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Briefing for development of the UK's National Action Plan on Sustainable Use of Pesticides (NAP)

Summary of issues to include in the NAP:

1. An **ambitious national pesticide reduction target** - both by amount and toxicity
2. An emphasis on the growth of a healthy crop, with the least possible disruption to agro-ecosystems and encouragement of **natural pest control mechanisms**. This should be reflected in the inclusion of **strong measures for genuine Integrated Pest Management (IPM)*** development, support and dissemination. These measures should include (but are not limited to):
 - a. creation of an independent advice and research facility for farmers and agronomists, to include an increase in funding for research into agroecological farming systems, to provide farmers with an alternative and reduce the reliance on chemicals
 - b. develop and adopt a clear definition of what constitutes IPM and what practices cannot be counted as IPM
3. **Phase-outs of the use of pesticides in certain areas (e.g. urban areas) and pesticides of particular concern** for wildlife, endangered plants and fungi or human health

**Integrated Pest Management (IPM) is an approach to managing pests, diseases or unwanted plants under which chemical pesticides are used only as a last resort, if at all. IPM tackles pests and diseases through the use of a combination of different control methods, based on good crop husbandry and control methods, underpinned by effective pest, weed and disease monitoring strategies.*

The signatories to this briefing representing farming, environmental and health organisations are calling for a NAP that helps farmers and plays a role in addressing the ecological crisis by reversing the current dependence on pesticides.

Post-Brexit, the UK has an opportunity to do better and go further towards a shift to healthy farming systems, and a new NAP to drive sustainable pesticide policy plays an important role in this vision.

The refreshed NAP should show how the UK will **reduce risks and impacts of pesticide use on human health and the environment** and should **encourage the development and introduction of alternative approaches and techniques**, in order to reduce dependency on their use.

Impact of pesticides

Evidence is mounting for the impact of pesticides on nature and human health. As the UK leaves the European Union, it is vital that we are ambitious and committed to improving how our countryside is managed for people and the environment.



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Recent findings suggest that 41% of insect species are faced with extinction, and the top two reasons implicated are habitat loss and pollution from pesticides [1] [2]. A German study suggests biomass of insects may have fallen by 75% or more since the late 1980s [3]. These statistics are extremely worrying, not least because **insects are vitally important as food for other wildlife, especially birds such as the grey partridge (pictured), and as crop pollinators**. 75% of global crop types rely on animal pollination [4]. An insect “roadmap to recovery” published in January 2020 by more than 70 scientists, recommended a number of “no-regret” solutions including a massive reduction in synthetic pesticide use [5].



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In the UK, **farmland biodiversity** continues to decline, with bird populations more than halving since 1970 and arable wildflowers becoming one of the most threatened groups of plants in the UK. Changes in agricultural practices, including increased use of pesticides, have been the leading cause of this decline [6].

Pesticides are also known to have **detrimental impacts on human health** throughout the supply chain from grower to consumer. Numerous studies have shown that farmers, farmworkers and their families have elevated negative health outcomes related to pesticide exposure [7]. There are also concerns about the impact of pesticides on rural residents. Further, pesticide residues in food are an ongoing concern with much of the produce that is consumed in the UK being contaminated by multiple pesticide residues [8]. Human health impacts can be both acute and chronic and many pesticides that are still in use in the UK and appear in our food are classified as human carcinogens and endocrine disrupting chemicals, exposure to which can have serious long-term health impacts, particularly on vulnerable groups such as children [9].

In addition, the extensive use of pesticides is **not conducive to sustainable farming**. Their use reduces the abundance of pollinators and beneficial predatory insects, as well as polluting water courses and reducing soil quality. Earthworm abundance (vital for maintaining soil health and ensuring fertile soils for food production) is falling and pesticides are known to impact earthworm reproduction [10].

As the UN concluded in its recent report on Biodiversity for Food and Agriculture: **“Biodiversity makes production systems and livelihoods more resilient to shocks and stresses, including to the effects of climate change”**.

Solutions

1. **Setting an ambitious reduction target:**

This has been implemented in other countries (e.g. Denmark), so is not unique, and has shown to lead to a significant reduction. We recommend the UK Government sets an ambitious target – taking into account both **amount of pesticide and the risk/toxicity**, or “toxic load”. Tackling both is important, as a risk reduction target will ensure that the most harmful pesticides to human health or the environment are prioritised for reduction. Meanwhile, a target for cutting overall use will ensure that indirect and poorly understood effects from pesticides are reduced.



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In the current NAP, too much importance has been given to voluntary or industry approaches which have been shown not to work.

A French study [11] found by using measures such as crop rotation, mechanical weeding and managing sowing dates, total pesticide use could be reduced by 42% without any negative effects on both productivity and profitability in 59% of farms.

In addition, **a pesticide tax or levy could encourage a reduction in use** and could provide funding for point 2 below, as well as for a fit-for-purpose post-approvals monitoring system.

2. **Inclusion of strong measures for genuine IPM development, support and dissemination:**

The NAP should have a focus on defining, developing and disseminating genuine **Integrated Pest Management (IPM)**. At its foundation, this means working with nature using whole farm approaches (such as those carried out under organic farm management) with the aim to reverse the current



dependence on pesticides. For example, the 25 Year Environment Plan says “**For too long, IPM has simply been viewed as good practice for farmers to do voluntarily**”.

It is vital that farmers are supported to do this through a variety of means including the new land management schemes in each UK country, provision of independent advice and training, and increased research into alternatives (especially agroecological farming systems) and the NAP should set out these measures.

3. **Phase-outs of the use of pesticides in certain areas and pesticides of particular concern:**

We recommend a commitment to:

- **phasing out the use of all pesticides in urban settings** e.g. green spaces, pavements and around hospitals and schools. Many towns, cities and boroughs are already committing to the latter, but a national steer would drive this faster. In 2019 France banned the use of all non-agricultural pesticides and they are not alone – Belgium, the Netherlands, Luxembourg, Italy and numerous other countries, cities and towns throughout and Europe and the wider world have banned the use of pesticides to protect the health and wellbeing of their citizens
- **phasing out pesticides that are particularly harmful to wildlife, endangered plants and fungi, and people.** Pesticides should be proven to be safe before use, not proven to be damaging afterwards.

Myth buster

Pesticide use is declining: FALSE. While overall weight of pesticides has declined, the number of hectares treated with pesticides and the frequency of treatments have increased in the last 25 years. In addition, there have been increases in the toxicity of pesticides and the variety of pesticides used on a single crop [12] [13]

Reducing pesticide levels will lead to food shortages: FALSE The UN’s Food and Agriculture Organisation has warned that: “while the last half-century has witnessed striking increases in global food production through intensive use of inputs, such practices may deplete natural resources and impair the ability of agro-ecosystems to sustain production into the future”.

Ultimately, a move to agroecology, which works with healthy functioning ecosystems and less external inputs, would **protect the soils and lead to a more sustainable future for British farming**. Technological solutions, such as robotic weeding, developed with farmers can have a role in agroecological systems. The refresh of the NAP provides an opportunity to develop, support and progress a system of crop protection that better protects people, wildlife and farmers, and should bring together agricultural, environmental, health, resistance management and economic policies.



This briefing has been prepared and signed up to by the following organisations:



References

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- [13] FoE, "There's something wrong in the countryside: rising pesticide use in the UK," April 2019. [Online]. Available: <https://policy.friendsoftheearth.uk/print/pdf/node/119>.

Further reading

[Reversing the decline of Insects](#) – Dave Goulson and The Wildlife Trusts 2020

R. van Klink et al. [Meta-analysis reveals declines in terrestrial but increases in freshwater insect abundances](#). *Science*. 368, April 26, 2020, p. 417.

Macadam, C.R, Whitehouse, A. & Shardlow, M. (2020) [No Insectinction - how to solve the insect declines crisis](#). Buglife – The Invertebrate Conservation Trust, Peterborough

[Why the government must set ambitious targets](#): Friends of the Earth 2019

[How to go pesticide-free in towns and cities](#): PAN UK

[Cutting pesticide use, a farmer's perspective](#): Peter Lundgren