

What Happens When Issue-Attention Moves On: The Case of 'Neonic' Pesticides

<http://threeworlds.campaignstrategy.org/?p=2599>

[Chris Rose](#) July 2020

In Europe, Neonic' pesticides have dropped from the heights of the public agenda following a 'ban' in the EU in 2018. As anticipated in Anthony Downs's 1972 'Issue Attention Cycle', neonics seem consigned to a 'twilight zone', with the result that alarming new evidence of their impacts gets little attention.

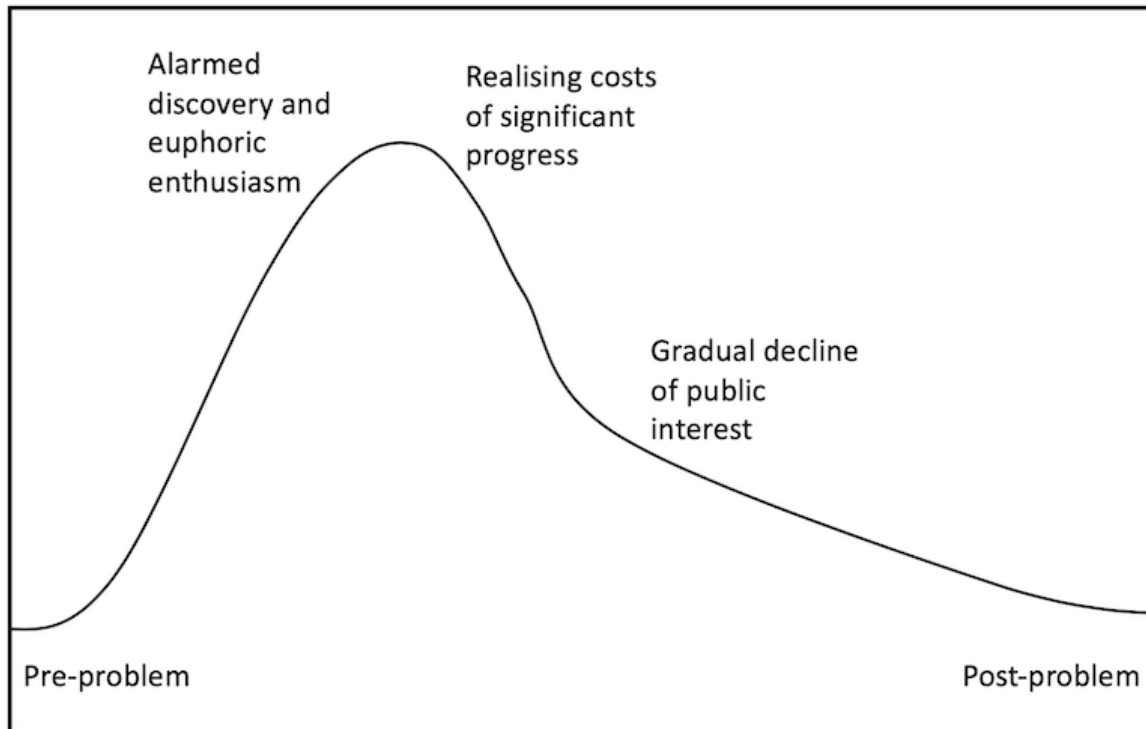
This blog examines the neonic case and others, and proposes ways that campaigners (on any issue) might plan so that they stand the best chance of escalating issues where necessary, and getting around the public attention dynamic trap created by the Issue Attention Cycle. It also calls for bolder action on pesticides by well-established groups such as the RSPB.

Introduction

In 1972 Anthony Downs published *[Up and down with ecology—the "issue-attention cycle"](#)* describing how public interest would become 'alarmed' on discovering a problem, 'euphoric' about solving it, then hit 'realisation' of the costs of action, lose momentum and see interest fade away before the problem was truly resolved. This five-stage cycle became a popular idea in political science for some years. Is the current situation with 'neonics' ([neonicotinoids](#)) best known as 'bee killing pesticides', now a case in point?

Two truly alarming UK scientific studies have recently been published showing the levels of exposure to neonics among farmland birds, yet to no noticeable response. The distracting effect of Covid aside, the lack of obvious reaction to these studies made me wonder if this is because Neonics were 'banned' in the EU from 2018 (indeed while these studies were in progress) and so are now regarded in Europe as a problem solved: a validation of the Downs hypothesis.

Back in April 2018, after a considerable struggle, NGOs campaigning in Europe declared victory, '[a historic day](#)', and told their supporters 'you did it'. The 'bee-killers' were vanquished. Neonics were prohibited from outdoor use on all main crops and it was a real success but as Downs anticipated back in 1972, it wasn't really a problem resolved.



Approximate Issue Attention Curve after Anthony Downs 1972

The Two Studies

Many studies have shown the ecological havoc wrought by ‘neonic’ insecticides but these two recent papers on birds bring detailed observational and sampling evidence to add key evidential links in the chain of cause and effect.

The first, [*From seeds to plasma: Confirmed exposure of multiple farmland bird species to clothianidin during sowing of winter cereals*](#), was available in *Science of the Total Environment* on 19 March, and the second [*High prevalence of the neonicotinoid clothianidin in liver and plasma samples collected from gamebirds during autumn sowing*](#), was available online in the same journal from 24 June. Both were by teams led by Rosie Lennon of York University, and included Will Peach from the major bird conservation group, the RSPB.

‘Global Implications’

The first paper reported that cereal seeds treated with neonicotinoids ‘were found on the soil surface at all 25 farms surveyed’ (shortly after sowing wheat). A much-repeated argument in the chemical industry’s case that neonics cannot be causing harm to wildlife is that they are ‘safe’ if used according to instructions, or in American parlance, to ‘the label’. In practice that is usually impossible. In this case the Bayer Crop Science label specified that seed should be buried 4cms deep – in reality a lot was left on the surface. Essentially similar agricultural processes exist worldwide.

Using camera traps, ‘15 species of bird were observed consuming clothianidin-treated seed at seed piles’. As I read it, the study effectively calculated the amount of neonic that birds feeding on the left-over seed (and seedlings) would consume over several weeks. After

catching birds and taking samples, ‘Clothianidin was detected in the [blood] plasma of 10/11 farmland bird species sampled. Birds consumed up to 65% of a chronic toxicity estimate for clothianidin’. This included two birds (Yellowhammer and Tree Sparrow) which were exhibiting signs of acute poisoning when caught.



Tree Sparrow – [Creative Commons Stefan Berndtsson](#)

A third of the species and half the individual birds examine had been exposed to the neonic chemical and levels in their bodies were ‘among the highest recorded for wild birds to date’. The study does not directly tell us anything about what would happen to birds exposed over several seasons but the authors state:

‘Overall, these data are likely to have global implications for bird species and current agricultural policies where neonicotinoids are in use’ (in 120 countries).

The second paper found 89% of gamebirds analysed after autumn seed-sowing (from carcasses of shot birds, including red-legged and grey partridges and pheasants) contained clothianidin, whereas only 11% sampled before sowing had the chemical. Birds with higher levels of the pesticide in their livers also had more internal parasites, which the authors suggest may be due to interference of the immune system by the chemical. (Bees affected by neonics can have increased parasite burdens).

From seeds to plasma: Confirmed exposure of multiple farmland bird species to clothianidin during sowing of winter cereals



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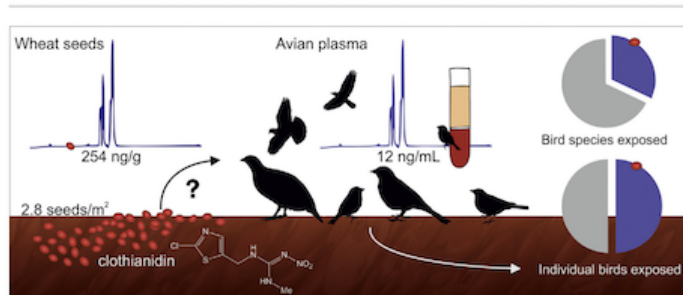
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HIGHLIGHTS

- Exposure of farmland birds to a neonicotinoid seed treatment was characterised.
- Treated cereal seeds were found on the soil surface at all 25 farms surveyed.
- 15 species of bird were observed consuming clothianidin-treated seed at seed piles.
- Clothianidin was detected in the plasma of 10/11 farmland bird species sampled.
- Birds consumed up to 65% of a chronic toxicity estimate for clothianidin.

GRAPHICAL ABSTRACT



Aside from robbing insect-eating birds of food by being very efficient at killing insects and in the case of bees, increasing their vulnerability to parasites and interfering with their ability to navigate, so reducing their chances of survival, at high enough levels neonics can kill birds directly and at lower levels, [impair their ability to migrate](#) and navigate. [A Dutch study](#) published in *Nature* found a pattern of fast declining bird populations in areas with significant levels of imidacloprid, a ‘pattern of decline [which] appeared only after the introduction of imidacloprid to the Netherlands, in the mid-1990s’. Another very recent study in *Nature* [found](#) ‘alarming’ effects on ants (ants are related to bees), which like bees are a huge part of the natural ecosystem.

‘Problem Solved’ in EU Would Delight The Chemicals Industry

If the European public is largely in Downs’s ‘declining interest’ phase following the breakthrough ‘ban’ of 2018 and thus not responding to new signals that neonics area problem, the chemicals industry will be delighted, because outside the European Union, neonics are in massive and increasing use around the world. The EU is the only significant market in the world where the chemicals industry has been ‘defeated’ over neonics.

A blog by science analytics company SciEx [states](#):

‘Given the concern about the impact of pesticides, you would expect their use to be strictly governed globally. The reality is that [35 percent of the world has zero pesticide legislation](#), and restrictions on neonicotinoids are only just emerging’.

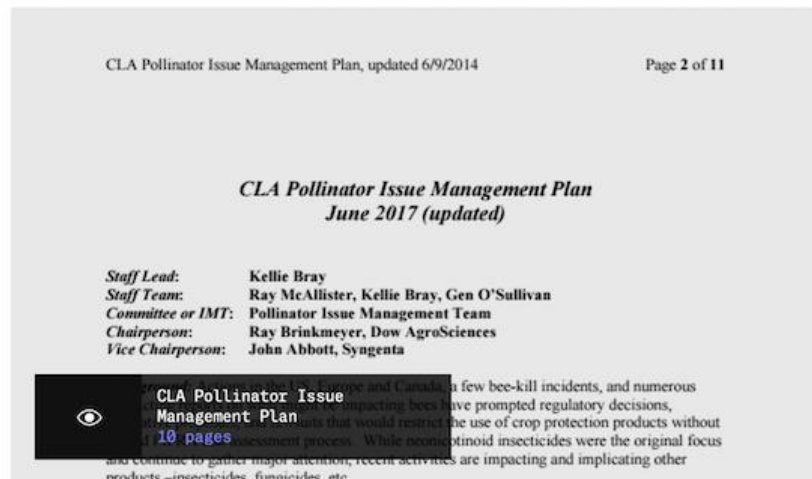
It's not easy even to get firm data on neonic use unless you are prepared to pay sums of around \$3,000 for market reports and forecasts, which is one of many reasons why campaigning on pesticides is a niche activity. But one market analyst forecasts “[robust growth](#)” in neonics to 2025, and another [notes that](#) ‘Asia Pacific dominates the global market in terms of value and volume’. An agrochemicals industry insider told me not long ago that the industry, or at least the Europeans, thought they had ‘lost’ the battle over neonics. It is true that there is increasing [investment in alternative ‘biologicals’](#) but in a way similar to the fossil fuel companies investing in renewables and hydrogen while still pushing petrol, diesel and gas: the chemical companies are also expanding their existing product portfolio wherever they can.

Mainly in the US but also elsewhere, the industry is still mounting a massive ‘product defence’ lobbying and propaganda campaign, as described by Lee Fang in a January 2020 article on neonics in *Intercept* magazine: [The Playbook For Poisoning The Earth](#). Fang details activities involving Syngenta, Dow and Bayer (now incorporating Monsanto), including the ‘co-option’ of science through their domination of research funding, and promoting the views of bee-keepers willing to stress the role of disease rather than chemical pollution, in bee declines.



factors in pollinator decline.

“Position the industry as an active promoter of bee health, and advance best management practices which emphasize bee safety,” noted an [internal planning](#) memo from CropLife America, the lobby group for the largest pesticide companies in America, including Bayer and Syngenta. The ultimate goal of the bee health project, the document noted, was to ensure that member companies maintained market access for neonic products and other systemic pesticides.



The planning memo, helmed in part by Syngenta regulatory official John Abbott, charts a variety of strategies for advancing the pesticide industry's interests, such as, “Challenge EPA on the size and breadth of the pollinator testing program.” CropLife America officials were also tapped to

From Lee Fang's Intercept article

Even in the EU, the industry is still trying to mount a rearguard action against the ‘ban’. As *Farmers Weekly* [reports](#), the British National Farmers Union and Bayer are

currently challenging it in the European Court of Justice. Analysis by Client Earth and Pesticides Action Network also found that the EU’s 2013 neonic restrictions had been circumvented 62 times by Member States exploiting an ‘emergency use’ provision, and [Unearthed recently found](#) this loophole had been exploited 67 times since 2018. As I was writing this blog, Britain’s Wildlife Trusts published an excellent report [Reversing The Decline of Insects](#), calling for national pesticide use to be cut by at least 50% but neonics are hardly mentioned. (Neonics were covered in more detail in a 2019 Wildlife Trusts report [Insect Declines and Why They Matter](#)).

If you are at all concerned about biodiversity, neonics are a significant and literally systematic threat to whatever you are working on. This also includes bird organisations in Europe, even if the ban is maintained and properly implemented, because about half of ‘European’ birds spend part of their lives outside Europe, such as swallows, cuckoos, swifts and nightingales which spend most of their lives in Africa.

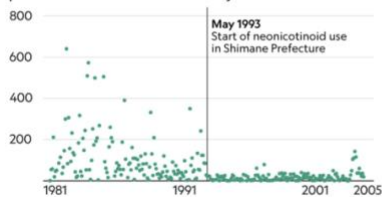
‘Neonic’ Back Story

Neonics are systemic insecticides, meaning they get into a plant and make it poisonous to insects. They were invented by a Japanese subsidiary of chemical giant [Bayer in the 1980s](#) and at first were welcomed as a more targeted use of pesticide than aerial or general spraying of insecticides such as organophosphates. It has since turned out that neonics (a) don’t stay in the target crop but get into soil, water and thus other plants such as in hedgerows, where they also kill insects, and (b) as much as 95% of neonics applied to treat seeds sown by farmers, goes straight into the environment and not into the crop.

The first neonic, imidacloprid, [was launched](#) by Bayer in 1991, followed by a dramatic crash in zooplankton and fish in Lake Shinji from 1993.

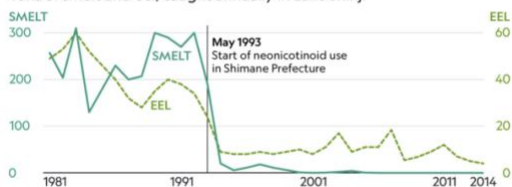
Runoff containing neonicotinoids from fields and paddies was linked to a dropoff of zooplankton biomass in Lake Shinji.

Monthly measurement of zooplankton in micrograms carbon per liter present in water from Lake Shinji



Populations of commercial smelt and eel in Lake Shinji, which were reliant on zooplankton and benthos as a source of food, began to collapse.

Tons of smelt and eel, caught annually in Lake Shinji



JOHN KAPPLER, NGO STAFF
SOURCE: MASUMI YAMAMURO ET AL., SCIENCE, 2019

Graphic from [National Geographic article](#).

Neonics nevertheless spread quickly around the world and a further six types have been put on the market by companies including Syngenta, Bayer, Mitsui, Sumitomo and Nippon Soda. By 2008 neonicotinoids had taken a 24% share of the total insecticide market of €6.330 billion. Widespread ‘collapse’ of bee colonies began in France in 1994, as the chemical ‘Gaucho’ was introduced by Bayer and used on sunflowers. It was Imidacloprid. By 1999 honey production in France had been halved.

Dutch toxicologist [Henk Tennekes](#) became one of the leading scientific campaigners against neonics when he realised that their ‘mode of action’ had ‘much in common with that of chemical carcinogens’. He [has also pointed to](#) the pivotal discovery in 2001 by Luc Belzunces, a bee researcher at the French agricultural institute INRA, that ‘an acute lethal dose of [neonic] imidacloprid’ was only 40 nano-grammes, much lower than most other insecticides but ‘his greatest discovery was that the lethal dose from chronic exposure ... was 4,000 times less’.

Citing Rachel Carson “knowing what I do, there would be no future peace for me if I kept quiet”, Tennekes (not to be confused with a Dutch climate-sceptic of the same name) decided to write a book warning the world of their danger: *[‘The Systemic Insecticides: A Disaster in the Making’](#)*, published in 2010. By that time neonics were widely implicated in disappearance of bees, birds, and later insect life in general. ‘Silent Spring’ was becoming a reality.

Scientists at the US EPA warned about the ecological dangers posed by neonics in an internal memo released by Wikileaks in 2010: “...*The proposed use on cotton poses an acute and chronic risk to freshwater and estuarine/marine free-swimming invertebrates...*” and “..*Clothianidin’s major risk concern is to nontarget insects (that is, honey bees). Clothianidin is a neonicotinoid insecticide that is both persistent and systemic. Acute toxicity studies to honey bees show that clothianidin is highly toxic on both a contact and an oral basis....*”

In the UK, the area of land treated with neonics more than doubled between 2003 and 2013. Restrictions started to be imposed elsewhere in Europe, for example in Germany from 2008, and across the EU from 2013, leading to a ‘complete’ ban on outdoor use from 2018.

There are few restrictions on Neonics in the US. In 2018 John Tooker of Pennsylvania University [worked out](#) that an area of corn (maize), soyabean and cotton crops the size of Texas* was treated with Neonics, and noted: ‘between 2011 and 2014 the [mass of neonicotinoids deployed in each crop doubled](#), indicating that seed suppliers applied about twice as much insecticide per seed. Unfortunately, many farmers are unaware of what is coated on their seeds, while others like the peace of mind that comes from an apparently better protected seed ... Unlike most insecticides, neonicotinoids are water soluble ... But only a small fraction of the insecticide applied to seeds is [actually taken up by seedlings](#). For example, corn seedlings only take up about 2 percent ... The critical question is where the rest goes’. [Germany is 53% of the size of Texas].

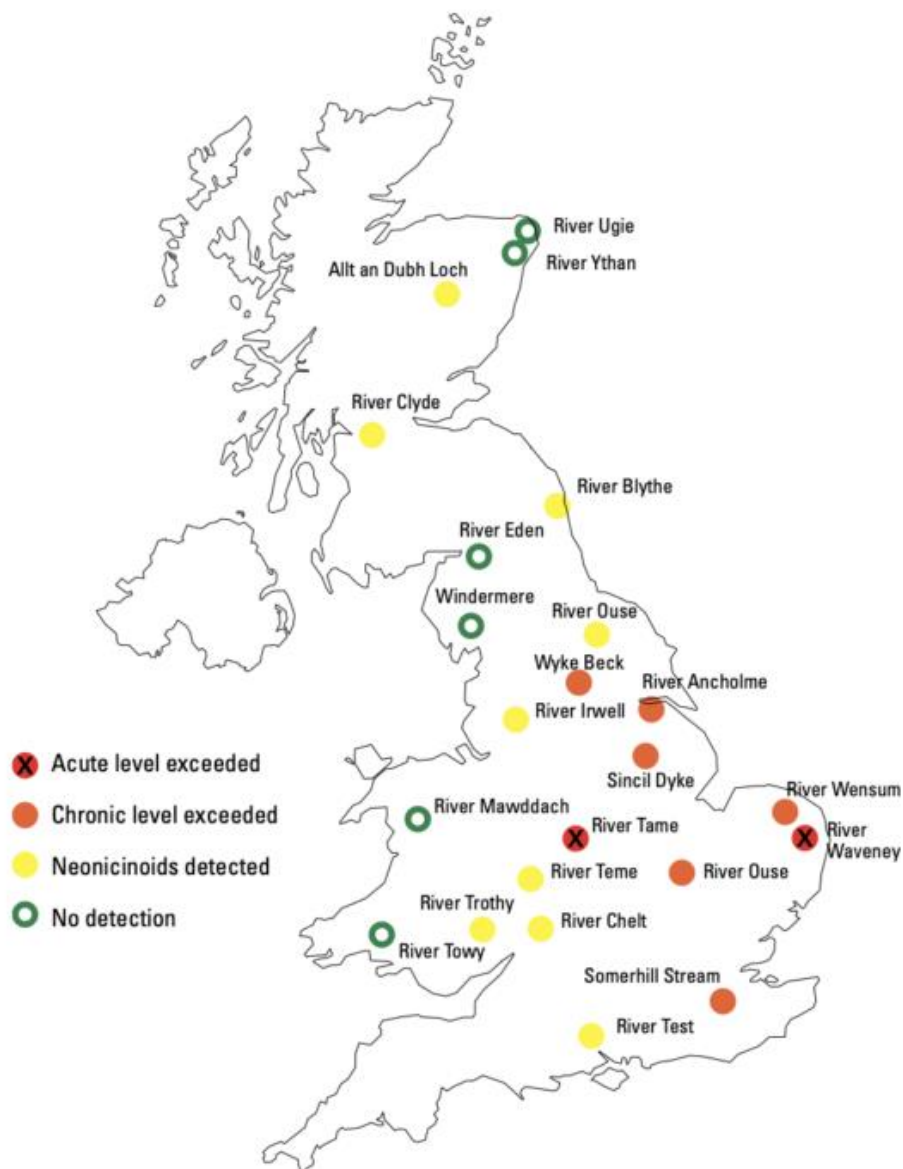
Polluting Pets

Within the EU, other uses of Neonics escaped the ‘ban’, including in veterinary pesticides such as cat and flea treatments for domestic pets such as cats and dogs. [3.6m](#) individual British pet owners have pet insurance, and part of the insurance package often involves

regular ‘flea treatment’. In 2018 The Daily Telegraph [reported](#) that charity Buglife found over 60 pet ‘flea treatments’ contained neonicotinoids, and that rivers and streams were widely contaminated, even in areas with little arable farming.

Neonicotinoid insecticides in freshwater

Neonicotinoids are water soluble, leaching from soils into streams and rivers. They are also widely applied as flea treatments to dogs (a use not covered by the EU ban). The map reveals widespread contamination of British rivers with these pesticides, including in regions with little arable farming (it is thought that this might be from domestic pets swimming in rivers).



[Shardlow, M. 2017. Neonicotinoid insecticides in British freshwaters. Buglife Report <https://bit.ly/2C6wweB>]

UK freshwater pollution by neonics (from Wildlife Trusts report)

Was Anthony Downs Right?

The Downs 'cycle' has been much discussed in academia ([for example](#)). Downs originally [wrote](#):

American public attention rarely remains sharply focused upon any one domestic issue for very long—even if it involves a continuing problem of crucial importance to society. Instead, a systematic “issue-attention cycle” seems strongly to influence public attitudes and behavior concerning most key domestic problems. Each of these problems suddenly leaps into prominence, remains there for a short time, and then- though still largely unresolved—gradually fades from the center of public attention. A study of the way this cycle operates provides insights into how long public attention is likely to remain sufficiently focused upon any given issue to generate enough political pressure to cause effective change.

Downs conceptual model proposed five stages: **'Pre-Problem'** when, he said, the problem is actually worse than by the time it is recognized; **'Alarmed discovery and euphoric enthusiasm'** when in America, a 'combination of alarm and confidence results in part from the strong public pressure ... for political leaders to claim that every problem can be "solved"'; **'Realizing the cost of significant progress'**; **'Gradual decline of public interest'**, and **'The post-problem stage'**, a 'prolonged twilight'.

The original article is still worth a read. Although writing mainly about the environment in the US, his examples were mainly drawn from other issues such as racism and poverty, some of which are very topical today.

Some of Downs's explanations may have been overtaken in subsequent social research but there is little doubt that innate human tendencies combine to encourage individuals and groups to focus on the most acute threat perceived at any one time.

This in turn combines with the crystallising, simplifying morés of news and social media and the limited space in a 'news agenda' and the herd-dynamics of common focus among media actors, to define *'the threat'* or *'the big issue'* of the moment. CEOs, Premiers or rulers convene to discuss *'the issue'*, and while waiting in the wings are candidates for being *the* next issue, the constraints of a 'summit' agenda and awareness of media appetites are in themselves sufficient to create a single action focus.

The same thing happens within any 'issue' sector: development will have it's top issue of the time, as will environment, human rights, and so on. Leaders and news editors are expected to know what that is, and maybe one or two things about it but no more. In so far as politicians and other leaders want to be seen to respond to 'public opinion' as manifest through 'media' these operating norms lead to a fix-one-thing-and-move-on effect, a scaled up version of [single action bias](#). In [an earlier blog](#) on the history of the plastics issue I argued that happened in the early 1970s, when the popularising impact of Thor Heyerdahl's ocean voyage helped shoot ocean pollution up the international agenda but oil pollution rather than plastic was incorporated into UN plans for action.

Once that happens, and the next issue heads the agenda, the 'done-with-it' effect creates a one-way valve resisting attempts to revisit the topic. In Europe, that may be happening right now with neonics, keeping scientific (Track 2 analytical) findings off the 'mainstream' agenda ([Track 1, run on Kahneman's System 1 rules](#)).

Implications of the Downs Cycle for Campaigns in General

Since Downs wrote his piece in 1972, the lines between public, media and politics have become considerably blurred, as we have moved from a mass-media world with a few channel controllers (newspapers, radio, tv etc) to a much more porous online and social media web. But the above dynamics still have an effect. At least in the Anglo world in recent years ‘top issues’ have included ‘bees’, rightwing political populism, Me Too, plastic, climate (at times synonymous with environment), Covid and Black Lives Matter.

In some ways the ‘onlining’ of communications has made the Downs cycle effect even stronger because ‘issue agendas’ have themselves become more globalised. Online has made it easier for activists and campaigners to discuss and create calls-to-action internationally and even globally but that can then embed an assumption that ‘messages’ need to work globally and resolutions require global action. Both of these can make change harder to achieve.

It may be worth campaign designers asking themselves:

- Can you get a result without having to ‘escalate’ your demand-making conversation, given that the escalating process involves reductionist focus? For example, designing campaigns to achieve change through geographically local or regional politics (and can add together to create a wider effect).
- Can you get a result without broadening the public conversation so that it requires endorsement by ‘general public opinion’? For cause groups the very idea that ‘public’ pressure is always required is often built into the organisational DNA but even a brief encounter with the methods of the Public Affairs (lobbying) industry shows that many of their successes on behalf of corporate clients, involve much more ‘below the line’ methods. This might require more effort to research, segment and communicate with specific audiences. The default audience strategy of many campaign groups seems to be to start with their own followers or members, and then work out to the wider public, with the aspiration to ‘reach the general public’. This is rarely necessary, may even be grandiose, and sets the highest possible hurdle.
- Can you get a result by changing behaviours first, from which changed opinions will follow, rather than setting out to win a public argument on the assumption that this is necessary to ‘change minds’? For example one effect of the EU ban on neonics has been that conventional farmers have had to find alternatives and some are adopting non-pesticide methods (see eg the UK [Farmers Weekly](#)). If these changes feel good to the individuals concerned, they may be available as influential messengers among their peers or in politics. This is very different from ‘pressuring’ people into change by asking them to change their minds (for instance in Britain many conventional farmers have long adopted a view against Organic Farming so trying to get them to ‘go organic’ raises identity issues which a switch to different technical options like companion cropping and IPM does not). See also [Increasing The Impact of Individual Behaviour Change](#) and [VBCOP](#).

Implications For Environmental Campaigning

Plainly neonics are far from finished business even in Europe, yet the 2018 ‘ban’ may have pushed neonics into the Downs ‘twilight zone’. But once an issue has dropped from the peak of public attention it is of course hard to re-escalate it. In the plastics case [Why We Suddenly Have a Plastics Crisis](#) I suggested that it was the role of two dramatic story-makers (Thor Heyerdahl in the 1970s, Charles Moore in the 1990s, both ocean-voyagers) who made the problem ‘discoveries’ in Track 1 intuitive public terms, that escalated the issue from analytical technical science world of Track 2. The subsequent slew of public plastic campaigns rode on the back of Moore’s wave, more than making it.

It was mass bee-hive deaths that catapulted the neonic issue into public consciousness. They were visible, and by comparison with wild insect deaths, easy to communicate and study. They also came with human story tellers attached (bee keepers). They were disruptive of business as usual – no crop pollination = no honey, less food. In 2018-19 [XR attempted](#) to be the disruption that elevated climate into an immediate (political) crisis.

If neonics are to be revived as an issue from problem-solved to a salient crisis, who will do this escalation from Track 2 to Track 1 now?

Governments allowing so-called ‘emergency uses’ on farms and ongoing pollution from uses such as pet treatments (presumably also contaminating the homes of unwitting pet owners), mean neonics are still getting into the European environment. Little work has been done in that area.

Organisations like the RSPB, one of the worlds biggest conservation groups, are also deeply involved in work of [BirdlifeInternational](#), and in Europe like the US, many of the most loved birds are visitors from other continents, where neonics are subject to few campaigns or controls. Millions of Britons are glued to the [BBC Springwatch](#) programmes each year, and millions of birdwatchers track the arrival of summer visiting birds. Are they a potential audience for Silent Spring II?

RSPB

If the environmental movement is to deal with the global neonic threat, it will need the influence of major European campaign groups both for their resources and because companies like Syngenta and Bayer are essentially European. Which includes groups like the RSPB. The RSPB is a much trusted brand in the UK but has taken a very cautious and low profile approach to neonics. In 2011 when I was researching what became Friends of the Earth’s ‘bee campaign’ and small groups like [Buglife](#) were going head to head with the chemicals industry and the entire farming lobby, I asked the RSPB about Tennekees’ research and was told that their Head of Science, David Gibbons, was ‘monitoring the science’. Rumour had it that the RSPB had decided not to take on the UK government (pro-neonic) or the pesticides industry, and that Tennekees had sent a batch of his books to leading figures in the RSPB but received little or no response.

In May 2018 I spent some hours interviewing Peter Melchett, then Policy Director director of the Soil Association (an organic farming organisation), himself a farmer, previously Executive Director of Greenpeace, an RSPB Council Member and government Minister. Melchett, who died later that year, was full of regret about the failure of

environment groups to tackle the ecological impact of pesticides, and particularly frustrated with the RSPB.

He told me:

“Do you know they [RSPB] haven’t said a single [expletive] word about neonicotinoids? From their introduction to their banning, from their science people. And they’ve been doing research on them for 3 years, Dave Goulson gave a talk at an RSPB science event, at the Zoological Society, must have been 3 years ago now, I went up to the guy who runs it, David something he’s called, and said “are you gonna do any work on Neonics?” And he said “oh yes we are” ... And then a year or two later I met a young person who had been a RSPB volunteer who’d worked on this project, because we got talking about neonics; I said “oh really what were you doing?” and she said “we were watching the partridges and other birds to see if they’d eat spilt neonicotinoid-treated seed”. I said “oh really fascinating did they?” Yes they did. And Dave had already shown it took 2 or 3 - 5 seeds to kill a partridge or something? Yes relatively few. So, so far as I know, they have been sitting on this information”.

So far as I can see the RSPB has indeed said little about neonics although it hasn’t said nothing. Search for ‘neonicotinoid’ or ‘pesticides’ on the RSPB ‘news’ listing and nothing comes up but it has posted numerous blogs at its community site, produced position papers and taken part in lobbying and scientific research.

For instance, in 2012 the RSPB [was asked](#) about use of neonics on its own experimental farm (Hope Farm). Ian Dillon the farm manager responded ‘this is a difficult subject, as conservation farmers we want to grow as good quality and high yielding crops as we can while at the same time encouraging wildlife to thrive’, and ‘it’s not yet clear whether neonicotinoids are causing declines of pollinators in the wild. We’ve set out our views here: www.rspb.org.uk/.../Neonicotinoids_and_bees_RSPB_position_tcm9-327906.pdf and we’re keeping this policy under review as more evidence emerges. You’ll see from our policy statement that we do intend to phase out use of neonicotinoids on our land’.

In 2015 it published a blog by Ellie Crane who said:

‘There is very strong [evidence](#) that pollinators and other wildlife are being exposed to neonicotinoids at potentially harmful levels. Some particularly worrying research recently showed that even [flowers around the edges of arable fields can be contaminated](#) - a concern for any farmer doing his or her best to help pollinators. We are therefore calling for a complete halt on all uses of neonics and a clear plan for filling in the remaining gaps in our knowledge’.

In 2017 David Gibbons published a detailed blog on tracking the science ([here](#)) linking to a large review study he was one of the authors of ([here](#)) and alluding to RSPB research on birds. He also said ‘The recent decision by the Environment Secretary, Michael Gove, to support a complete ban on the use of neonicotinoid insecticides came as a delightful surprise’.

The project Melchett was talking about seems (July 2020) to be the one [described on its website here](#). According to this RSPB page, after observations of large amounts of neonicotinoid-treated seed on farmland in 2013, the study began in 2015 with ‘assessment of

exposure risk’, continued in 2016, followed in 2017 by ‘assessments of NN exposure on the survival and behaviour of partridges’. It aimed to assess: the extent to which NN-coated seeds are left exposed on soil surfaces at crop sowing; NN residues on surface seeds and in growing crops; to identify the species of birds and mammals most likely to consume NN-coated seeds; and likely impacts of NN-exposure on bird survival and behaviour. Under ‘planned work’ it says ‘We recorded bird and mammal species seen foraging on recently sown fields, and consuming NN-coated seed at concentrations of seed spillage’.

In July 2020 I contacted scientist Will Peach at the RSPB who quickly sent me two papers which seem to stem from the work Melchett encountered, and which are described above. So from a science and conventional farm management point of view, the RSPB as a conventional (not organic) farm manager with its own science programme, could probably say that it has not been ‘sitting on’ findings, only waiting for the slow process of scientific research and publishing to take its course.

What do you do as scientists if you discover something urgently important? This dilemma has led to an [increasing proliferation](#) of online preprints, especially since [Covid](#).

From a campaign point of view, the RSPB may have made discoveries which might have made a significant difference in the campaign to get rid of neonics. Of course in terms of getting change, it’s not just publishing evidence that matters but what you do with it.

Now that the normally even more cautious Wildlife Trusts have called for a dramatic reduction in pesticide use, I hope that well-resourced environment groups like the RSPB will become significantly bolder in opposing the ecological wipe-out being caused by neonics and other agrochemicals. If the chemicals industry gets to decide the pace of change, the global picture for many forms of wildlife and the functioning of ecosystems that humans depend upon, is not good.