

LIVING WITH ENVIRONMENTAL CHANGE

INSECT POLLINATORS INITIATIVE

CALL FOR EXPRESSIONS OF INTEREST

BACKGROUND

1. Insects contribute substantially to the pollination of a wide variety of cultivated and wild plants, and play important roles in both crop production and the maintenance of natural ecosystems. However, there is evidence that populations of managed and wild insect pollinators are currently declining in the UK and elsewhere, in the face of threats from rapid changes in the environment such as emerging pests and diseases, habitat loss, intensive agriculture and climate change. An evidence base is needed to inform the conservation of wild insect pollinators and to improve the husbandry of managed species, in order to avoid the potentially catastrophic loss of the ecosystem services they provide.
2. With a common recognition of the importance of honey bees and other insects in the pollination of food crops and wild plants, and in the light of concerns about recent widespread declines in their abundance, a consortium of five funders has come together in a joint initiative to support research into the causes and consequences of threats to pollinators, and to inform the development of appropriate mitigation strategies. Each of the five partners has a different mission and remit, but all of them agree that there is an urgent need for innovative research to provide a basis for reducing current declines and sustaining healthy and diverse populations of pollinating insects for the future.
3. Collectively, the Biotechnology and Biological Sciences Research Council (BBSRC)¹, the Department for Environment, Food and Rural Affairs², the Natural Environment Research Council (NERC)³, the Scottish Government⁴ and the Wellcome Trust⁵ will commit up to £10M over five years to support multidisciplinary research in this area under the auspices of the Living With Environmental Change (LWEC) partnership⁶. The initiative aligns with several of LWEC's six strategic objectives, in particular, those concerned with the implications of environmental change for ecosystem services (Objective B), food and water supply (C), and plant, animal and human health (D).

PURPOSE

4. The purpose of this initiative is to promote innovative research aimed at understanding and mitigating the biological and environmental factors that adversely affect insect pollinators. The causes of pollinator declines are likely to be multifactorial, involving complex interactions between pollinators, their pests and pathogens, and the environment. Multidisciplinary and systems-based approaches will be important in elucidating them. In particular, the funders are keen to bring to bear on these issues - alongside the expertise of the existing pollinator research community - relevant new skills such as state-of-the-art and high-throughput "post-

¹ www.bbsrc.ac.uk

² www.defra.gov.uk

³ www.nerc.ac.uk

⁴ www.scotland.gov.uk

⁵ www.wellcome.ac.uk

⁶ www.lwec.org.uk

genomic” technologies, and the latest techniques in epidemiological and ecological modelling.

SCOPE

5. The scope of the initiative includes all insect pollinators, both managed and wild. Expressions of interest are invited for projects to address challenges under one or more of the following themes, which are not intended to be prescriptive or exclusive. Research may address any levels of biological organisation from the molecular to the population or ecosystem, as well as interactions with the environment:

- **Health and disease:** understanding and mitigation of factors that have adverse effects on pollinator health, including pathogens, pests and chemical pollutants, or combinations of them, as well as host genetic or other factors that influence susceptibility or resistance.
- **Environmental change:** understanding and mitigation of the adverse effects of climate or other environmental change on pollinators, their pests and pathogens, or plant-pollinator interactions.
- **Agriculture and land-use change:** understanding and mitigation of the effects of changes in agricultural practice or land use that have adverse effects on pollinator abundance, diversity or behaviour, including competition for resources between pollinators.
- **Husbandry:** understanding to inform the better husbandry of managed pollinators, such as improvements in pest or disease control or enhancement of resistance.
- **Tools and data:** development and application of new tools for the investigation of pollinator health, including biological reagents, diagnostic techniques, monitoring and surveillance protocols, data analysis and modelling.

6. The funders are particularly keen to encourage innovative proposals from multidisciplinary groupings of researchers that bring together optimal combinations of expertise to address aspects of pollinator health and decline. Where appropriate, this should involve collaborations between scientists with established skills in pollinator research and others with wider relevant capabilities who could work together to their mutual benefit - drawing, for example, on specialist expertise at the leading edges of fields such as microbiology, pathology, epidemiology and ecology, and associated informatics and mathematical modelling.

7. Where relevant, the use of existing data is encouraged. There are many datasets available under licence to researchers that are potentially relevant to the study of pollinators and their interactions with the environment. They include:

Data available under the Pan-Government Agreement, Ordnance Survey, Next Perspective (aerial photography), Natural England data on SSSIs, Countryside Survey series, Land Cover Map series, and Environmental Change Network.

Many such datasets are accessible through the NERC Environmental Bioinformatics Centre or the Environmental Information Data Centre and the Biological Records Centre at the Council's Centre for Ecology and Hydrology.

8. In addition, the funders recognise the knowledge of pollinators that resides with beekeepers and others in the wider “stakeholder” community. Their participation in research proposals would be welcomed as project partners, but such individuals or organisations are not eligible to apply for funding from the initiative (see paragraph 9 below).

ELIGIBILITY

9. Expressions of interest will be accepted only from eligible individuals in the following classes of eligible UK and Republic of Ireland institutions:
 - Higher education institutions (HEIs)
 - Research Council institutes
 - RCUK-approved Independent Research Organisations
 - Government Research Establishments
 - Scottish Government Main Research Providers
10. Overseas research institutions are eligible to participate in and to receive funding from the initiative as collaborative partners, but only as co-applicants on proposals led by an eligible UK institution. Expressions of interest will not be accepted directly from overseas institutions.
11. To be eligible to submit an expression of interest, an individual applicant must be resident in the UK and hold a position that is resourced from the central funds of an eligible institution. The applicant’s position should be at lecturer level or above in a HEI, or its equivalent in other institutions. Research assistants, technicians or other researchers employed on short-term projects or Research Council grants are not eligible to apply.
12. Prospective applicants who have any doubts about their individual or institutional eligibility should contact BBSRC which is leading the administration of the initiative (see paragraph 21 below).

FUNDING

13. Most of the projects funded through this initiative are likely to be of three years’ duration, but where appropriate and scientifically justified shorter or longer (but not more than five years) projects will be supported - for example (but not exclusively) to facilitate, respectively, exploratory “pilot” studies or work requiring replicated data collection over a number of seasons. In addition, the level of support needed for projects might be expected to vary. Although multidisciplinary groupings of researchers are particularly encouraged, some of the challenges identified in paragraph 5 above - notably some of those under the tools and data theme - might be appropriately addressed through more narrowly focused smaller and/or shorter projects.
14. There are differences between the funding partners in the proportion of the full economic cost (FEC) of research that they normally cover. To take account of these differences, projects under this initiative will be funded at the “average” level of 75% of FEC.
15. Funding awarded under the initiative will be administered by BBSRC. It will be subject to the Council’s usual terms and conditions for research grants, and specific additional or alternative requirements to be agreed jointly by the funding partners.

APPLICATION AND ASSESSMENT PROCESS

16. The application and assessment process for the initiative comprises two stages: an open call for expressions of interest, followed by invitations to selected applicants to submit full proposals.

Expressions of interest

17. Expressions of interest must be submitted on BBSRC's outline proposal form by 16.00 on 23 September 2009, through Research Councils UK's Joint Electronic Submission (Je-S) system⁷. In order to do so, both individuals and institutions must be registered on the Je-S system. Any eligible institution that intends to submit an expression of interest but is not currently registered to use the system should contact the Je-S Helpdesk (JeSHelp@rcuk.ac.uk; 01793 444164) at the earliest opportunity. Individuals may apply to use the system to start preparing applications before their institutional registration is complete, but applications cannot be submitted to BBSRC until the registration of the institution has been completed.
18. The "Case for Support" attachment to the outline proposal form should comprise a summary of not more than two pages describing the proposed research, how it would address the aims of the initiative and its potential impact.
19. Expressions of interest will be assessed against the following criteria:
- Does the proposed research fall within the scope of the call?
 - Do the applicants have relevant expertise to carry out the proposed research?
 - Have the applicants adequately considered the potential impact of the proposed research?
 - Are the resources requested appropriate to carry out the proposed research?

Full proposals

20. Applicants whose expressions of interest meet the above criteria will be invited to submit full proposals. Further guidance about the requirements for full proposals will be provided at that stage.

TIMETABLE

21. The timetable for the initiative is expected to be as follows:
- | | | |
|---|-------------------|--|
| • | 3 July 2009 | Launch of call for expressions of interest |
| • | 23 September 2009 | Closing date for expressions of interest |
| • | Mid-October 2009 | Assessment of expressions of interest |
| • | 19 October 2009 | Invitation of full proposals |
| • | 13 January 2010 | Closing date for full proposals |
| • | 18-19 May 2010 | Assessment of full proposals |
| • | End June 2010 | Notification of funding decisions |

⁷ www.so.stfc.ac.uk/jes/jes1/jes1system.asp

CONTACT INFORMATION

22. The administration of the initiative is being led by BBSRC on behalf of all of the funding partners. Enquiries should be addressed to:

Debbie Harding
e-mail insect.pollinators@bbsrc.ac.uk
Tel 01793 414653

Expressions of interest must be submitted through the Je-S system by 16.00 on 23 September 2009.