Scientists propose 10 policies to protect vital pollinators

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Carpenter bee, Xylocopa sp., visiting a coffee flower. Credit: Dino Martins

Pesticide regulation, diversified farming systems and long-term monitoring are all ways governments can help to secure the future of

pollinators such as bees, flies and wasps, according to scientists.

In an article published today in the journal *Science*, a team of researchers has suggested ten clear ways in which governments can protect and secure pollination services - vital to the production of fruits, vegetables and oils.

A recent global assessment by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) confirmed that large-scale declines in wild pollinators are happening in north Europe and North America.

The ten policies report, led by Dr Lynn Dicks at the University of East Anglia who also took part in the assessment, expands on its findings to provide clear suggestions on how to tackle the problem.

Dr Dicks said: "The IPBES report has made it very clear that pollinators are important to people all over the world, economically and culturally. Governments understand this, and many have already taken substantial steps to safeguard these beautiful and important animals. But there is much more to be done. We urge governments to look at our policy proposals, and consider whether they can make these changes to support and protect pollinators, as part of a sustainable, healthy future for humanity.

"Agriculture plays a huge part. While it is partly responsible for pollinator decline, it can also be part of the solution. Practices that support pollinators, such as managing landscapes to provide food and shelter for them, should be promoted and supported. We also need to focus publicly funded research on improving yields in farming systems like organic farming, which are known to support pollinators."

"Pressure to raise pesticide regulatory standards internationally should be

a priority. The World Health Organisation and the Food and Agriculture Organization of the United Nations have worked for many years to develop a global code of conduct on pesticide management, but there are still many countries that don't follow it. This means pesticides are in widespread use that are unacceptably toxic to bees, birds, even humans."

The report stresses the need to develop more in-depth knowledge about the status of pollinators worldwide. Dr Dicks said: "We need long-term monitoring of pollinators, especially in Africa, South America and Asia, where there is little information about their status, but the processes driving declines are known to be occurring."

The ten suggested policies in full are:

- Raise pesticide regulatory standards
- Promote integrated pest management (IPM)
- Include indirect and sublethal effects in GM crop risk assessments
- Regulate movement of managed pollinators
- Develop incentives, such as insurance schemes, to help farmers benefit from ecosystem services instead of agrochemicals
- Recognize pollination as an agricultural input in extension services
- Support diversified farming systems
- Conserve and restore "green infrastructure" (a network of habitats that pollinators can move between) in agricultural and urban landscapes
- Develop long-term monitoring of pollinators and pollination
- Fund participatory research on improving yields in organic, diversified, and ecologically intensified farming

Prof Simon Potts, co-author and research professor in Agri-Environment at the University of Reading, said: "The definitive UN report is a sign

that the world is waking up to the importance of protecting these vital pollinators. We hope that by going a step further and implementing these top policy opportunities, we can encourage decision-makers to take action before it's too late.

"Three quarters of the world's food crops benefit from animal pollination, so we must safeguard pollinators to safeguard the supply of nutritious foods."

The paper 'Ten policies for pollinators: What governments can do to safeguard pollination services' is publish in the journal *Science* on Friday 25 November.

More information: "Ten policies for pollinators," *Science*, science.sciencemag.org/cgi/doi … 1126/science.aai9226

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