ReNature

Promoting research excellence in nature-based solutions for innovation, sustainable economic growth and human well-being in Malta.

Science and policy for pollinator protection: The All-Ireland Pollinator Plan

Prof Jane Stout
Trinity College Dublin

ReNature 5th Training Course: Nature-based solutions and the science-policy interface 16.09.20

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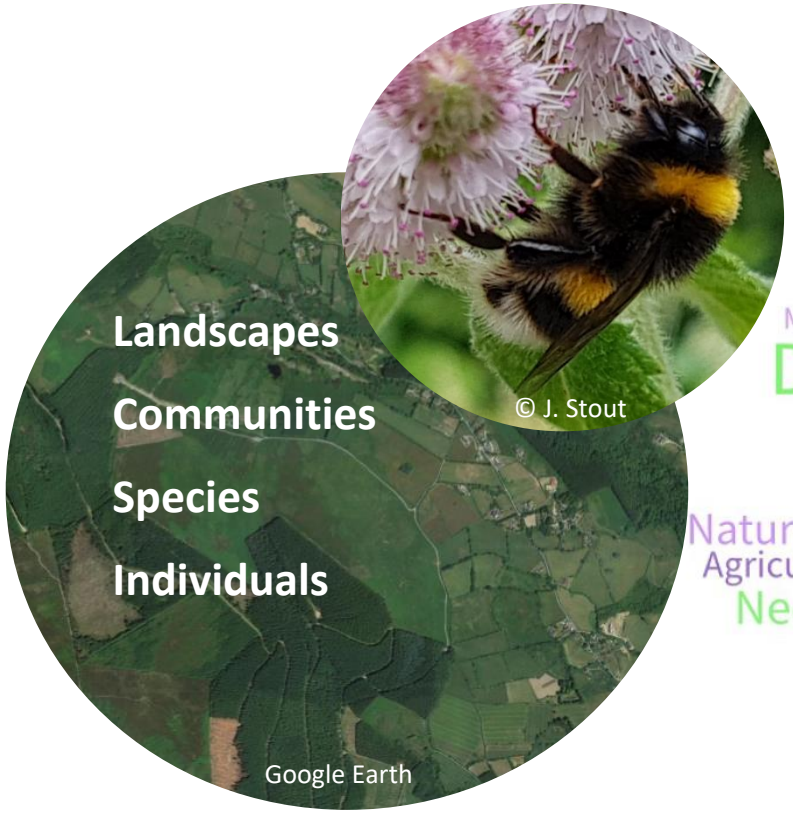
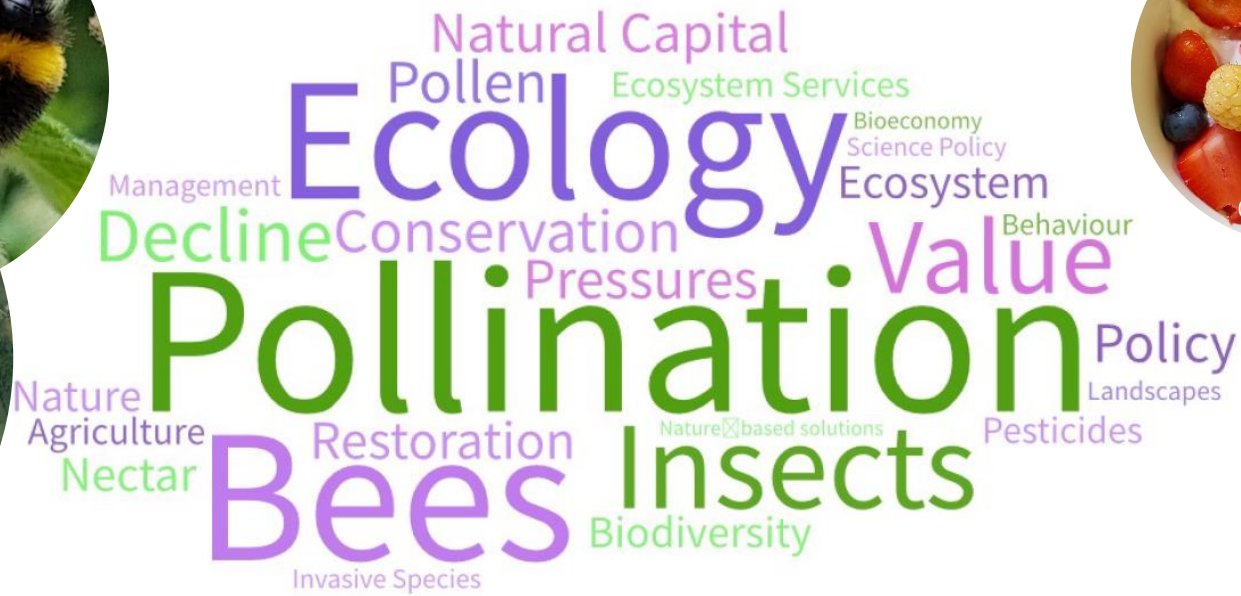
Ecological interactions ⟷ Human society





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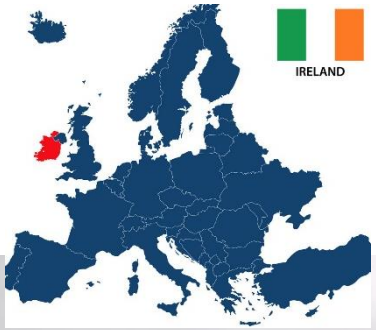
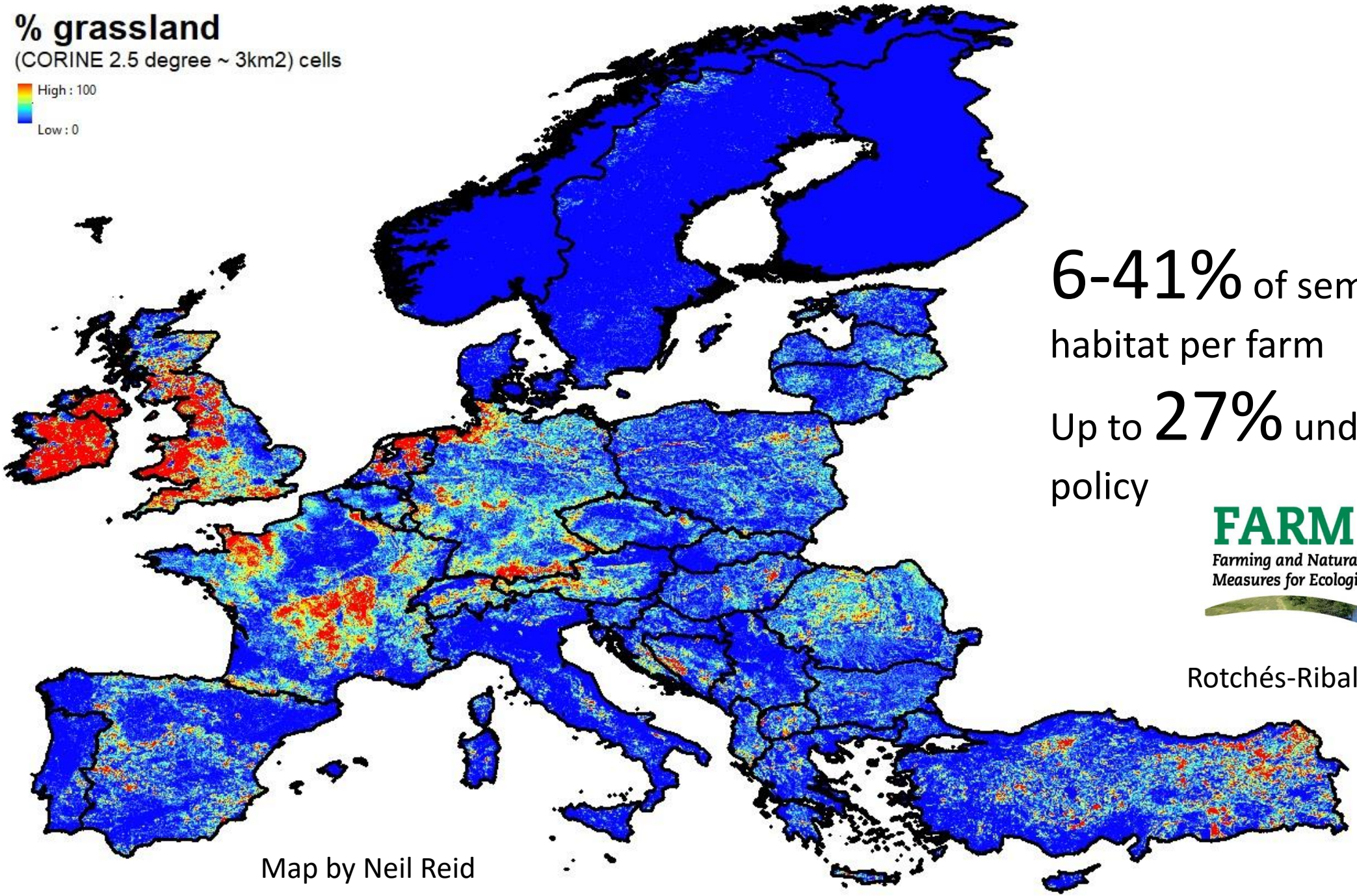
Ireland’s nature



31,500 species living within 117 habitats


Protected habitats
85% in unfavourable condition
© J. Stout



Map by Neil Reid

6-41% of semi-natural habitat per farm

Up to 27% undervalued by policy

FARM ECOS
Farming and Natural Resources: Measures for Ecological Sustainability

Rotchés-Ribalta et al. (2020)


Of 31,500 species
10% assessed for conservation status
1/5 at risk of extinction

Ireland's bees

1 honey bee
21 bumble bees
77 solitary bees

1/3 at risk of extinction

Fitzpatrick et al. (2006)

Protected species

Agri-environmental scheme:

Solitary bee hotels and sand piles

Saorla Kavanagh

Why does pollinator decline matter?

75% crop species worldwide are animal pollinated

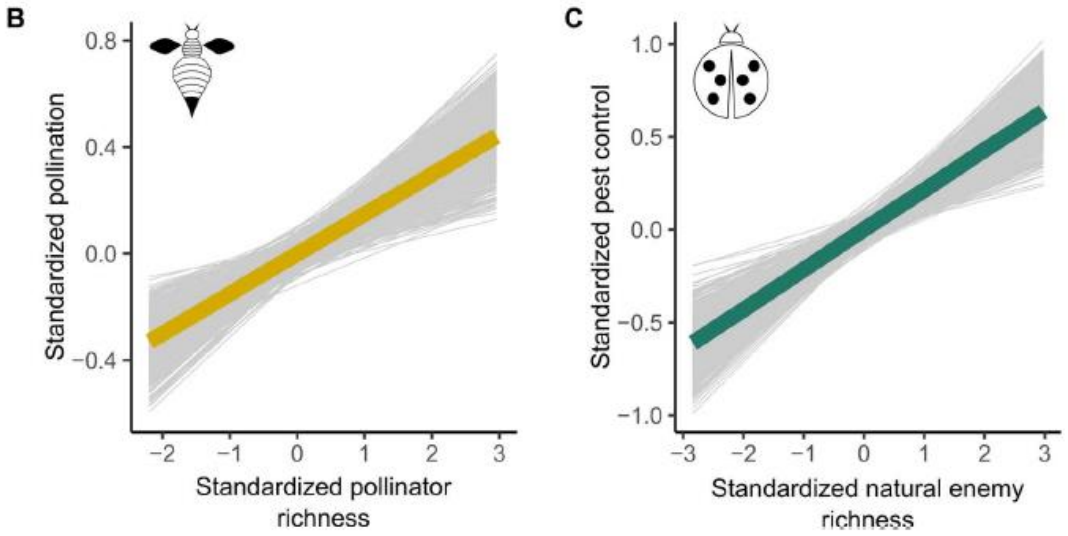
- In Ireland – apples, strawberries, blackcurrants, raspberries
- Irish food crops up to **€59M** per year (2005-2014)

Stout et al. (2019)

http://www.epa.ie/pubs/reports/research/biodiversity/Research_Report_291.pdf

Why does pollinator diversity matter?

More species => more pollination and pest control in farmland



Dainese et al. 2019 Science Advances

Different types of pollinators have different traits – this can maximise yield across crops

Woodcock et al. 2019 Nature Comms

Why does pollinator decline matter?

E.g. fruit and seeds for farmland animals & maintenance of plant communities

E.g. nitrogen fixing legumes

Value of pollination services

75% crop species worldwide are animal pollinated

87.5% flowering plant species are animal pollinated

Stout et al. (2019)

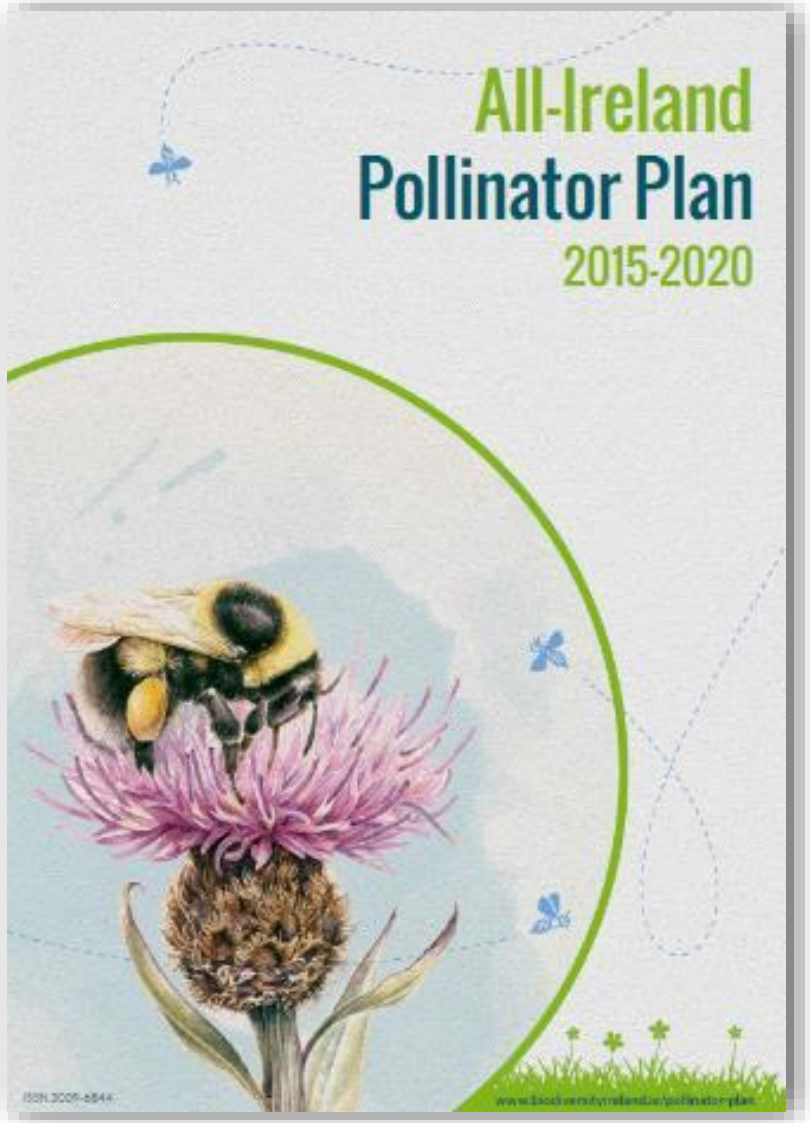
Drivers of decline

Habitat loss – **homelessness**
Decline in wildflowers – **hunger**
Pests and diseases – **sickness**
Pesticides – **poisoning**
Climate change – **changing environment**

Photo: www.agriland.ie/farming-news/what-size-should-my-paddocks-be-and-how-many-do-i-need/

All-Ireland Pollinator Plan

Úna FitzPatrick



1. Making Ireland pollinator friendly
   - Farmland, public and private land
2. Raising awareness of pollinators and how to protect them
3. Managed bees - supporting beekeepers and growers
4. Expanding our knowledge on pollinators and pollination services
5. Tracking change – collecting evidence to track change and measure success

National Biodiversity Data Centre
Documenting Ireland's Wildlife

www.pollinators.ie

AIPP: the approach

Collaboration: Republic of Ireland and Northern Ireland are working together to share knowledge, experience and resources to address the problem

100+ partners fund their own actions

The Plan is supported by **68** organisations

Integrate existing networks/partnerships

www.pollinators.ie

AIPP: the approach

Clear guidance on how to help

EVIDENCE BASED

- ✓ Pollinator-friendly actions, each very clearly explained
- ✓ Lots of **options**
- ✓ All actions are pragmatic & low cost
- ✓ Free on website

www.pollinators.ie

AIPP: the approach

Positive messaging

- ✓ Celebrate what we have
- ✓ Bees as a vehicle for wider biodiversity
- ✓ Celebrate best practice
- ✓ It is important that people feel they are part of something – ***together we can make a difference***

www.pollinators.ie

AIPP: the approach

Simple messages and branding, range of comms approaches

www.pollinators.ie

ANIMATION: All-Ireland Pollinator Plan

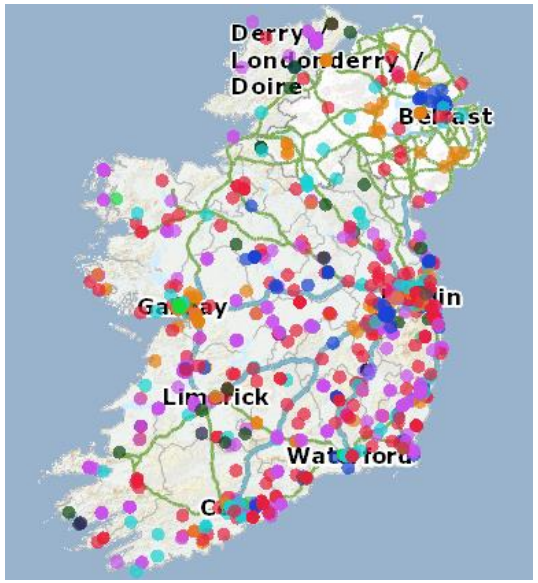
https://youtu.be/BXHAHHHki_E

AIPP: the successes

Since 2015…

Actions for pollinators across Ireland, across sectors

~4,000 actions over >3,000km^2



Reached all 3,200 primary **schools** in RoI

50% of **Councils** have already formally partnered & agreed to take actions

162 **local communities** have become pollinator-friendly

The number of **business** supporters now stands at **>260**

Policy National Biodiversity Action Plan 4.1.8. "Implement the All-Ireland Pollinator Plan"

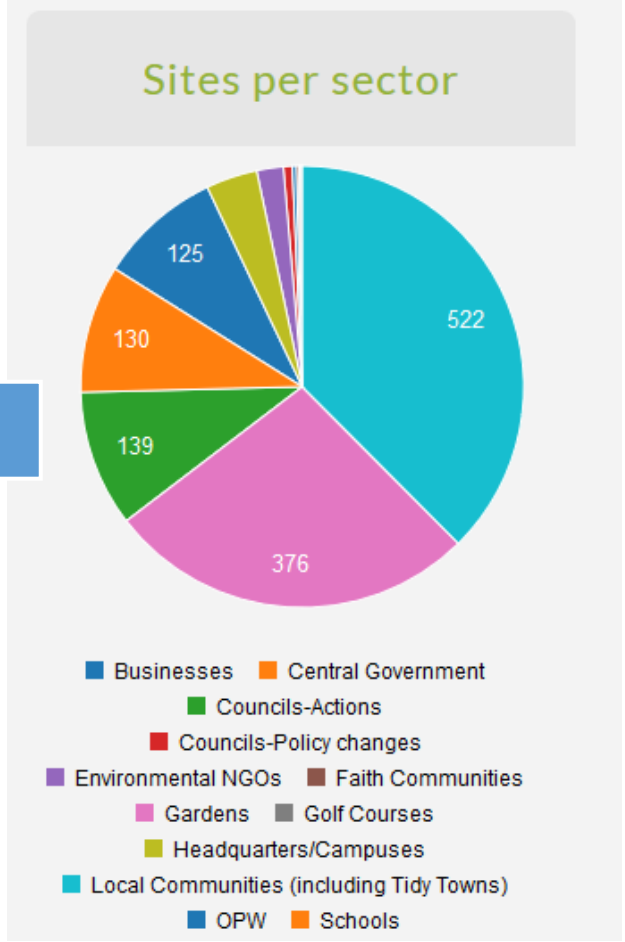
Joined global efforts via **Promote Pollinators**

www.pollinators.ie

AIPP: the successes

Short-term

Buy-in



'Actions for Pollinators'

pollinators.biodiversityireland.ie

Medium-term

Returning food and shelter to the landscape

Long-term

??

Science and policy for pollinator protection:

Summary:

- Science underpins understanding of pollinator decline and how to tackle it
- Helps to make the case for action
- Policy gaps filled with voluntary, bottom-up Plan
  - Participatory approach
  - Cross sectoral
  - Clear evidence-based guidance
  - Simple positive messaging

Úna FitzPatrick

Juanita Browne

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Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

www.pollinators.ie

National Biodiversity Data Centre
Documenting Ireland's Wildlife

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