.html

<sup>32</sup> http://jech.bmj.com/content/early/2017/09/01/jech-2017-209403

year, this was the largest rise for nearly 50 years and the higher rate of mortality has been maintained throughout 2016 and into 2017."

Rise in UK death rates spread across the age groups not just in the elderly<sup>33</sup> Will Hutton wrote in *The Observer* on 1 January 2017: "The British are in the midst of a critical health epidemic. In the 12 months to June 2016, the number of deaths jumped by the biggest absolute and relative amount since 1940 – a rise of 52,400. And this appears not solely to be an effect of a growing and ageing population, since the increase is spread across age groups. (Deaths rose by 12% among those aged 90 and over; 10% for 85-89; 7% for 80-84; 5% for 75-70; and 3% for those aged 55-74.) This is unprecedented in peacetime."

**UK cancer survival rates trail 10 years behind other European countries**Cancer survival rates in the UK are still lagging more than two decades behind those achieved in many European countries, according to new analysis by campaigners on 25<sup>th</sup> March 2015. <sup>34</sup> The Concord-2 global study looked at survival rates in 67 countries for patients diagnosed with lung, breast, colon and stomach cancers in 1995 to 1999, compared with levels in 2005 to 2009.

Academic performance of 15-year-old British school children has deteriorated between 2000 and 2013 compared with Europe, according to OECD PISA tests The Programme for International Student Assessment (PISA) is a worldwide study by the Organisation for Economic Co-operation and Development (OECD) in member and non-member nations of 15-year-old school pupils' scholastic performance on mathematics, science, and reading.<sup>35</sup> It is done with a view to improving education policies and outcomes. It measures problem solving and cognition in daily life. PISA was first performed in 2000 and then repeated every three years. In 2000 the UK was ranked 4th. By 2013 the UK failed to make the top 20 in mathematics, reading and science (3 December 2013). Although not directly comparable, because there have been different numbers of countries taking part, this marks a sustained decline. The UK has made little progress and remains among the average, middle-ranking countries, in 26th place for mathematics and 23<sup>rd</sup> for reading, broadly similar to three years ago. In 2016 an OECD study showed that in England the young have lower basic skills than their counterparts in Europe.<sup>36</sup> But adults approaching retirement age (55-65 year-olds) in England compare reasonably well with their counterparts in other countries. The study says: "The priority of priorities is therefore to improve the standard of basic schooling in England, improving both average and minimum standards (which are especially weak in England)."

#### **Cancer Research UK protects the Agrochemical Industry**

Michael Pragnell former Chairman of Cancer Research UK, Founder of Syngenta and former Chairman of CropLife International was awarded a CBE in 2016 for services to cancer research. CropLife International was founded in 2001. As of 2015 CropLife International's member list includes the following 8 companies: BASF, Bayer CropScience, Dow AgroSciences, DuPont, FMC Corp., Monsanto, Sumitomo and Syngenta. The CRUK website said that there was little evidence that pesticides caused cancer.

 $<sup>^{33}\,\</sup>underline{\text{https://www.theguardian.com/commentisfree/2017/jan/01/good-health-good-society-we-are-suffering}$ 

 $<sup>^{34}</sup>$  http://www.theguardian.com/society/2015/mar/24/uk-cancer-survival-rates-trail-10-years-behind-those-in-european-countries

<sup>&</sup>lt;sup>35</sup> http://www.cmec.ca/252/Programs-and-Initiatives/Assessment/Programme-for-International-Student-Assessment- (PISA)/PISA-2012/index.html

<sup>36</sup> http://www.oecd.org/unitedkingdom/building-skills-for-all-review-of-england.pdf

In 2014 in Britain CRUK reported 13,605 new cases of NHL (4,801 deaths)<sup>37</sup> 41,265 new cases of bowel cancer (15,903 deaths); 12,523 new cases of kidney cancer (4,421 deaths); 5,550 new cases of liver cancer (5,091 deaths); 5,419 new cases of melanoma (2,459 deaths); 3,404 new cases of thyroid cancer (376 deaths); 10,063 new cases of bladder cancer (5,369 deaths); 9,324 new cases of uterine cancer (2,166 deaths); 7,378 cases of ovarian cancer (4,128 deaths) 9,534 new cases of leukaemia (4,584 deaths); 55,222 new cases of invasive breast cancer (11,433 deaths); 46,690 new cases of prostate cancer (11,287 deaths); 8,919 new cases of oesophageal cancer (7,790 deaths) and 5,501 new cases of myeloma (2,928 deaths); 2,418 new cases of testicular cancer (60 deaths). In the US in 2014 there were 24,050 new cases of myeloma.

### The Royal Society of Medicine Conference on pesticides safety in November $2017^{38}$

At the Royal Society of Medicine Conference on pesticide safety the Soil Association presented alarming figures. Under FOI request Fera Science (previously a government agency, now privatized) provided figures that showed that the number of active ingredients applied to wheat had risen 12-fold from 1.7 in 1974 to 20.7 in 2014; that those applied to potatoes had risen 5.8 times from 5.3 in 1975 to 30.8 in 2014; that those applied to onions and leeks had risen 18-fold from 5.3 in 1975 to 30.8 in 2014. Pesticides are tested individually but no one tests the cocktail of pesticides to which humans and the environment are exposed. The Chief Scientist for Defra Professor Ian Boyd pointed out that once a pesticide is approved there is no follow up. Dave Bench Head of UK Chemicals Regulation Division described the regulatory system for pesticides as robust and as balancing the risks of pesticides against the benefits to society.

Fera statistics show that  $\underline{\text{in } 2014}$  glyphosate was used on Wheat (601,330 kg) Winter barley, Spring barley, Oats, Rye, Triticale, Oilseed rape (577,969 kg), Linseed, All potatoes, Peas, Beans, Sugar beet, with a total of 1,765,465 kg glyphosate on all crops. The total weight of pesticides (herbicides and desiccants, fungicides, growth regulators, molluscicides and repellants, insecticides and seed treatments) applied to farmland in 2014 was in excess of 16,000 tonnes.

The NHS is failing because the NHS staff is eating the same food poisoned with pesticides as the patients: education is failing for the same reason

Proof that obesity is a problem related to glyphosate: a study showed that by 2025, the UK will have the highest obesity rates among both men and women in Europe, at 38%: in contrast in France women have had virtually no increase in BMI over 40 years.

A study on obesity: "Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19·2 million participants published in the Lancet in March 2016 says: "About a fifth of all adults around the world and a third of those in the UK will be obese by 2025, with potentially disastrous consequences for their health". The Lancet Study says there is zero chance that the world can meet the target set by the UN for halting the climbing obesity rate by 2025. "Over the past 40 years, we have changed from a world in which

 $<sup>^{37}\,</sup> http://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/non-hodgkin-lymphoma$ 

 $<sup>^{38}\, \</sup>underline{\text{https://www.soilassociation.org/news/2017/november/rapid-increase-in-pesticide-use-and-new-evidence-of-health-impacts-of-very-low-doses/}$ 

<sup>&</sup>lt;sup>39</sup> http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)30054-X/abstract

underweight prevalence was more than double that of obesity, to one in which more people are obese than underweight," said senior author Prof Majid Ezzati from the School of Public Health at Imperial College London. "The English-speaking world is particularly badly affected. The UK will have the highest obesity among both men and women in Europe, at 38%.

<u>In contrast</u>: "Against the trend of steadily rising weight, women in some countries had virtually no increase in BMI over the 40 years – in Singapore, Japan, and a few European countries including Czech Republic, Belgium, <u>France</u>, and Switzerland."

The UK and the US are predicted to head the global obesity levels. Children in Wales are so obese that they are now approaching the levels seen in the US.

### Genetically-engineered crops, glyphosate and the deterioration of health in the United States of America. Swanson $et\ al.$ 40

Abstract: A huge increase in the incidence and prevalence of chronic diseases has been reported in the United States (US) over the last 20 years. Similar increases have been seen globally. The herbicide glyphosate was introduced in 1974 and its use is accelerating with the advent of herbicide-tolerant genetically engineered (GE) crops. Evidence is mounting that glyphosate interferes with many metabolic processes in plants and animals and glyphosate residues have been detected in both. Glyphosate disrupts the endocrine system and the balance of gut bacteria, it damages DNA and is a driver of mutations that lead to cancer.

In the present study, <u>US government databases</u> were searched for GE crop data, glyphosate application data and disease epidemiological data. Correlation analyses were then performed on a total of 22 diseases in these time-series data sets. The Pearson correlation coefficients are highly significant (< 10-5) between glyphosate applications and hypertension (R = 0.923), stroke (R = 0.925), diabetes prevalence (R = 0.971), diabetes incidence (R = 0.935), obesity (R = 0.962), lipoprotein metabolism disorder (R = 0.973), Alzheimer's (R = 0.917), senile dementia (R = 0.994), Parkinson's (R = 0.875), multiple sclerosis (R = 0.828), autism (R = 0.989), inflammatory bowel disease (R = 0.938), intestinal infections (R = 0.974), end stage renal disease (R = 0.975), acute kidney failure (R = 0.978) cancers of the thyroid (R = 0.988), liver (R = 0.960), bladder (R = 0.988)0.981), pancreas (R = 0.918), kidney(R = 0.973) and myeloid leukaemia (R = 0.878). The Pearson correlation coefficients are highly significant ( $< 10^{-4}$ ) between the percentage of GE corn and soy planted in the US and hypertension (R = 0.961), stroke (R = 0.983), diabetes prevalence (R = 0.983), diabetes incidence (R = 0.955), obesity (R = 0.962), lipoprotein metabolism disorder (R = 0.955), Alzheimer's (R = 0.937), Parkinson's (R = 0.937), 0.952), multiple sclerosis (R = 0.876), hepatitis C (R= 0.946), end stage renal disease (R = 0.958), acute kidney failure (R = 0.967), cancers of the thyroid (R = 0.938), liver (R = 0.967) 0.911), bladder (R = 0.945), pancreas (R = 0.841), kidney (R = 0.940) and myeloid **leukaemia** (R = 0.889). The significance and strength of the correlations show that the effects of glyphosate and GE crops on human health should be further investigated.

#### Studies that show that glyphosate is responsible for many diseases

#### Roundup causes NAFLD: direct proof that Roundup causes liver damage 41

Multiomics reveal non-alcoholic fatty liver disease in rats following chronic exposure to an ultra-low dose of Roundup herbicide.

Dr Antoniou's most recent research used a new cutting edge technique and is the first to show a definite link between ultra-low dose Roundup and non-alcoholic fatty liver

 $<sup>\</sup>frac{40}{http://www.organic-systems.org/journal/92/JOS\_Volume-9\_Number-2\_Nov\_2014-Swanson-et-al.pdf$ 

<sup>&</sup>lt;sup>41</sup> http://www.gmwatch.org/en/news/archive/17402-roundup-causes-non-alcoholic-fatty-liver-disease-at-very-low-doses

disease (NAFLD). NAFLD currently affects 25% of the US population and similar numbers of Europeans. It has become epidemic and increased greatly in the US and the UK from 1999. It affects a wide age range, from children aged 2 up to adults, particularly those with obesity.

Brain impairment from exposure to Glyphosate-based herbicides: many papers come from Latin American countries where they grow almost exclusively GM Roundup Ready Crops that Monsanto forced on them in 1996: here are three papers: the Glyphosate Task Force excluded papers from South America Behavioral impairments following repeated intranasal glyphosate-based herbicide administration in mice. 42

Taken together, our findings demonstrate that intranasal (IN) exposure to commercial Gly-BH produces alterations in locomotor activity, anxiety and memory in adult mice. These observations could be a consequence of alterations in neurotransmission systems comprising the GABAergic, dopaminergic, serotoninergic and/or cholinergic systems." In this research paper there are references to many papers from around the world that confirm the glyphosate-based herbicides are damaging to the development of the foetal brain and that repeated exposure is toxic to the adult human brain and may result in alterations in locomotor activity, feelings of anxiety and memory impairment. Martínez, M. A., Ares, I., Rodríguez, J. L., Martínez, M., Martínez-Larrañaga, M. R., & Anadón, A. (2018). Neurotransmitter changes in rat brain regions following glyphosate exposure. Environmental Research, 161, 212-219. 43 Highlights:

- Glyphosate oral exposure caused neurotoxicity in rats.
- Brain regions were susceptible to changes in CNS monoamine levels.
- Glyphosate reduced 5-HT, DA, NE levels in a brain regional- and dose-related manner.
- Glyphosate altered the serotoninergic, dopaminergic and noradrenergic systems. Mechanisms underlying the neurotoxicity induced by glyphosate-based herbicide in immature rat hippocampus: Involvement of glutamate excitotoxicity. 44

Many couples have difficulty in conceiving a child: the first successful in-vitro-fertilisation was in 1978 and there has been an increase in demand: in 2016 a 50% decrease in sperm count in males between 1973 and 2011 was reported Prof Hagai Levine from the Hebrew University of Jerusalem undertook a rigorous and comprehensive meta-analysis of data collected between 1973 and 2011 finds that among men from Western countries, sperm concentration declined by more than 50 percent, with no evidence of a 'leveling off' in recent years. For Levine suggested endocrine disruption from chemical exposures "during critical windows of male reproductive development may play a role in prenatal life" and "exposure to pesticides may play a role in adult life. Thus, a decline in sperm count might be considered as a 'canary in the coal mine' for male health across the lifespan." Researchers from Brazil where babies who are lactose intolerant drink GM Roundup Ready soy milk found that in rats fed soy milk it elicits endocrine-disrupting effects, by decreasing serum testosterone levels, decreased Sertoli cell numbers and increased percentage of degenerated Sertoli and Leydig cells. In Brazil in 2014 88% of the soy grown was GM Roundup Ready.

45

 $\frac{https://academic.oup.com/humupd/article/doi/10.1093/humupd/dmx022/4035689/Tempora\ l-trends-in-sperm-count-a-systematic-review$ 

<sup>42</sup> https://www.sciencedirect.com/science/article/pii/S0892036217301526

<sup>43</sup> https://www.sciencedirect.com/science/article/pii/S0013935117316730

<sup>44</sup> https://www.sciencedirect.com/science/article/pii/S0300483X14000493

<sup>46</sup> http://www.sciencedirect.com/science/article/pii/S0278691516304896

In 2014 Séralini's team showed that: An acute exposure to glyphosate-based herbicide alters aromatase levels in testis and sperm nuclear quality.  $^{47}$ 

This confirmed the adverse effects of Roundup on experimental animals, but the industry-funded SMC suppressed that as well.

#### Sex-dependent impact of Roundup on the rat gut microbiome<sup>48</sup>

An environmentally relevant concentration of Roundup caused changes in the gut microbiome of rats, according to a new study published by the group of Prof Gilles-Eric Séralini at the University of Caen, France.

#### Many organisations state that pesticides should be phased out because they destroy human health and biodiversity: but the UK media remains silent about their Reports

Governments moving towards a ban on glyphosate in public places and gardens They include France, Austria, Italy, German, Netherlands, Slovenia and Spain. At least 15 countries and four regions were refusing to grow GM crops. European Commission's continuing authorisation of GM crops confirms it is being run by the Agrochemical Corporations that make up the 22 members of the European Glyphosate Task Force.

## The Corporate Media in Britain is silent about pesticides: this results from the corporate sponsorship of the UK Science Media Centre so any science against the corporations can be suppressed by interested parties

These include AstraZeneca, Coca Cola, Syngenta, BP and Monsanto. Séralini's 2-year feeding study provoked chronic hormone and sex dependent pathologies in rats; males developed tumours at 4 months and females at 7 months. Authors' highlights:

- A Roundup®-tolerant maize and Roundup® provoked chronic hormone and sex dependent pathologies.
- Female mortality was 2–3 times increased mostly due to large mammary tumours and disabled pituitary.
- Males had liver congestions, necrosis, severe kidney nephropathies and large palpable tumours.
- This may be due to an endocrine disruption linked to Roundup® and a new metabolism due to the transgene.
- GMOs and formulated pesticides must be evaluated by long-term studies to measure toxic effects.

This was how Laurence Woodward reported it.

*UK media – a conspiracy of silence over GM health risks*<sup>50</sup>

"Last week saw the publication of the most important piece of research about the health risks of genetically engineered foods in recent years. It was widely covered in France and other EU countries; it was big news in the US where all the major media carried the story – over 10,000 articles appeared there during the week; and in the UK – monumental indifference. And as for the BBC, our national beacon of light, truth and integrity; a single fleeting mention on its website with only enough energy to feature the smokescreen put out by pro-GM lobbyists.

<sup>&</sup>lt;sup>47</sup> http://www.sciencedirect.com/science/article/pii/S1382668914001227

<sup>48</sup> https://www.sciencedirect.com/science/article/pii/S2214750017301129

<sup>&</sup>lt;sup>49</sup> http://dx.doi.org/10.1016/j.fct.2012.08.005

 $<sup>^{50}\, \</sup>underline{http://www.nyrnaturalnews.com/campaigning/uk-media-a-conspiracy-of-silence-over-gm-health-risks/}$ 

France to act; UK stays silent. The research on rats, carried out at the University of Caen in France, found that GM maize, GM maize sprayed with Roundup and Roundup itself causes tumours, multiple organ damage and premature death. According to Dr Michael Antoniou, molecular biologist at Kings College, London, 'This is the most thorough research ever published into the health effects of GM food crops and the herbicide Roundup on rats. It shows an extraordinary number of tumours developing earlier and more aggressively – particularly in female animals'. French government ministers are so concerned by the findings that they have asked its National Agency for Health Safety to investigate and say that if necessary will suspend imports of the GM maize.

So why have parts of the UK media ignored the story and others just shrugged it off? Is there a pro-GM media conspiracy; is this down to corruption, incompetence, culture or simple stupidity and laziness; or a mixture?"

#### In 2015 German Scientists awarded Séralini 'Whistleblower of the Year' 51

"Professor Dr. Gilles-Eric Séralini, as a scientist at the University of Caen, France, was the first to publish animal test results demonstrating the toxic and carcinogenic properties of the most commonly used herbicide worldwide, the glyphosate-based "Roundup" by carrying out a two-year feeding test on rats. Immediately after the publication of his research study in 2012 in the journal Food and Chemical Toxicology (FCT), published by Elsevier, he was attacked in a vehement campaign by 'interested circles' from the chemical industry as well as the industry-financed British Science Media Centre. This wasn't reported either.

#### Le Monde (France) informs the French people the truth about pesticides

"French government ministers are so concerned by the findings (of Séralini's study) that they have asked its National Agency for Health Safety to investigate and say that if necessary will suspend imports of the GM maize."

Le Monde investigative journalists Stéphane Foucart and Stéphane Horel contributed revelations about Monsanto emails to **The Monsanto Papers** part of Baum Hedland's evidence in the trial against Monsanto for Roundup causing cancer.

In November 2017 *Le Monde* won the Prix Varenne for their series of articles, the *Monsanto Papers*, an investigation on the world wide war the Monsanto Corporation started in order to save glyphosate: it included intimidating letters to Dr Margaret Chan the then Director-General of the World Health Organisation and individual scientists in the International Agency for Research into Cancer.

#### Letter from six Ministers to European Commission: re: glyphosate exit plan<sup>52</sup>

A letter was sent to the European Commission on 19 December by Nicolas Hulot, Minister for ecologic and inclusive transition (France), Denis Ducarme, Federal Minister for Middle classes, SMEs, Agriculture and Social inclusion (Belgium) Carole Dieschbourg, Minister for the Environment (Luxemburg) Josè A. Herrera, Minister for the Environment (Malta) Dejan Zidan, Minister for Agriculture (Slovenia) and Evangelos Apostolo, Minister of Agriculture (Greece).

The letter states;

"The renewal of the authorization of glyphosate for 5 years was voted during the appeal committee of November 27th. While taking note of this vote, we, Ministers of Environment or Agriculture of France, Belgium, Luxembourg, Slovenia, Malta and Greece underline our concerns about the risks associated with the use of products containing this substance. As a matter of fact, a European citizen's initiative signed by more than one million people called

<sup>&</sup>lt;sup>51</sup> http://gmwatch.org/en/news/latest-news/16458-whistleblower-award-goes-to-prof-gilles-eric-seralini

 $<sup>^{52}\,\</sup>underline{https://sustainable pulse.com/2017/12/28/six-european-countries-call-for-glyphosate-exit-plan-new-carcinogenicity-study-and-focus-on-alternatives/$ 

for a ban of this substance.

The European Parliament has expressed its support for the adoption of necessary measures to phase out the active substance glyphosate in the European Union by 15 December 2022 at the latest. The European Parliament also asked for the extension of specific restrictions of use of glyphosate for weeding and pre-harvest desiccation. We wish to recall that our countries are in favor of the ban of these uses, which are the main sources of residues that can be found in food.

#### NGOs also initiated the International Monsanto Tribunal October 2016

NGOs from around the world with France and Germany in the forefront had initiated the International Monsanto Tribunal to hold Monsanto accountable for its actions. <sup>53</sup> The five judges gave their verdict on April 2017. <sup>54</sup> **They concluded that Monsanto's activities have a negative impact on basic human rights. Besides, better regulations are needed to protect the victims of multinational corporations.**Eventually, international law should be improved for better protection of the environment and include the crime of ecocide.

#### Progress on the Monsanto Tribunal<sup>55</sup>

"2017 has been the year of a great and ever growing opposition to Monsanto and the poison companies that try to control our food system. The legal opinion of the Monsanto Tribunal was a highlight. For the very first time, Monsanto victims from all over the world came together and convinced a panel of international judges that the company is violating basic human rights.

More documents and evidence of Monsanto's misbehavior will follow in spring. In the meantime, Monsanto's cash machines are grounding to a halt. The introduction of their new dicamba resistant GMO crops turned into a disaster as 3.6 million acres of crops (1,5 million hectares) are damaged by pesticide drift. Already over a 1000 farmers in the US are suing the company for the damage. The new generation of BT crops is supposed to fight insects has failed in India. Weed and insect resistance are nature's answer to those crops. Monsanto is trying to hide these failures by stepping into other fields of destruction. They try to tighten their grip on agricultural data, to get even more control on the food system. They will probably merge with Bayer to increase control and try to hide the bad name of the company, but Bayer is buying a Trojan horse. The share value of Monsanto is massively overrated, because both techniques on which the GMO revenue model depends are failing. More and more people, farmers, and consumers see that we have to change the food system to stop the ecocide."

### UN Rapporteur: Report of the Special Rapporteur on the right to food: Pesticides are "global human rights concern" and UN experts urge new treaty

The United Nations received a report by the Special Rapporteur on the right to food, presented to the United Nations Human Rights Council, focused more narrowly on agricultural chemicals. The UN report states unequivocally that the storyline perpetuated by companies like Monsanto—the one that says we need pesticides to feed the world—is a myth. 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". Two United Nations experts are calling for a comprehensive new global treaty to regulate and phase out the use of dangerous pesticides in farming, and move towards sustainable agricultural practices. They say:

<sup>53</sup> http://www.monsanto-tribunal.org

<sup>54</sup> http://www.monsanto-tribunal.org/upload/asset\_cache/1016160509.pdf

<sup>55</sup> http://en.monsantotribunal.org/main.php?name=main&obj\_id=384283593

"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. <sup>56</sup>

### The UN expert on Toxics Baskut Tuncak wrote in the *Guardian* on 06/11/2017: The EU and glyphosate: it's time to put children's health before pesticides <sup>57</sup>

"Our children are growing up exposed to a toxic cocktail of weedkillers, insecticides, and fungicides. It's on their food and in their water, and it's even doused over their parks and playgrounds. The UN Convention on the Rights of the Child, the most ratified international human rights treaty in the world (only the US is not a party), makes it clear that states have an explicit obligation to protect children from exposure to toxic chemicals, from contaminated food and polluted water, and to ensure that every child can realise their right to the highest attainable standard of health. These and many other rights of the child are abused by the current pesticide regime. These chemicals are everywhere and they are invisible. The only way to protect citizens, especially those disproportionately at risk from exposure, is for governments to regulate them effectively, in large part by adhering to the highest standards of scientific integrity.

In light of revelations such as the copy-and-paste scandal, a careful reexamination of the performance of states is required. The overwhelming reliance of regulators on industry-funded studies, the exclusion of independent science from assessments, and the confidentiality of studies relied upon by authorities must change."

#### How the British Government has spent taxpayer's money on the Agrochemical and Pharmaceutical Corporations and vice versa

The Agrochemical and Pharmaceutical Corporations work within UK Government One corporation causes diseases and the other tries to cure them. Both they and the British Government make a lot of money from this arrangement. Syngenta is one member of the Glyphosate Task Force. Syngenta manufactures its own formulated glyphosate and a CM grop angineered to be registant to glyphosate. Michael Bragnell

member of the Glyphosate Task Force. Syngenta manufactures its own formulated glyphosate and a GM crop engineered to be resistant to glyphosate. Michael Pragnell CBE was the founder of Syngenta, former Chairman of Cancer Research UK (CRUK) 2010-2016 and former President of Croplife International. The CMO, CRUK, Public Health England and the Media blame the people for "life style choices" but the Corporations are to blame.

<u>In 2011 CRUK</u> (Syngenta) donated money (£450 million/year) to the Government's <u>Strategy for UK Life Sciences</u><sup>58</sup> and <u>AstraZeneca</u> provided 22 compounds to academic research to develop medicines.

#### The Francis Crick Institute opened in 2016<sup>59</sup>

"The Francis Crick Institute is a biomedical discovery institute dedicated to understanding

<sup>&</sup>lt;sup>56</sup> http://www.pan-uk.org/site/wp-content/uploads/United-Nations-Report-of-the-Special-Rapporteur-on-the-right-to-food.pdf

 $<sup>^{57}\</sup> https://www.theguardian.com/environment/2017/nov/06/the-eu-and-glyphosate-its-time-to-put-childrens-health-before-pesticides$ 

 $<sup>\</sup>frac{\text{58 https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/32457/11-1429-strategy-for-uk-life-sciences.pdf}{\text{1429-strategy-for-uk-life-sciences.pdf}}$ 

<sup>59</sup> https://www.crick.ac.uk/about-us/

the fundamental biology underlying health and disease. Its work is helping to understand why disease develops and to translate discoveries into new ways to prevent, diagnose and treat illnesses such as cancer, heart disease, stroke, infections, and neurodegenerative diseases. An independent organisation, its founding partners are the Medical Research Council (MRC), Cancer Research UK, the Wellcome Trust, UCL (University College London), Imperial College London and King's College London. The Crick was formed in 2015, and in 2016 it moved into a brand new state-of-the-art building in central London which brings together 1500 scientists and support staff working collaboratively across disciplines, making it the biggest biomedical research facility under a single roof in Europe." The Wellcome Trust hosts the industry-funded UK Science Media Centre.

#### Monsanto toxic synthetic chemicals cause many genetic defects

That is why Britain has become the number one global centre for researching and finding cures for these diseases.

Monsanto manufactured Agent Orange, Polychlorinated biphenyls (PCBs), dioxins and formulated glyphosate (Roundup) and many other toxic chemicals. These synthetic chemicals, manufactured in Monsanto's factory in Wales from 1949 onwards, cause genetic defects.

#### Years Before Vietnam, the Chemical Industry Knew About Dioxins<sup>60</sup>

Synopsis: "Decades before the herbicide 2,4,5-T was pulled from the US market for containing dioxins, the global chemical giants Dow, BASF, Monsanto, and others, had extensive discussions amongst themselves of whether to sell dioxin-contaminated chemicals. These discussions ranged from chemical analysis of each other's products to comments on their safety and whether to inform governments that their products contained contaminants of "extraordinary danger". On 17 November 1953 a catastrophic accident took place at a German chemical plant owned by BASF (Badische Anilin und Soda-Fabrik). Production went badly out of control and dozens of workers came into contact with the reaction contents, which contained the chemical dioxin (principally 2,3,7,8-TCDD)."

## Monsanto and the UK Government came to an agreement on PCBs in Wales In 1968 US documents showed that Monsanto tried to decide whether or not to come clean about the dangers of PCBs.

They stopped making PCBs in Anniston US in 1971 because of scandals about PCBs on the health of the population and wildlife. However, the British government led by Ted Heath agreed to ramp up production at their Monsanto plant in Newport. The UK government, which knew of the dangers of PCBs in the environment in the 1960s, allowed their production in Wales until 1977. <sup>61</sup>

#### Alabama is more than 50 million square miles: Wales is 8,000 square miles.

The toxic waste was illegally dumped at Brofiscin Quarry west of Cardiff (and in 5 other quarries in Wales). According to engineering company WS Atkins, in a report prepared for the agency and the local authority in 2005 **but never made public**, Brofiscin Quarry contains at least 67 toxic chemicals. Seven PCBs have been identified, along with vinyl chlorides and naphthalene. The unlined quarry is still leaking, the report says. "*Pollution of water has been occurring since the 1970s, the waste and groundwater has been shown* 

<sup>&</sup>lt;sup>60</sup> https://www.independentsciencenews.org/news/years-before-vietnam-the-chemical-industry-knew-about-dioxins/

<sup>61</sup> https://www.theguardian.com/guardian/2007/feb/12/frontpagenews.uknews

to contain significant quantities of poisonous, noxious and polluting material, pollution of  $\ldots$  waters will continue to occur.  $^{62}$ 

A secret meeting was held between the Agricultural Biotechnology Council (ABC), representing industry, two UK Ministers, two MPs, Civil Servants, Scientists and NFU to discuss the barriers to introducing Genetically Modified Crops (GM) into Britain and how to overcome them

On 25<sup>th</sup> October 2012 Dr Helen Wallace Director of Genewatch and Pete Riley Campaign Manager GM Freeze published a Press Release: <sup>63</sup> Monsanto meets Ministers to push return of GM crops to Britain. On 26 June 2012, Roundtable discussion on 'Going for Growth': Realising the potential of agricultural technologies in the UK. Attendees <sup>64</sup> included Government Ministers, MPs, Civil Servants from Defra, the Department of Business, Innovations and Skills, Office of Life Sciences, Director of the Centre for Food Security, John Innes Centre, Rothamsted Research, James Hutton Institute, the National Farmers Union and the Agricultural and Horticultural Development Board. Here are the links to the Agenda <sup>65</sup> and a summary of the meeting. <sup>66</sup> The ABC had also communicated with the Food Standards Agency (FSA). These organisations have colluded with industry. In 2017 the chickens have come home to roost.

The UK Government and the GM Industry: colluding to promote GM crops and foods, undermine consumer choice and ignore environmental harm (published by Genewatch UK, May 2014)<sup>67</sup>

"This briefing summarises information collected by GeneWatch UK using requests under the Freedom of Information Act and the Environmental Information Regulations (known as FoIs). It demonstrates close co-operation between the GM industry and the UK Government, including a joint strategy to promote GM crops and foods in the press and media.

<u>The documents</u>: Reveal how foreign multinational GM companies are running the Government's PR strategy on GM crops by controlling how public and private money will be invested in research:

Show that taxpayers' money is being spent on PR for the GM industry rather than delivering better food and farming:

Suggest close co-operation with GM soya importers to pressure retailers to allow meat and dairy suppliers to use Monsanto's RoundUp® Ready GM soya for animal feed and prevent consumers from accessing GM-free fed meat and dairy products:

Highlight the extent to which the GM industry's role in Government policy is being kept hidden from the public."

The All-Party Parliamentary Group (APPG) on Agroecology met in the Houses of Parliament in London on June 18, 2014 to discuss the harm caused by the world's most popular herbicide – Roundup®. People from all round the world met to listen to four experts. The first expert to speak was <u>Dr Don Huber</u>, <u>Plant scientist</u>, <u>Emeritus</u> <u>Professor Purdue University</u>. He produced two crucial slides of facts about glyphosate.

http://www.theecologist.org/The\_Brofiscin\_Monsanto\_Files/77777/burying\_the\_truth\_the\_org\_inal\_ecologist\_investigation\_into\_monsanto\_and\_brofiscin\_quarry.html

http://www.genewatch.org/article.shtml?als%5Bcid%5D=569457&als%5Bitemid%5D=571449

 $\frac{http://www.genewatch.org/uploads/f03c6d66a9b354535738483c1c3d49e4/FoI\_summary\_May14.pdf}{}$ 

<sup>62</sup> 

<sup>64</sup> http://tinyurl.com/9jbce4g

<sup>65</sup> http://tinyurl.com/8ahylza

<sup>66</sup> http://tinyurl.com/92rrajn

<sup>67</sup> 

One was a picture of an octopus: each arm is used to describe the multiple actions of the biocide glyphosate: Mineral chelating agent (previously used for cleaning boilers) 'grabbing' minerals such as Boron, Ca, Co, Cu, Fe, K, Mg, Mn, Ni and Zn that are essential to metabolic processes and absorption of amino acids; Growth regulator; Antibiotic; Herbicide; Toxicant; Virulence enhancer; Organic phosphonate; Persistent in the environment.

The second was the epidemic of diseases in the US that have increased between 1995 and 2011 and are linked to glyphosate: the incidence of the same diseases has increased in the UK over that time.

Alzheimer's disease, Dementia, Autism, ADHD Bipolar, Diabetes (Type 2) Multiple sclerosis, Motor-neurone Disease, Obesity, Stroke, Hypertension, Cataracts & eye diseases, Inflammatory bowel disease, Birth defects, Colitis, Crohn's disease Hypercholesterolaemia, Allergies, asthma, Atopic dermatitis, Miscarriage/infertility, Renal disease/failure, Liver abnormalities, Coeliac disease, Gluten intolerance, Pancreatic abnormalities, Autoimmune diseases, Arthritis and **cancers**.

### Biocides Regulations in the European Union make a lot of money for European Regulators, the Pesticides Industry and the British Government

**REACH** (Registration, Evaluation, Authorisation and Restriction of Chemical substances): The Biocidal Product Regulation (BPR, Regulation (EU) 528/2012) concerns the placing on the market and use of biocidal products, which are used to protect humans, animals, materials or articles against harmful organisms, like pests or bacteria, by the action of the active substances contained in the biocidal product. "REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry. It also promotes alternative methods for the hazard assessment of substances in order to reduce the number of tests on animals."

It came into force on 02/08/07.

Exponent Inc. is a company that helps chemical firms with **REACH** compliance. It describes itself as "a research and scientific consultant firm with clients from industry (including crop protection) and government." Exponent Inc. was employed by Bayer to criticise EFSA's work on neonicotinoids and bees in 2013. It also contributed to a review by a Dow employee (Dow manufactures chlorpyrifos that is still authorised by CRD) that concluded that "exposure to specific pesticides during critical periods of brain development and neurobehavioral outcomes is not compelling." Dr Caroline Harris, a Vice-President of Exponent Inc was on the UK Advisory Committee on Pesticides even before it became the Expert Committee on Pesticides (a conflict of interest).

### Training in REACH compliance is given by Industry: BiocidesHub is based in the UK so the British Government makes money by spreading poisons globally

Biocides Symposia are held regularly around the world to "get up-to-speed on all that's new in biocidal products regulation" to "stay one step ahead." Courses are from £300-400 per day to \$1585 for a Symposium. A multitude of firms have clients from 'industry, crop protection and government'. Chemical Watch **Biocides**Hub (Shrewsbury) offered 13 Events on Biocides Regulation in 2016, ranging from beginners courses to advanced courses. In 2017 Chemical Watch was advertising course at least once a week.

### A biocide is a substance that is killing all life: biocides have no place in the world, but glyphosate is found everywhere

Séralini found glyphosate in rodent diets for testing chemicals used in every continent. Samsel has found glyphosate present in the keratin proteins of humans and animals, in **vaccines**, baby milk formulations, pet foods and rat feeds for experimental purposes. It has been found in sanitary products made from GM cotton. All processed foods including

orange juice; beers, breakfast cereals, bread, wine; all non-organic vegetables including potatoes. In March 2016 a survey of more than 2009 German citizens tested showed that more than 99% had glyphosate in their urine and the highest levels were in children and young adults and those that were meat eaters. <sup>68</sup> Glyphosate was found to be persistent in seawater off the Great Barrier Reef. <sup>69</sup> It was also found in the islands of Hawai'i where the agrochemical industry undertakes testing of GM crops, which the people of Hawai'i don't want and don't use. "The most commonly tested GE "trait" is herbicide-resistance (82% of field releases over the past two years), which permits heavier and more frequent spraying of herbicides than is otherwise possible (3.2 & 3.4). Hawai'i's incredible biodiversity and many threatened and endangered species are at risk from intensive pesticide use on the Islands. "70

Hawai'i's HAPA Board President Gary Hooser wrote to me on 1st January 2018 of the Hapahi Organisation's current courtroom battle against Syngenta and the State of Hawaii. "I am meeting this coming week with attorneys to launch the preliminary research work needed for a class action lawsuit against the State of Hawaii for gross negligence in following its own laws, and failing to protect our health and environment. Success in 2018 is within our reach but it will require a monumental effort. "71

### In 2010 GSK Pandemrix vaccine was recommended for swine flu: narcolepsy was a rare complication: the government underwrote the risks

"Reports indicate that dozens of Pandemrix victims from the UK will be awarded about \$1.5 million each in British pounds for permanent health damage caused by GSK's Pandemrix vaccine.<sup>72</sup> One in 16,000 people who took the vaccine, it turns out, are said to have developed narcolepsy and/or cataplexy, two neurological diseases that disrupt normal sleep patterns and muscle function. <u>But rather than be held responsible, GSK is actually billing the UK government the equivalent of about \$92 million to pay for damages, which means taxpayers are footing the bill.</u> <sup>73</sup>

Patrick Vallance, president of research and development at the pharmaceutical giant <u>GlaxoSmithKline</u>, has been appointed as UK Chief Scientific Adviser and 'will help to navigate the UK's exit from the European Union.'

Merck and GlaxoSmithKline (GSF) donated vaccines Gardasil and Cevarix to prevent cervical cancer through the Gates Foundation in India that have caused illnesses and seven deaths; the trial was done without valid consent forms

Narayana Kumar, Times of India 31 August 2014: 'Controversial vaccine studies: Why is Bill & Melinda Gates Foundation under fire from critics in India? "Several months after the vaccines were administered, many girls started falling ill and by 2010 five of them died in Andhra Pradesh and two died in Gujarat."

#### In 2015 The Rockefeller Foundation published a paper in The Lancet

Safeguarding human health in the Anthropocene epoch: Report of The Rockefeller Foundation–Lancet Commission on planetary health. 75 The Rockefeller Foundation was involved in extensive financing of eugenics research by the National Socialists (Nazis) during and after World War 2 and "were in league with some of America's most respected

<sup>68</sup> http://www.lifegate.com/people/lifestyle/glyphosate-almost-all-germans-intoxicated

<sup>69</sup> http://www.sciencedirect.com/science/article/pii/S0025326X14000228

<sup>70</sup> http://www.centerforfoodsafety.org/files/pesticidereportfull\_86476.pdf

<sup>71</sup> http://www.hapahi.org/news

<sup>72</sup> http://www.naturalnews.com/050767\_swine\_flu\_vaccine\_GlaxoSmithKline\_Pandemrix.html

<sup>73</sup> http://www.bmj.com/content/346/bmj.f794#aff-3

<sup>&</sup>lt;sup>74</sup> http://articles.economictimes.indiatimes.com/2014-08-31/news/53413161\_1\_hpv-vaccine-cervarix-human-papilloma-virus

<sup>75</sup> http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(15)60901-1.pdf

scientists from such prestigious universities as Stanford, Yale, Harvard and Princeton. These academicians espoused race theory and race science, and then faked and twisted data to serve eugenics' racist aims."<sup>76</sup>

Scientists in the RF-Lancet Commission failed to mention glyphosate and other pesticides. According to their report the key drivers of ecosystem change in the last 60 years have been: "Increases in the amounts of nitrogen and phosphorus entering the environment through agricultural fertiliser run-off and soil erosion." The report failed to mention the serious threats of exposure to the most widespread chemicals in the global environment, glyphosate (an endocrine disruptor) and the systemic neonicotinoid insecticides. In 2006 the Rockefeller and the Bill and Melinda Gates Foundation formed an Alliance to Help Spur "Green Revolution" in Africa. It was a chemical revolution.<sup>77</sup>

#### Genetic extinction technologies discussed by the UN Convention on Biodiversity

A US military agency is investing \$100m in genetic extinction technologies that could wipe out malarial mosquitoes, invasive rodents or other species, emails released under freedom of information rules show.  $^{78}$ 

The documents suggest that the US's secretive Defense Advanced Research Projects Agency (Darpa) has become the world's largest funder of "gene drive" research and will raise tensions ahead of a UN expert committee meeting in Montreal beginning on December 12<sup>th</sup> 2017. Between 2008 and 2014, the US government spent about \$820m on synthetic biology. Since 2012, most of this has come from Darpa and other military agencies.

#### The Bill and Melinda Gates Foundation paid a PR firm to lobby the UN 79

Jonathan Latham of Independent Science News reports: "The Bill and Melinda Gates Foundation this year paid a PR firm called Emerging Ag \$1.6 million to recruit a covert coalition of academics to manipulate a UN decision-making process over gene drives, according to emails obtained through Freedom of Information requests. Gene drives are a highly controversial new genetic extinction technology. They have been proposed as potentially able to eradicate malarial mosquitoes, agricultural pests, invasive species, as well as having potential military uses. Emerging Ag calls itself "a boutique international consulting firm providing communications and public affairs services." Its president and founder is Robynne Anderson, a former international communications director of CropLife, the global lobby group for the biotechnology, seed, and pesticide industries."

### Should philanthropists be allowed to control the agenda of Governments and the World Health Organization?

The organization Global Justice Now asks pertinent questions about the Bill & Melinda Gates Foundation (BMGF). Global Justice Now published a Report in June 2016: Gated Development: Is the Gates Foundation always a force for good? It asks the question: "Should Bill Gates be setting the global agenda for health and agriculture?" The Corporations (the Agrochemical Industry and the Pharmaceutical Industry) that the Gates Foundation funds and works closely with are those present at the Bilderberg Meetings whose objectives are to control the world. Monsanto, Cargill, Syngenta, DuPont, Bayer, Nestle, Mondelez and Mars are among the Corporations. "The foundation

<sup>&</sup>lt;sup>76</sup> http://www.sfgate.com/opinion/article/Eugenics-and-the-Nazis-the-California-2549771.php

<sup>77</sup> https://www.gatesfoundation.org/Media-Center/Press-Releases/2006/09/Foundations-Form-Alliance-to-Help-Spur-Green-Revolution-in-Africa

 $<sup>^{78}</sup>$  <u>https://www.theguardian.com/science/2017/dec/04/us-military-agency-invests-100m-ingenetic-extinction-technologies</u>

 $<sup>^{79}\,</sup> https://www.independentsciencenews.org/news/gates-foundation-hired-pr-firm-to-manipulate-un-over-gene-drives/$ 

 $<sup>^{80}</sup>$  http://www.globaljustice.org.uk/sites/default/files/files/resources/gated-development-global-justice-now.pdf

is also pushing GM research in the UK. In 2012, a team of British plant scientists at the John Innes Centre in Norwich won a \$10 million grant to develop GM cereal crops; this was one of the largest single investments in GM in the UK... The Swindon-based Biotechnology and Biological Sciences Research Council, which also promotes GM research, received an \$8 million grant in 2010 to "support high quality research on sustainable crop production in sub-Saharan Africa and South Asia... In June 2014, the BMGF gave \$5.6 million to another major GM developer and advocate, Cornell University, "to support a global agricultural communications platform that will improve understanding of science-based agricultural technologies".

Global Justice Now reports that BMGF has an overwhelming focus on vaccines and GM technology. Bill Gates: "Donor countries, you must increase your investment in vaccines and immunization, even though you are coping with budget crises... All 193 member states, you must make vaccines a central focus of your health systems."

In his 2015 annual letter, for example, Bill Gates wrote that the next 15 years will see major breakthroughs in poor countries which: "will be driven by innovation in technology – ranging from new vaccines and hardier crops to much cheaper smartphones and tablets – and by innovations that help deliver those things to more people."

Jacob Levich, writing in Global Research, 81 said: "The Gates charitable empire is vast and growing. Within the US, BMGF focuses primarily on 'education reform,' providing support for efforts to privatize public schools and subordinate teachers' unions. The much larger international divisions target the developing world and are geared toward infectious diseases, agricultural policy, reproductive health, and population control. In 2009 alone, BMGF spent more than \$1.8 billion on global health projects. He confirmed the view of Global Justice Now that the power of the WHO is in the hands of BMGF and its "partners". Levich said: "Emulating his own strategies for cornering the software market, Gates has created a virtual monopoly in the field of public health. In the words of one NGO official, "[y]ou can't cough, scratch your head or sneeze in health without coming to the Gates Foundation." The Foundation's global influence is now so great that former CEO Jeff Raikes was obliged to declare: "We are not replacing the UN. But some people would say we're a new form of multilateral organization.""

Control of media reports: "It is not inconceivable that you might find yourself some day reading a story about a Gates-funded health project, written up in a newspaper that gets its health coverage underwritten by Gates, reported by a journalist who attended a Gatesfunded journalism training program, citing data collected and analysed by scientists with grants from Gates."

"Even if we were to satisfy ourselves that the Gates Foundation was utterly benign, it would still be worrisome that **they wield such enormous propaganda power**": Mark Crispin Miller, professor of media, culture and communications at New York University.

### The philanthropist David Sainsbury, Baron Sainsbury of Turville, has influenced science and education policy in Britain via the Gatsby Foundation

Since 2006 when he resigned as Parliamentary Under-secretary of State at the Department of Trade and Industry, Lord Sainsbury has influenced the educational and the political systems in the UK at many levels in order to promote his personal project of introducing GM crops and GM foods "to feed the world". He is donor of multiple Plant Research Laboratories for GMO development via the Gatsby Foundation. He influenced education by the introduction of STEMNET 82 (Science, Technology, Engineering and Mathematics Network). It is a network, one part of which is to support the teaching of physical science in schools (11-19), which includes the science of GMOs. It concentrates on teaching technology but definitely not history. Canada also has branches of STEMNET

 $<sup>^{81}\,</sup>http://www.globalresearch.ca/philantrocapitalism-gates-the-worlds-largest-and-most-powerful-foundation/5383461$ 

<sup>82</sup> http://www.gatsby.org.uk/Education/Projects/STEMNET.aspx

and government approved textbooks promote the benefits of GM fruit and vegetables. "No scientific study has shown them to be harmful."

Yet in 2011 a scientific study from the eastern townships of Quebec has found genetically modified endotoxin in maternal and foetal blood.  $^{83}$ 

"We funded the formation of STEMNET, which creates opportunities to inspire young people in STEM via its 24,000+ STEM Ambassadors, the STEM Clubs network, and projects including brokering enhancement and enrichment activities between schools and business." In recent years, STEMNET has received core funding from the Department for Business, Innovation and Skills, and the Department for Education for its three major programmes\*84

#### **Britain joins forces with Monsanto**

On 23/09/2013 the British Government joined forces with Monsanto, EFSA and the EU Commission to fight civil society in the EU Court to defend the right to import Monsanto's transgenic soybean Intacta® which produces an insecticide and is resistant to glyphosate herbicides such as Roundup®.85

### Open letter from America to Prime Minister David Cameron at 10 Downing Street warning the UK against GM crops: November 2014 $^{86}$

<u>Living with GMOs: Citizen to Citizen: From 57 million citizens in the US to</u> citizens, politicians, and regulators in the UK and the rest of the EU about the hazards of genetically modified crops.

We, the undersigned, are sharing our experience and what we have learned with you so that you don't make our mistakes. Signatories included NGOs, groups, academics, scientists, farmers, food manufactures, and high profile individuals representing some 57 million Americans.

Extracts: "A recent review found that between 1996 and 2011, farmers who planted Roundup Ready crops used 24% more herbicide than non-GMO farmers planting the same crops. This pesticide treadmill means that in the last decade in the US at least 14 new glyphosate-resistant weed species have emerged, and over half of US farms are plagued with herbicide-resistant weeds." They outlined eight independent papers describing Environmental Harm and six about the Threat to Human Health. "Americans are reaping the detrimental impacts of this risky and unproven agricultural technology. EU countries should take note: there are no benefits from GM crops great enough to offset these impacts. Officials who continue to ignore this fact are guilty of a gross dereliction of duty.

We strongly urge you to resist the approval of genetically modified crops, to refuse to plant those crops that have been approved, to reject the import and/or sale of GM-containing animal feeds and foods intended for human consumption, and to speak out against the corporate influence over politics, regulation and science."

The Open letter from America was passed from the Prime Minister's Office to Defra.

#### Extracts from the reply from Lord de Mauley, Defra Minister

"However, to pick up on your point on contamination, cross-pollination is, again, a normal process between compatible plant species and there is nothing different about GM crops in this respect...The UK Government regards safety as paramount and we will only agree to planting of GM crops or the marketing of GM foods if it is clear that people and the environment will not be harmed." 87

<sup>83</sup> https://www.ncbi.nlm.nih.gov/pubmed/21338670

<sup>84 \*</sup> What Lord Sainsbury started has now been picked up by Government Funding bodies

<sup>85</sup> http://www.testbiotech.de/en/node/898

<sup>86</sup> http://www.theletterfromamerica.org/

<sup>87</sup> http://beyond-gm.org/wp-content/uploads/2015/01/BGM\_Defra-letter\_151214.pdf

### The European Commission and EFSA ignored it as well and have continued to approve GM Crops for growing and for food and feed in the EU

Over Christmas 2017 the European Commission has added to the list of GM Crops to be approved in January 2018.  $^{88}$ 

#### Toxic morality is killing honeybees

Evaggelos Vallianatos worked for the US Environmental Protection Agency for 25 years and then became a whistle blower. He wrote a book in 2014: *Poison Spring: The Secret History of Pollution and the EPA*.<sup>89</sup> He now writes regularly in the US Huffington Post. On 10 June 2017 he wrote about the US EPA poisoning honeybees with chemical and biological weapons.<sup>90</sup>

<u>Excerpts</u>: "Morally bankrupt governments, regulatory agencies, and farmers have been poisoning honeybees for decades. These "farmers" claim to be following science-based agricultural practices.

But what kind of "science" would be blessing farmers spraying their crops with chemicals, which in reality are **chemical and biological weapons?** If this surprises you, let me assure you that most pesticides are relatives of chemical warfare agents. A weed killer like glyphosate (roundup) devastates life in the soil, killing the bacteria that make the crops healthy and enhances the power of the bad bacteria giving disease to crops. This mentality of showing only one part of the farm story but hiding the deleterious effects of chemical agriculture dominates environmental and public health "protection" in both America, Europe and the rest of the world in 2017. Under the name of science, agribusiness, universities and governments have been hiding the human health effects of contaminated food and drinking water, much less dead honeybees."

### Massive fraud in agricultural science and testing and regulation of pesticides

On 17 June 2017 Vallianatos wrote the following about the control of farming by petrochemical corporations and the abuse of science.<sup>91</sup>

Extract: "The triumph of this aggressive form of farming has meant the sidelining of science and the formal, state-supported addiction of farmers to pesticides. In this agricultural context science became a weapon. The petrochemicals industry drafted the pesticide laws in America and Europe. Such blatant power grab infused everything about pesticides with loopholes, secret to the public but crystal clear to the industry and most regulators, politicians, and environmentalists.

Testing pesticides for health and ecological effects became a brutal abuse of science. It is a display of concern in a strategy of deception. For example, the massive fraud of the Industrial Bio-test Laboratory made no difference to the corruption engulfing the "registration" of farm sprays. Registration equals government approval with little if any reliable data. From the 1950s to the 1970s, IBT made up most of the results of testing hundreds of pesticides, drugs, and a myriad of other chemicals. Despite the public revelation of the gangster-like behavior of this American lab, and no doubt questionable practices in countless other labs all over the world, nothing happened to eliminate lab corruption."

<sup>88</sup> https://ec.europa.eu/food/sites/food/files/plant/docs/sc\_modif-genet\_20180116\_agenda.pdf

<sup>&</sup>lt;sup>89</sup> https://www.independentsciencenews.org/health/poison-spring-the-secret-history-of-pollution-and-the-epa/

 $<sup>^{90}</sup>$  https://www.huffingtonpost.com/entry/toxic-morality-is-killing-honeybees\_us\_593c867fe4b0b65670e56b21

<sup>91</sup> https://www.huffingtonpost.com/entry/playing-political-games\_us\_5945789ae4b024b7e0df4c9a

### The world is not a dangerous place because of those that do harm but because of those who look at it without doing anything – Albert Einstein

In 2009 the independent toxicologist Henk Tennekes predicted that the Systemic Neonicotinoid Insecticides were 'A disaster in the making'.

In his own words, Dr Tennekes said that his book "catalogues a tragedy of monumental proportions regarding the loss of invertebrates and subsequent losses of the insect-feeding (invertebrate-dependent) bird populations in all environments in the Netherlands. They cause damage to the central nervous system of insects that is virtually irreversible and cumulative. There is no safe level of exposure, and even minute quantities can have devastating effects in the long term. They leach into groundwater and contaminate surface water and persist in soil and water chronically exposing aquatic and terrestrial organisms to these insecticides.

#### Dr Tennekes' predictions were correct

The British Government and the UK conservation organizations ignored his work because it wasn't 'sound science'. Nine years later independent US Scientists have announced global poisoning with synthetic chemicals - a chemical apocalypse.

#### Humans need invertebrates; without them they cannot survive

Prof E.O. Wilson the eminent field entomologist from Harvard, who in his autobiography *Naturalist* published in 1994, documented massive global declines of ant colonies at the hand of man, said: "The one process now going on that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us."

#### Fifty-six years ago Rachel Carson wrote Silent Spring

Her description of systemic pesticides was correct; nothing has changed apart from the fact that the industry has today devised more powerful and persistent weapons. She wrote:

"The world of systemic insecticides is a weird world, surpassing the imaginings of the brothers Grimm. It is a world where the enchanted forest of the fairy tales has become a poisonous forest. It is a world where a flea bites a dog and dies...where a bee may carry poisonous nectar back to its hive and presently produce poisonous honey".

Rosemary Mason 4/1/2018