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## ALL-IRELAND POLLINATOR PLAN 2015-2020 FINAL REVIEW DECEMBER 2020



An Chomhairle Oidhreachta The Heritage Council



### Background

Pollinators are in decline, with one-third of our 98 wild bee species threatened with extinction from the island of Ireland. The problem is serious and requires immediate attention to ensure the sustainability of our food, avoid additional economic impact on the agricultural sector, and protect the health of the environment.

In publishing the All-Ireland Pollinator Plan in September 2015, Ireland became one of the first countries in Europe to address this problem. At its core, it is about providing food and shelter across all types of land so that pollinators can survive and thrive. As a shared plan of action, it is about coming together to work strategically and cohesively over the period 2015-2020, so that collectively we can take steps to reverse pollinator losses and help restore populations to healthy levels.

It was supported by more than 100 governmental and non-governmental organisations and it identified 81 actions to make Ireland, North and South, more pollinator friendly. A 16-member steering group provided oversight of the Plan, with implementation coordinated by the National Biodiversity Data Centre (2016-2020).

The All-Ireland Pollinator Plan 2015-2020 had five objectives:

- 1. Making Ireland pollinator friendly (farmland, public land & private land)
- 2. Raising awareness of pollinators and how to protect them
- 3. Managed pollinators supporting beekeepers and growers
- 4. Expanding our knowledge on pollinators and pollination service
- 5. Collecting evidence to track change and measure success

Within each objective, targets were set, and actions identified to help achieve that target. Responsibility for delivering the 81 actions has been shared out between the supporting organisations. In this Final Review, we have assessed the Plan based on what has been achieved within each objective.

The All-Ireland Pollinator Plan was developed from the ground up to meet the challenge of pollinator declines across the island. This Final Review aims to assess transparently and honestly what it has achieved in its first five years. A new version of the Plan will be published for 2021-2025.

### All-Ireland Pollinator Plan Steering Group 2020:

Member	Affiliation	
Dr Úna FitzPatrick (chair)	National Biodiversity Data Centre	
Prof Jane Stout (deputy chair)	Trinity College Dublin	
Mr Ken Bradley	DAERA; Environmental Policy Division	
Ms Pauline Campbell	DAERA; Northern Ireland Environment Agency	
Ms Niamh Carmichael	Centre for Environmental Data and Recording (CEDaR)	
Ms Rachael Conway	Butterfly Conservation	
Ms Hannah Denniston	Department of Agriculture, Food and the Marine	
Ms Eimear Fox	Local Communities, Tidy Towns Adjudicator	
Ms Susie Hill	Ulster Beekeepers Association	
Dr Catherine Keena	Teagasc	
Dr Mary Montaut	Federation of Irish Beekeepers' Associations (FIBKA)	
Dr Archie Murchie	Agri-Food and Biosciences NI	
Ms Anne Murray	Local Authorities: Dún Laoghaire-Rathdown County Council	
Dr Brian Nelson	National Parks and Wildlife Service	
Ms Sarah Jane Phelan	Transport Infrastructure Ireland	
Ms Melina Quinn	National Trust	

Thanks to the following past members who assisted with the Plan over the first five years: Dr John McMullan, Dr Gerry Clabby, Mr Jerome Walsh, Ms Catherine Bertrand, Dr Tomás Murray, Dr Damian McFerran & Dr Veronica Santorum.

### All-Ireland Pollinator Plan funding 2016-2020

- The All-Ireland Pollinator Plan was developed voluntarily by the Steering Group in 2014-2015. This group also provide oversight of the Plan on a voluntary basis.
- Implementation was project managed on a part-time basis (1.25 days/week) by Dr Úna FitzPatrick within her current role as Senior Ecologist in the National Biodiversity Data Centre, which is a programme of the Heritage Council. She is supported by Prof Jane Stout in Trinity College Dublin.
- The following organisations have funded one full-time project officer position (plus small T&S budget). From 2016-2019 if was jointly funded by the Heritage Council and Bord Bia. In 2020, it was funded by SuperValu. Funding for the project officer post was agreed on a year-to-year basis and has not had full continuity.

Year	Funding provided by:	Project Officer		
2016	Jointly provided by Bord Bia and the Heritage Council	Erin Jo Tiedeken		
(April-	to support the agri-business, and Local Authority and			
Dec)	local community sectors, respectively			
2017	Jointly provided by Bord Bia and the Heritage Council	Jan-May: Erin Jo Tiedeken		
	to support the agri-business, and Local Authority and	June-Dec: Juanita Browne		
	local community sectors, respectively			
2018	Jointly provided by Bord Bia and the Heritage Council	Jan-June: Juanita Browne		
	to support the agri-business, and Local Authority and	Sept-Dec: Job share Juanita		
	local community sectors, respectively	Browne & Gemma Hughes		

2019	Jointly provided by Bord Bia and the Heritage Council to support the agri-business, and Local Authority and		
	local community sectors, respectively		
2020	Provided by SuperValu to support the school and local	Juanita Browne	
(Feb-	community sectors.		
Dec)			

- Office space and other associated project officer costs were borne by the National Biodiversity Data Centre from its core budget.
- The All-Ireland Pollinator Plan does not have project funding, nor was a large project budget ever envisaged. It was set up to be as cost effective as possible. Partner organisations who agreed to support the Plan, and take actions on the land they manage, did so on the understanding that they would fund this themselves.
- The Department of Agriculture, Food and the Marine (DAFM) has provided €15,000 from 2016-2020 inclusive. This has been invaluable in allowing the publication of resources and outreach material.
- Website management/hosting and development of the GIS-based mapping system to track progress across sectors were funded by the National Biodiversity Data Centre from within its core budget.
- We acknowledge the assistance of other organisations who have independently funded specific activities directly in support of the All-Ireland Pollinator Plan since 2016. Particularly those who have funded large print runs of guideline documents (NPWS, NIEA, Local Authority Heritage and Biodiversity Officers, Environmental Awareness Officers); videos and animations (page 8) or key awards (Local Authority Heritage and Biodiversity Officer network).
- In N. Ireland, Department of Agriculture, Environment and Rural Affairs (DAERA) encourage recipients of the Environment Fund to implement the Pollinator Plan. The Northern Ireland Environment Agency (NIEA) provide grant aid to Butterfly Conservation and Buglife who both actively promote and encourage pollinator recording.



### International

The All-Ireland Pollinator Plan has been featured in presentations made by Dr Úna Fitzpatrick and Prof Jane Stout at many international events and has attracted international acclaim and interest. Advice has been requested from more than 10 countries, both within and outside Europe, interested in learning from the initiative and developing something similar. The AIPP has informed the development of pollinator strategies published in Scotland (2017), Norway (2018) and the Netherlands (2018). We have also worked with the EU Pollinator Initiative, which aims to encourage all Member States to

develop national pollinator plans. In 2020, they published a template, based on the All-Ireland Pollinator Plan 2015-2020 to help national authorities create effective pollinator strategies. Given the success of the Plan, the government in the Republic of Ireland agreed to join 'Promote Pollinators, the Coalition of the Willing on Pollinators' in 2018. The coalition was established in 2016 during the 13th Conference of the Parties to the Convention on Biological Diversity (CBD COP13) and aims to share knowledge and expertise globally.

## **Thank You**

The All-Ireland Pollinator Plan is a shared plan of action. It is about all of us coming together to try to create an island where pollinators can survive and thrive. On behalf of the Steering Group, we extend our thanks to all the partners involved in the Plan. Progress to date is entirely due to their support, goodwill and enthusiasm. We also extend our enormous thanks to all those members of the public – whether in their garden, farm, park, school, local community, faith community or business property – who have expressed their support and engaged with the Plan in its first five-year phase. We look forward to an even more ambitious second phase for 2021-2025.

## Working together for Biodiversity: Tales from the All-Ireland Pollinator Plan 2015-2020



We have also published this booklet (December 2020) to mark the end of the first phase of the AIPP, and celebrate the positive changes already made. It is the actions on the ground that make the difference. Often, helping biodiversity calls on us to manage land in a different way than we're used to, sometimes in the face of local opposition. The people who have implemented changes across the island are the ones who deserve all the credit. This booklet, designed to show the diversity of actions and range of sectors helping, mentions just a small fraction of the thousands of people who have made this Plan a reality. To those thousands of people, groups and organisations who should also be in this booklet, we can only say that we are very grateful to work together with all of you on this.

Download the booklet here: https://pollinators.ie/working-together-for-biodiversity

## Overview

Success in protecting our pollinators can be measured in the short, medium, and long-term.

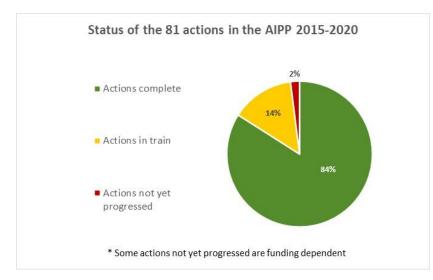
- 1. Short-term: Having an All-Ireland strategy and buy-in for the plan
- 2. Medium-term: Actions on the ground to return food and shelter for pollinators to the landscape
- 3. Long-term: Positive increases in pollinators themselves across the landscape

### Short-term: Having an All-Ireland strategy and buy-in for the plan

Agreeing a plan of action to address the problem

### Final assessment: HUGELY SUCCESSFUL

- ✓ The Pollinator Plan was developed from the ground up without direct funding. It has seen widescale buy-in, with more than 100 governmental and non-governmental organisations agreeing their support.
- ✓ It is a proven example of effective North-South cooperation, with both jurisdictions coming together to work within a common framework.
- ✓ Organisations are supporting the Plan in word, but also in deed. At the end of the five years, the 81 actions in the Plan have been delivered. Those remaining in train are long term or research related.
- ✓ The All-Ireland Pollinator Plan is regarded as an example of best practice internationally.
- ✓ Given the success of the Plan, the RoI government agreed to join 'Promote Pollinators, the Coalition of the Willing on Pollinators' in 2018. Ireland became the 21<sup>st</sup> country to join this CoP initiative aimed at sharing knowledge and expertise globally.
- ✓ Support for the Plan has been integrated into the Rol National Biodiversity Action Plan 2017-2021 (Action 4.1.8. Implement the All-Ireland Pollinator Plan) and the Biodiversity Strategy for Northern Ireland to 2020.
- ✓ The All-Ireland Pollinator Plan has evolved into a widespread and successful national biodiversity conservation initiative that has a large public profile.



The 81 actions in the 2015-2020 All-Ireland Pollinator Plan have been delivered:



### Status of the 81 actions broken down by the Pollinator Plans five main objectives:

### Ensuring everyone knows how to help

Upon agreeing a framework to address the problem, a key step in implementation has been the development of guidelines for different sectors, with evidence-based actions they can take to help. For each, we carried out extensive consultation with the sector to ensure they were realistic, pragmatic, and communicated as effectively as possible.

Between 2016-2020, the following were developed and made available to freely download from the website, along with lots of other additional resources <u>www.pollinators.ie</u>:

### Evidence-based guideline documents:

- Junior Pollinator Plan (English and Irish language versions) 2016
- Local Communities: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 1. 2016
- Gardens: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 2. 2016
- Businesses: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 3. 2016
- Councils: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 4. 2017
- Farmland: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 5. 2017
- Faith Communities: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 6. 2018
- Transport Corridors: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 9. 2019
- Pollinator-friendly management of: Group Water Scheme Sites. All-Ireland Pollinator Plan, Guidelines 7. 2018
- *Pollinator-friendly management of: Golf Courses.* All-Ireland Pollinator Plan, Guidelines 8. 2019
- *Pollinator-friendly management of: Sports Clubs*. All-Ireland Pollinator Plan, Guidelines 11. 2020

### <u>How-to-guides</u>:

- Creating wild pollinator nesting habitat. All-Ireland Pollinator Plan, How-to-guide 1. 2016
- Collecting and using pollinator-friendly wildflower seed. All-Ireland Pollinator Plan, How-to-guide 2. 2016
- *Hedgerows for Pollinators*. All-Ireland Pollinator Plan, How-to-guide 3. 2016
- *Creation and management of a wildflower meadow*. All-Ireland Pollinator Plan, How-to-Guide 4. 2017
- Develop a Pollinator Plan for your school. All-Ireland Pollinator Plan, How-to-Guide 5. 2018
- *Protecting rare pollinators: Great Yellow Bumblebee.* All-Ireland Pollinator Plan, How-to Guide 6. 2019
- *Guidelines for users of imported bumblebee colonies*. All-Ireland Pollinator Plan, How-to Guide 7. 2020

Supporting videos & animations currently produced: http://www.pollinators.ie/videos/

- Short animation on the Pollinator Plan (2018)<sup>3</sup>
- Short animation on Ireland's wild bees (2019) <sup>3</sup>
- Video: Introduction to the AIPP (2017) <sup>1</sup>
- Video: How Farmers can support the Pollinator Plan (2017)<sup>1</sup>
- Video: How Councils can support the Pollinator Plan (2017)<sup>1</sup>
- Video: How Community Groups can support the Pollinator Plan (2018)<sup>1</sup>
- Video: Managing Healthy Hedgerows for Pollinators (2018)<sup>2</sup>
- Video: Hedgerows Lifelines on Farmland (2018)<sup>2</sup>
- Video: All-Ireland Bumblebee Monitoring Scheme (2018)<sup>1</sup>
- Video: How to conduct a Flower-Insect Timed count (2020)<sup>2</sup>
- Video: Creating Meadows for Biodiversity (2020)<sup>4</sup>

• Video: Management tips for Wildflower Meadows (2020)<sup>4</sup>

Videos were independently funded by Waterford County Council<sup>1</sup>, Tipperary County Council<sup>2</sup>, Kildare and Wicklow County Councils<sup>3</sup>, Kildare, Wicklow & Kilkenny County Councils<sup>4</sup>







# Medium-term: Actions on the ground to return food and shelter for pollinators to the landscape

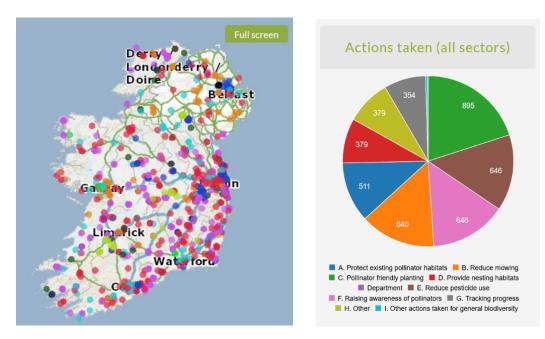
Changes to land management to make the island more pollinator friendly

Final assessment: POSITIVE START WITH THE BEGINNINGS OF REAL CHANGE APPARENT

- ✓ Within each sector, where evidence-based guidelines were produced and made available, we have seen real engagement with the Plan in terms of actual or planned changes to land management.
- ✓ This is an ongoing medium to long-term goal. Key successes within each sector are discussed in the rest of the document.

Actions logged on the mapping system Actions for Pollinators as of 30<sup>th</sup> November 2020:

Actions for Pollinators is a publicly available GIS-based mapping system that was developed by the National Biodiversity Data Centre. Anyone who has taken a pollinator-friendly action can log their site and the action(s) taken. It is intended to help track progress and to help with coordination at local levels. The system is not yet being widely used and reflects only a fraction of the actual actions taken. However, as of 30/11/20 more than 1,600 individual sites have logged more than 4,400 pollinator-friendly actions. The total area managed for pollinators logged on the system is 3320.14 km<sup>2</sup>



Visit https://pollinators.biodiversityireland.ie to see live map and figures

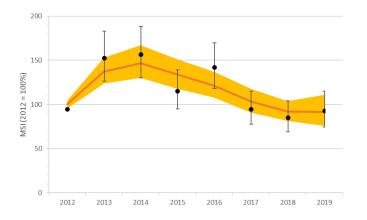
### Long-term: Positive increases in pollinators themselves across the landscape

Greater abundance of common species; preventing disappearance of rarer species

### Final assessment: IMPACT OF THE PLAN CANNOT YET BE ASSESSED

- ✓ This is a long-term action and the success of the Plan in reversing declines cannot yet realistically be assessed. Assuming food and shelter can be returned to the landscape through the AIPP, we would expect to see positive impacts on wild pollinator abundances by 2025.
- ✓ Only one scientifically rigorous monitoring scheme is currently in place. The All-Ireland Bumblebee Monitoring Scheme is a citizen science initiative that was established by the National Biodiversity Data Centre in 2012. The timing of the development and publication of the AIPP was linked to this scheme so that some baseline data would be in place before implementation.
- ✓ Current trends within the All-Ireland Bumblebee Monitoring Scheme are based on eight common species where there is sufficient information to accurately assess changes. The current overall trend from 2012-2019 is a year-on-year decline of 4.8% (with a 95% confidence interval around our estimate being ± 2.4%). We must err on the side of caution in reading too much into these trends, as a longer-term dataset is necessary to ensure accuracy. However, things remain precarious for our common bumblebees and some individual species are showing worrying losses. The common carder bumblebee has traditionally been one of our most common bumblebees but is now showing a strong decline. It highlights the necessity of the AIPP and the urgency with which it needs to be implemented.
- ✓ The AIPP has consistently flagged that additional national monitoring programmes on wild bees and hoverflies are required to properly assess the long-term impact of the Plan.

## All-Ireland Bumblebee Monitoring Scheme: Multispecies Index of bumblebee population change 2012-2019



The multi-species index derived from the amalgamation of the population trends of 8 common species of bumblebees from 2012 to 2019. The dark orange line is the smoothed trend line, and the circle markers represent the multispecies index per year. Error bars (on markers) and the shaded area surrounding the trend line are the 95% confidence intervals.

# REVIEW OF EACH OF THE FIVE OBJECTIVES IN THE ALL-IRELAND POLLIANTOR PLAN 2015-2020

## **Objective 1: Making Ireland pollinator-friendly: farmland, public & private land**

## 1.1 Making Ireland pollinator-friendly: Farmland

### Final assessment: POSITIVE START BUT MUCH WORK STILL NEEDED

Good relationships established with all stakeholders. Evidence-based actions for farmland identified. Significant groundwork occurring behind the scenes with farmers to identify realistic future mechanisms to encourage all farms to become more pollinator friendly.

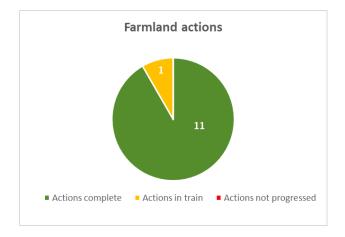
2015-2020: Four targets & 12 actions

1.1.1: Increase the area of farmland that is farmed in a pollinator-friendly way (4)

1.1.2: Create a network of meadows and other flower-rich habitats to serve as pollinator havens (1)

1.1.3: Encourage the sustainable use of agricultural pesticides (insecticides, herbicides & fungicides) (2)

1.1.4: Provide clearer information on pollinators to the farming community (5)



Action in train: Provide farmers with a system that will indicate potential crops based on geographic area, known pollinator distribution, and floral resource availability (this is a long-term aim that is linked to future research).

- Publication of evidence-based pollinator actions for farmland in collaboration with farmers, farming organisations and key stakeholders.
- ✓ Positive relationship with the Department of Agriculture, Food and the Marine (DAFM) and discussions on the best pollinator measures for future agri-environment schemes.
- ✓ Incorporation of pollinator measures within the current Department of Agriculture, Environment and Rural Affairs (DAERA) Environmental Farming Scheme (EFS) in NI.

- ✓ Agri-ecological pollinator-related research is being funded by DAFM including two large collaborative projects. Farm-Ecos is exploring novel biodiversity enhancement measures for Irish farmland, and assessing pollinators in relation to habitat quality, floral resource availability and landscape context. PROTECTS is assessing pesticide residues in floral rewards and soils in relation to risk to pollinator health.
- ✓ Establishment of good collaborative links with the bee health network in DAFM.
- ✓ Increased awareness of the pesticide usage statistics collected by AFBI and others
- ✓ Close working relationship with Bord Bia and Origin Green quality assurance scheme.
- ✓ National Biodiversity Data Centre successfully secured €1,194,679 funding for a five-year project (2019-2023) on protecting farmland pollinators through the European Innovation Partnership (EIP) call run by DAFM. The project will develop and test a whole-farm pollinator scoring system that can be easily calculated, easily understood and easily improved (and in line with the All-Ireland Pollinator Plan farmland pollinator guidelines published in 2017). The five-year project is being run with a group of 40 farmers across farm types and intensities in Co. Kildare. It is a result-based system the higher the pollinator score of the farm, the more the farmer will get paid annually. The project will also include significant insect/plant surveys to test whether farms that do have higher scores have more pollinators (bees, hoverflies) and more biodiversity generally. It will also test the effectiveness of each of the individual pollinator measures in Ireland. The operational group for the project includes the Data Centre, TCD, Bord Bia, Glanbia, Heineken, Teagasc, Macra and four representative farmers across farm types.
- ✓ Pollinator information incorporated into Knowledge Exchange programmes provided by DAFM, Teagasc and CAFRE
- ✓ Teaching on pollinators and their conservation incorporated into relevant 3<sup>rd</sup> level agricultural courses (Teagasc, WIT, CAFRE, UCD).
- ✓ Pollinator measures widely promoted by the UFU to members
- ✓ Promotion of pollinator measures through the IFA Smart Farming initiative.

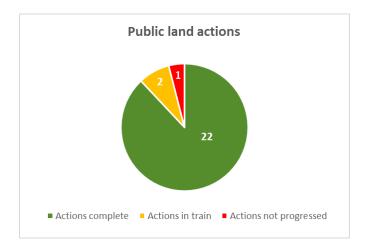
## 1.2 Making Ireland Pollinator-friendly: Public Land

### Final assessment: VERY POSITIVE START MADE IN PHASE ONE

Evidence-based actions published for Councils, Transport Authorities, Schools & Local Communities. Huge support from within this sector. Changes to the management of public land are beginning to be made on a wide scale. Have not been able to fully capitalise on interest levels due to lack of human capacity within the Plan itself.

### 2015-2020: Four targets & 25 actions

- 1.2.1: Increase the area of public & semi-state land that is managed in a pollinator friendly way (15)
- 1.2.2: Create linking areas of flower-rich habitat along transport routes (5)
- 1.2.3: Reduce the use of pesticides (insecticides, herbicides, fungicides) on public land (2)
- 1.4: Supporting the creation of pollinator-friendly habitat (3)



Actions in train: Reduce pesticide application on roadsides and in public parks and green spaces (this is a long-term ongoing action); Encourage pollinator-friendly management of national monuments (efforts not yet fully progressed)

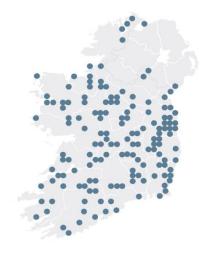
Actions not progressed: Provision of pollinator-friendly management guidelines to the National Trails Office (during implementation, a schedule for development of evidence-based guidelines was developed and other sectors were prioritised in the first phase).

- ✓ Publication of evidence-based pollinator actions for Councils, Transport Authorities, Schools, Local Communities
- ✓ Since publication, Councils across the island have offered support and adopted pollinatorfriendly policies. In early 2019, a framework to allow Councils to become formal partners to the AIPP was launched. 24 Councils across the island (55%) have so far formally partnered with the Plan and agreed to take actions to help.
- Many elements of the Plan have been delivered with the help of the Local Authority Heritage and Biodiversity Officer network (a Heritage Council programme) and by the Environmental Awareness Officer network in the Republic, and by the Biodiversity Officers in Northern Ireland.

- ✓ Dedicated pollinator award in the Green Flag for Parks competition since 2017 (Republic of Ireland). The Green Flag Award scheme is run by An Taisce in the Republic of Ireland and recognises and rewards well-managed parks and green spaces.
- ✓ The Plan is supported by the four main Transport Authorities across the island, who endorsed evidence-based guidelines for pollinator-friendly management of transport corridors (2019).
- ✓ Dedicated pollinator award in the Tidy Towns competition since 2016 (organised and funded by the Heritage and Biodiversity Officer network). 160 communities have entered this competition and made their local areas more pollinator friendly.
- ✓ The Great Yellow Bumblebee, the most threatened bumblebee on the island of Ireland, has been adopted by Mayo County Council. Most of the remaining populations exist only in the Mullet peninsula.
- Resources have been developed specifically for schools (Junior Pollinator Plan, How-to-guide on developing a school pollinator plan) and the Plan has been incorporated into the Green-Schools and Green Campus initiatives. The Plan was also promoted through Polli:Nation (NI) and the Heritage in Schools programme (RoI).
- The AIPP partnered with SuperValu in 2020 on a large primary school education campaign, called 'Save the Bees'. An Education Pack was sent to 3,200 primary schools, with over half a million children. This pack contained guidebooks, posters and bookmarks, in addition to a garden kit and sign.
- ✓ Third level institutions have created their own Pollinator Plans (e.g. TCD, UCD, NUIG, MU) and are implementing pollinator-friendly measures on campuses.
- ✓ Some Local Authorities have taken the innovative step of publishing comprehensive Town Pollinator Plans (e.g., Cork County Council published a Midleton Pollinator Plan in 2020)
- ✓ Many Local Authorities continue to test pesticide alternatives
- ✓ Increasing numbers of organisations have been managing their networks of sites on public land for pollinators – OPW, NPWS, NIEA, National Trust, NI Water, RSPB, BirdWatch Ireland, Bord na Móna, Gas Networks Ireland.

Map of Council partners





Over 160 pollinator-friendly towns and villages, from every county have entered the Local Authority Pollinator Award.

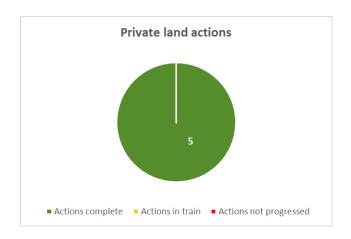
## 1.3 Making Ireland Pollinator-friendly: Private Land

## Final assessment: SOME SUCCESS BUT WERE UNABLE TO FULLY CAPITILISE ON THE LEVEL OF INTEREST

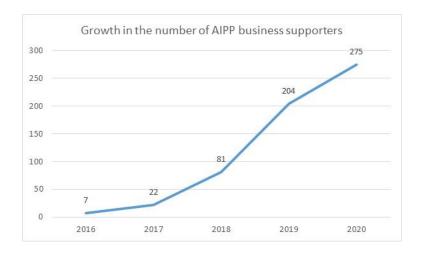
Evidence-based actions identified for gardens, businesses, faith communities & sports clubs. Enormous support from within this sector and many successes. Have not been able to capitalise on interest levels due to lack of human capacity within the Plan itself.

### 2015-2020: Two targets & 5 actions

1.3.1: Increase the number of gardens across Ireland that are pollinator friendly (4) 1.3.2: Encourage businesses to become pollinator friendly (1)



- Publication of evidence-based pollinator actions for Businesses, Gardens, Faith Communities. Specific guidelines developed for Sports Clubs, Golf Courses and Group Water Scheme sites
- ✓ Framework established for companies to sign up as a Business Supporter of the Plan. They agree to take at least one pollinator-friendly action in the year of signing up and another two by 2020
- ✓ Strong growth in the number of companies currently signed up as business supporters and taking actions. Currently stands at 275 (as of end October 2020).
- ✓ Good media coverage on how to make your garden pollinator friendly and positive engagement through events like Bloom and the Balmoral Show
- ✓ Positive interactions with Faith Communities, including Eco-Congregation Ireland, who have promoted the guideline document
- ✓ Collaboration with the GAA through phase one of the Green Clubs programme.



Pollinator-friendly gardens logged on the mapping system Actions for Pollinators as of  $30^{\rm th}$  November 2020



## **Objective 2: Raising awareness of pollinators and how to protect them**

## Final assessment: EXCELLENT START, BUT MUCH WORK STILL TO DO WITH THE GENERAL PUBLIC

Increasing awareness of pollinators and the need to help within society, both North and South. However, much more awareness raising remains to be done, especially with the public.

### 2015-2020: Three targets & 11 actions

2.1: Increase the number of people who are aware of pollinators and who understand the need for pollinator conservation (6)

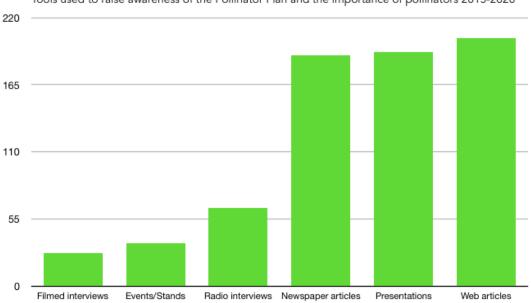
2.2: Promote education on pollinators and their conservation at primary, secondary and tertiary level (2)

2.3: Provide clear information to different sectors on how to take action to protect pollinators (3)



- ✓ Suite of free resources developed clearly explaining what evidence-based actions can be taken by different sectors (listed on page 8)
- ✓ Distribution of hard copies to date (approx.): 102,000 guideline booklets/How-to guides, 40,000 bookmarks, 136,000 fliers
- ✓ Production of a series of short videos and animations to explain the All-Ireland Pollinator Plan (listed on page 8)
- ✓ High level of traffic to the website <u>www.pollinators.ie</u> and growing Twitter account @PollinatorPlan
- ✓ Since 2015, the Pollinator Plan has been promoted via: 189 published newspaper articles; 64 radio interviews; 27 filmed interviews; 203 additional articles (blogs, websites, newsletters, magazines); 153 presentations; 39 conferences; 35 Other (panel events/stands)
- ✓ High levels of interest when promoted at relevant national events such as Balmoral Show, National Ploughing Championships, Bloom etc.
- ✓ World Bee Day (20<sup>th</sup> May, instigated 2018) successfully used to raise awareness of the Plan. In 2019 the *Irish Examiner* distributed 200,000 copies of an A3 poster on actions for Bees and a 32-page booklet on AIPP, plus series of articles in newspaper and online.
- ✓ In 2019, Dr Una FitzPatrick and Prof Jane Stout invited to Áras an Uachtaráin to meet President Michael D. Higgins to highlight the work of the AIPP.

- ✓ A 2020 TCD poll exploring motivations to engage with the AIPP (718 respondents) found very high levels of knowledge on pollinators and the actions needed to protect them. This suggests that the resources being provided are effective, they just need to reach as wide an audience as possible.
- Much has been achieved with no marketing/engagement budget. Promotion of the plan has been achieved through editorial coverage online and in print media, and by organising radio and television interviews.



Tools used to raise awareness of the Pollinator Plan and the importance of pollinators 2015-2020

## **Objective 3: Managed pollinators – supporting beekeepers and growers**

## Final assessment: ALL-IRELAND POLLINATOR PLAN HAS HAD A SMALL to MODERATE IMPACT

Much progress continues to be made by all Associations individually around honeybee health. Lack of summary data on hive numbers and annual losses at All-Ireland scale makes assessing change difficult. There are diverging opinions within the beekeeping sector on several issues (e.g., imports, disease monitoring, native Irish honeybee). Groundwork has been laid for a more cohesive All-Ireland Honeybee Strategy for the next phase of the AIPP.

The AIPP is supported by the four main Beekeeping Associations: Ulster Beekeepers Association (UBKA), Institute of Northern Ireland Beekeepers (INIB), Federation of Irish Beekeepers' Associations (FIBKA), Irish Beekeepers Association (IBA CLG) and by the Native Irish Honeybee Society (NIHBS).

2015-2020: Four targets & 7 actions

- 3.1: Provide clear information on the distribution and condition of Irish honeybees (1 action)
- 3.2: Support beekeepers in maintaining healthy honeybee populations (4)
- 3.3: Support beekeepers in conserving native honeybee populations (1)
- 3.4: Support growers by providing best practice advice on the use of imported bumblebee colonies (1)



- ✓ High levels of individual engagement with all four main beekeeping associations as well as the Native Irish Honeybee Society; with all widely promoting the Plan to their members and the public. Data on disease prevalence are being independently collected by associations
- ✓ Native Irish Honey Bee Society continues to take steps to protect *Apis mellifera mellifera*
- ✓ Voluntary hive registration in Northern Ireland through Databees
- ✓ Increasing education at primary, intermediate and senior beekeeping levels
- ✓ Greater awareness of native pollinators amongst beekeepers
- ✓ Bee health roadshows and other activities delivered to highlight threats and challenges
- ✓ Research on NI American foulbrood outbreak by AFBI
- ✓ Ongoing partnership activity between the UBKA & the Ulster Farmers Union
- ✓ 2020 UBKA conference held sessions to review the AIPP and provided a forum for public consultation on the 2021-2025 Plan
- ✓ Evidence-based guideline document for users of imported bumblebee colonies published and distributed to the horticultural industry
- ✓ All associations have agreed an All-Ireland Honeybee Strategy 2021-2025 which will be standalone but will also slot into the next AIPP.

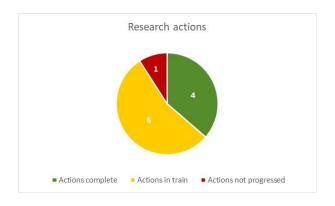
## **Objective 4: Expanding our knowledge on pollinators and pollination service**

## Final assessment: RESEARCH CAPACITY GROWING RAPIDLY AND KNOWLEDGE BASE IS INCREASING

By raising awareness of the importance of pollinators in both the public and private sectors, research opportunities have increased. However, it takes time and substantial investment to build capacity and knowledge, and the process is a long-term one. Since 2015, the number of researchers working on pollinators has increased and at least 20 scientific publications relating to Irish pollinators have been completed. There are many ongoing research projects that will continue to produce outputs over the coming years.

### 2015-2020: Four targets & 11 actions

- 4.1: Identify evidence-based actions to promote pollinator populations in Ireland (3)
- 4.2: Increase our understanding of the value of pollination service and the implications of pollinator loss (6)
- 4.3: Understand the impact of pesticides on wild pollinators in an Irish context (1)
- 4.4: Improve our understanding of bee health (1)



Action not yet progressed: Understand the relative contribution of different pollinator taxa to prioritise conservation strategies for the delivery of pollination and natural pest control services (this is best progressed in future years when the relevant research database are further developed).

- ✓ Irish Pollinator Research Network established 2017, annual meetings held since 2018.
- ✓ All existing insect-flower interaction data from Irish studies have been collated and analysed.
- ✓ Genetic analysis revealed that the Irish honeybee population is diverse and distinct.
- Physiochemical analysis of honey revealed that urban multi-floral honeys had a higher total phenolic content than rural honeys and that heather honey had the highest phenolic content.
- Experimental work showed that insects change their visitation to plants exposed to very low concentrations of agrochemicals (herbicide and fertilizer).
- ✓ The annual value of animal pollination to home-produced crops in Ireland (excluding animal fodder crops e.g. clover) was estimated to be €20–59 million per year. Given the importance of international trade in animal-pollinated crops, the predicted the cost to Ireland of pollinator loss elsewhere in the world was between €153 and €843 million per year.
- ✓ Expert analysis revealed that a combination of poor management, differences in the inherent pollinator habitat quality and uptake bias towards catch crops and nitrogen-fixing

crops severely limit the potential of CAP Ecological Focus Areas to support pollinators in European agricultural landscapes.

- ✓ Analysis of engagement in AIPP by volunteers revealed differences in motivation among actors and supported the importance of the tailored sectoral approach that has been employed by the AIPP.
- ✓ Research involving citizen scientists was selected for a major national advertisement campaign.
- Research funding awarded for large-scale interdisciplinary research projects, including the following on:
  - value of pollination services and implications of pollinator loss (EPA, 2016)
  - farmland biodiversity and ecosystem services (including pollinators/pollination) (DAFM 2017)
  - sustainable pesticide use and mitigation of impacts on pollinators (DAFM, 2018)
  - pollinators and climate change (SFI, 2018)
  - o bee health (EU, 2018)

Published research on Irish pollinators since 2015:

- Russo L, Buckley YM, Hamilton H, Kavanagh M, Stout, JC (2020) Low concentrations of fertilizer and herbicide alter plant growth and interactions with flower-visiting insects. Agriculture, Ecosystems & Environment 304:107141.
- Ahmed KSD, Volpato A, Day MF, Mulkeen CJ, O'Hanlon A, Carey J, Williams C, Ruas S, Moran J, Rotchés-Ribalta R, ÓhUallacháin D, Stout JC, Hodge S, White B, Gormally MJ (2020) Linear habitats across a range of farming intensities contribute differently to dipteran abundance and diversity. Insect Conservation and Diversity https://doi.org/10.1111/icad.12455
- Cole L J, Kleijn D, Dicks LV, Stout JC, Potts SG, Albrecht M, Balzan MV, Bartomeus I, Bebeli PJ, Bevk D, Biesmeijer JC, Chlebo R, Dautartė A, Emmanouil N, Hartfield C, Holland JM, Holzschuh A, Knoben NTJ, Kovács-Hostyánszki A, Mandelik Y, Panou H, Paxton RJ, Petanidou T, Pinheiro de Carvalho MAA, Rundlöf M, Sarthou J-P, M C Stavrinides MC, Suso MJ, Szentgyörgyi H, Vaissière BE, Varnava A, Vilà M, Zemeckis R, Scheper J (2020) A critical analysis of the potential for EU Common Agricultural Policy measures to support wild pollinators on farmland. Journal of Applied Ecology 57: 681 - 694
- 4. Browne KA, Hassett J, Geary M, Moore E, Henriques D, Soland-Reckeweg G, Ferrari R, Mac Loughlin E, O'Brien E, O'Driscoll S, Young P, Pinto MA, McCormack GP (2020) Investigation of free-living honey bee colonies in Ireland. Journal of Apicultural Research:1-12
- 5. Byrne F, delBarco-Trillo J (2019) The effect of management practices on bumblebee densities in hedgerow and grassland habitats. Basic and Applied Ecology 35:28-33.
- 6. Woodcock BA, Garratt MPD, Powney GD, Shaw RF, Osborne JL, Soroka J, Lindström SAM, Stanley D, Ouvrard P, Edwards ME et al. (2019) Meta-analysis reveals that pollinator functional diversity and abundance enhance crop pollination and yield. Nature Communications 10: 1481.
- Dainese M, Martin EA, Aizen MA, Albrecht M, Bartomeus I, Bommarco R, Carvalheiro LG, Chaplin-Kramer R, Gagic V, Garibaldi LA et al. (2019) A global synthesis reveals biodiversity-mediated benefits for crop production. Science Advances 5(10):eaax0121.
- 8. Russo L, Stout J, Speight MCD: On the presence of Neocnemodon breviens (Egger, 1865) in Ireland (Diptera: Syrpidae). Irish Naturalists' Journal 2019, 36:151-153.
- 9. Kavanagh S, Gunnoo J, Passos TM, Stout JC, White B (2019) Physicochemical properties and phenolic content of honey from different floral origins and from rural versus urban landscapes. Food Chemistry 272: 66-75
- 10. Redmond C, Stout JC (2018) Breeding system and pollination ecology of a potentially invasive alien Clematis vitalba L. in Ireland. Plant Ecology 11: 56-63
- 11. Hassett J, Browne KA, McCormack GP, Moore E, Society NIHB, Soland G, Geary M (2018) A significant pure population of the dark European honey bee (Apis mellifera mellifera) remains in Ireland. Journal of Apicultural Research 57: 337-350.
- Brown MJF, Dicks LV, Paxton RJ, Baldock KCR, Barron AB, Chauzat M-P, Freitas BM, Goulson D, Jepsen S, Kremen C, Li J, Neumann P, Pattemore DE, Potts SG, Schweiger O, Seymour CL, Stout JC (2016) A horizon scan of future threats and opportunities for pollinators and pollination. PeerJ 4: e2249.

- 13. Tiedeken EJ, Egan P, Stevenson PC, Wright GA, Brown MJF, Power EF, Matthews SM, Stout JC (2016) Nectar chemistry modulates the impact of an invasive plant on native pollinators. Functional Ecology 30: 885-893
- Rader R, Bartomeus I, Garibaldi LA, Garratt MPD, Howlett BG, Winfree R, Cunningham SA, Mayfield MM, Arthur AD, Andersson GKS, et al. (2016) Non-bee insects are important contributors to global crop pollination. Proceedings of the National Academy of Sciences 113: 146-151
- 15. Davis ES, Kelly R, Maggs CA, Stout JC (2018) Contrasting impacts of highly invasive plant species on flower-visiting insect communities. Biodiversity and Conservation 27:2069-2085 doi.org/10.1007/s10531-018-1525-y
- Naughton J, Tiedeken EJ, Garvey M, Stout JC, Rowan NJ (2017) Pulsed light inactivation of the bumble bee trypanosome parasite Crithidia bombi. Journal of Apicultural Research 56:144-154. doi: 10.1080/00218839.2017.1289668
- 17. De Palma A, Abrahamczyk S, Aizen MA, Albrecht M, Basset Y, Bates A, Blake RJ, Boutin C, Bugter R, Connop S, et al. (2016) Predicting bee community responses to land-use changes: Effects of geographic and taxonomic biases. Scientific Reports 6:31153.
- 18. Power EF Jackson Z and Stout JC (2016) Organic farming and landscape factors affect abundance and richness of hoverflies (Diptera, Syrphidae) in grasslands. Insect Conservation and Diversity 9: 244-253
- 19. Zimmermann J, Stout JC (2016) Underestimating neonicotinoid exposure: how extent and magnitude may be affected by land-use change. Environmental Science and Pollution Research. 23: 7050-7054
- 20. Casey, L. M., H. Rebelo, E. Rotheray, and D. Goulson. 2015. Evidence for habitat and climatic specializations driving the long-term distribution trends of UK and Irish bumblebees. Diversity and Distributions 21:864-875.

### **Objective 5: Collecting evidence to track change and measure success**

### Final assessment: AS MUCH AS POSSIBLE ESTABLISHED, BUT CRITICAL GAPS REMAIN

The citizen science All-Ireland Bumblebee Monitoring Scheme is collecting scientifically rigorous annual data on bumblebee population levels across the island. Other key pollinating insects (solitary bees and hoverflies) are not currently being monitored, meaning that mechanisms are not currently in place to properly assess the long-term impacts of the AIPP.

### 2015-2020: Four targets & 10 actions

5.1: Build taxonomic capacity so that we can collect better information on our pollinators (1 action)
5.2: Monitor changes in the abundance and distribution of wild pollinators across Ireland (2)
5.3: Provide mechanisms to track progress in implementation of the Plan (3)
General delivery of the Plan and measuring progress (4)



Actions in train: Provide an evidence base to advise, support & monitor pollinator-friendly actions so that they can become as effective as possible (long-term ongoing action); Establish a national sampling framework for solitary bees and hoverflies (future rollout of this scheme is funding dependent).

- ✓ The All-Ireland Bumblebee Monitoring Scheme is a citizen science initiative that was established by the National Biodiversity Data Centre in 2012 (the timing of the development and publication of the AIPP was linked to this scheme so that some baseline data would be in place before implementation). It is successfully tracking changes in common bumblebees across the island
- ✓ A new beginner level citizen science monitoring scheme, called Flower-Insect Timed Counts, was established in 2019
- ✓ Significant increases in the numbers of people attending pollinator identification workshops and submitting casual data on bees and hoverflies to the National Biodiversity Data Centre and CEDaR. This has been very effectively supported by the work of partner organisations such as the Irish Wildlife Trust (People For Bees initiative) and Buglife.
- ✓ Annual reviews have been published each year outlining progress against each of the 81 actions in the Plan
- ✓ A publicly available GIS-based mapping system has been developed by the National Biodiversity Data Centre to track what actions are being taken across sectors (Actions for Pollinators: <u>https://pollinators.biodiversityireland.ie</u>). It is the first system of its kind to track progress across multi-partners within a biodiversity plan. To date, more than 1,600 individual sites have logged more than 4,400 pollinator-friendly actions.
- ✓ The All-Ireland Pollinator Plan 2015-2020 has been successfully delivered, with excellent oversight provided by the Steering Group, which has been restructured as required over the five-year implementation period
- ✓ A new version of the AIPP for 2021-2025 has been developed and agreed by the Steering Group

## All-Ireland Pollinator Plan 2015-2020: Key lessons learned

We are incredibly grateful to have had the opportunity to coordinate the implementation of the AIPP since 2016. Through management of this initiative on biodiversity conservation, and through working in collaboration with all our partners, we have learned many lessons. We often get asked to share these lessons both within Ireland and internationally. Below, we have tried to briefly summarise the key lessons we have learned so far:

- 1. The bottom-up, grassroots approach to the initiative has been a core strength. From organisations to individuals, people have assessed why they are being asked to help, looked at what they are being requested to do and, on that basis, decided if they wanted to get involved.
- 2. People have responded positively to the transparent management of the initiative. This has been hugely aided by having a strong, active multi-sectoral steering group, led by people with a background in the subject (pollination ecology in this case). Transparently managed consultations, both with the public, and with respective stakeholders during development of sectoral resources have been extremely important.
- 3. The All-Ireland nature of the Plan has been a huge strength and has enabled very valuable sharing of knowledge and expertise across both jurisdictions. Efforts have continually been made to ensure that the framework, and all resources produced, apply equally both North and South in terms of structure and language.
- 4. The Plan is voluntary, and organisations have responded positively by doing as much as they can. In a multi-annual and multi-sectoral initiative, this can provide flexibility. Emphasis has been placed on constructiveness and on celebrating the biodiversity that we have. We have tried to ensure that all messaging is positive, and solution driven.
- 5. We have learned that it is important to plan your message carefully. The core message should be clean, simple, and easy to communicate (food, shelter, and safety for bees). We have deliberately used wild bees as a flagship for pollinators and biodiversity conservation generally.
- 6. Others cannot be expected to assist unless you are very clear on what you are asking them to do. Perhaps the greatest lesson we have learned is the power of evidence-based guidelines for different sectors, which were developed in consultation and were written in such a way that they were carefully tailored to each target audience. This has made it as easy as possible for others to get behind the initiative. We have focused on positive actions that are low cost and easy to implement. We have relied on existing structures and networks to disseminate this information.
- 7. It is very important that information is easily accessible. We have made as many evidencebased resources as possible available on the website, with all free to download. We have tried to continually update the website with new content and to support the core evidencebased guidelines with videos, animations, blogs, etc. to assist with knowledge sharing.

- 8. In terms of communication, three important lessons we have learned are: communication should be peer-to-peer where possible; it pays to deliberately and consciously try to reach new audiences rather than focus on the already converted; communication works best when it is an active message, and when the audience understands what they are being asked to do.
- 9. Working in partnerships and creating a strong sense that it is a *shared* plan of action has been very important. The success of the Plan is due to lots of small actions taken together. We have tried to continually encourage partnerships, and to work within existing networks and frameworks. We have used newsletters, events and blogs, as well as our social media channels to show that *everyone* is helping, and that *together* we can make changes for the better.
- 10. A crucial part of the All-Ireland Pollinator Plan is in transparently tracking progress regularly asking 'is it working?' This has been aided through management of implementation by the National Biodiversity Data Centre as it has meant the Plan can be linked directly to data and monitoring of the pollinators themselves.
- 11. We have learned the power of local champions. Across all sectors, there are individuals who champion the Pollinator Plan, mainly in a voluntary capacity. Without a shadow of doubt, the Plan would not have achieved what it has without those people, and we can never thank or acknowledge them sufficiently. Each December, we send a certificate and our personal thanks to new pollinator champions. Awardees are not publicised, as they are most often people who do not wish to be personally promoted.
- 12. We have learned the importance of being open to adapting, learning and being opportunistic as the initiative itself has evolved.

### TO BUILD UPON FOR THE NEXT PHASE

We are at the start of the journey. As we look forward to the next five years of the AIPP, we know we will need to engage more, monitor more, and manage more land for biodiversity.

We need additional human resources within the Plan itself so that we can properly support all those, across all sectors, who want to help. We need to regularly monitor bumblebees, solitary bees and hoverflies across the island in a scientific and systematic way so that we can understand the long-term impacts of the Plan. We need to build on the groundwork established in the first phase, so that we **fully** normalise a better way of managing our landscape that supports our struggling biodiversity. We need to talk less to the 'converted' and bring the message to new and wider audiences. We need to support beekeepers and ensure that honeybees are part of a cohesive pollinator message. We need to listen to what pollinators themselves would probably say – 'good start but please get a move on, do more and do it quicker!'

This Final Review has been written by Úna FitzPatrick with assistance from Jane Stout & Juanita Browne. It has been agreed by the Steering Group.

## **APPENDIX A: All-Ireland Pollinator Plan 2015-2020 Partners**

At the time of publication, 69 governmental and non-governmental organisations agreed to support the All-Ireland Pollinator Plan. Responsibility for delivering the 81 actions laid out by the Plan was shared out between these original partners. Since publication, the number of partner organisations has risen to 108. All current partners are listed below (partners that joined after the Pollinator Plan's launch are indicated by an asterisk).

### **Government Departments**

- Department of Housing, Local Government and Heritage (Rol)
- Department of Agriculture, Food and the Marine (RoI)
- Department of Agriculture, Environment and Rural Affairs (NI)

### National level organisations/bodies

- National Biodiversity Data Centre
- Heritage Council
- Bord Bía
- Agri Food and Biosciences Institute (NI)
- Centre for Environmental Data and Recording NI (CEDaR)
- Chartered Institute of Ecology and Environmental Management (CIEEM)
- Council for Nature Conservation and the Countryside (CNCC)
- Environmental Protection Agency (EPA)
- Fáilte Ireland
- Irish Organic Association
- Irish Rural Link\*
- Irish Soft Fruit Growers Association
- Keep Northern Ireland Beautiful
- Marine Institute\*
- National Botanic Gardens
- National Federation of Group Water Schemes\*
- National Parks & Wildlife Service (NPWS)
- NI Environment Link
- Northern Ireland Environment Agency (NIEA)
- Northern Ireland Water\*
- OPW
- Organic Trust
- Teagasc
- Tidy Towns
- Tree Council of Ireland\*
- Ulster Farmers' Union
- Ulster in Bloom
- Waterways Ireland

**Councils** - note that most Councils across the island have engaged with the Plan but the process of signing up as a formal Local Authority partner was only instigated in 2019 and is currently ongoing. The following have currently signed (as of end November). Separate annual updates on their activities are available on the website: <u>https://pollinators.ie/councils/council-partners</u>

- Antrim and Newtownabbey Borough Council
- Ards and North Down Borough Council
- Clare County Council
- Cork City Council
- Derry City & Strabane District Council
- Donegal County Council
- Dublin City Council
- Dun Laoghaoire Rathdown County Council
- Fingal County Council
- Galway City Council
- Kerry County Council
- Kilkenny County Council
- Limerick County Council
- Lisburn & Castlereagh City Council
- Mayo County Council
- Meath County Council
- Monaghan County Council
- Offaly County Council
- South Dublin County Council
- Tipperary County Council
- Waterford City & County Council
- Westmeath County Council
- Wexford County Council
- Wicklow County Council

### **Transport Authorities**

- Iranród Éireann
- Translink
- Transport Infrastructure Ireland
- Transport NI

### Charities/NGOs

- Airfield Estate\*
- An Taisce
- ARENA Network, Business in the Community NI
- Belfast Hills Partnership
- BirdWatch Ireland
- Botanical Society of Britain & Ireland\*
- Buglife\*
- Bumblebee Conservation Trust (UK)
- Burrenbeo Trust
- Business in the Community Ireland
- Butterfly Conservation
- Butterfly Conservation NI
- Community Gardens Ireland
- Friends of the Earth Ireland
- Friends of the Earth Northern Ireland

- Green Sod Ireland\*
- Grow it Yourself (GIY)
- Hedge Laying Association of Ireland
- Irish Peatland Conservation Council (IPCC)
- Irish Seed Savers\*
- Irish Wildlife Trust
- Kilkenny Civic Trust\*
- Learning Through Landscapes UK (Polli:Nation)
- Limerick's Buzzing
- National Trust
- RSPB
- Seal Rescue Ireland\*
- Scouting Ireland\*
- The Causeway Coast & Glens Heritage Trust\*
- True Harvest Seeds
- Ulster Wildlife
- Wexford Naturalists' Field Club\*
- Woodlands of Ireland

### **Beekeeping Associations**

- Federation of Irish Beekeepers' Associations
- Institute of Northern Ireland Beekeepers (INIB)
- Native Irish Honeybee Society
- Ulster Beekeepers Association
- Irish Beekeepers Association CLG\*

### Leader Companies

- Ballyhoura Development Ltd
- Mayo North East\*
- South and East Cork Area Development (SECAD)

### **Community Groups**

- Annascaul Adventures\*
- GLAN Tralee\*
- Wexford Environmental Network\*
- Individual Tidy Towns groups listed below

### Academic Institutions

- Athlone Institute of Technology\*
- College of Agriculture, Food and Rural Enterprise, NI (CAFRE)
- Dublin City University\*
- Kildalton College, Teagasc
- Maynooth University\*
- NUI Galway\*
- Open Air Laboratories (OPAL) UK
- Trinity College Dublin

- University College Dublin\*
- University of Limerick \*
- Waterford Institute of Technology\*

### Semi-state companies

- Bord Na Mona
- Gas Networks Ireland\*

### Other

- British Embassy Dublin\*
- Department of Business, Enterprise & Innovation, Carlow\*
- Representative Church Body, Church of Ireland House\*
- Circle of Life garden (national organ donor commemorative garden)\*
- Host in Ireland\*

**Tidy Towns Groups** These 162 groups have made their local area pollinator-friendly and entered the special pollinator award in the Tidy Towns competition. This award was launched in 2016 and is managed and funded by the Local Authority Heritage Officer and Biodiversity Officer Network.

Abbey	Belcarra	Connolly	Hollyfort	Kinnitty	Roscommon
Abbeyleix	Bennettsbridge	Coole	Hollywood	Ladysbridge	Rosscarbery
Abbeyshrule	Birdhill	Coon	Inistioge	Lawrencetown	Rosslare
Ardclough	Birr	Crinkill	Julianstown	LEAP Project Easkey	Scariff
Ardmore	Blackwater	Donnybrook	Keep Kilkenny Beautiful	Lecanvey	Shallee
Arklow	Blessington	Drinagh	Kells	Leighlinbridge	Shannonbridge
Ashbourne	Borris in Ossory	Drogheda	Kenmare	Lisacul	Silvermines
Ashford	Bridgetown	Dromiskin	Kilbeg Staholmog	Lismore	Skerries
Askeaton	Bruff	Drumkeeran	Kilcornan	Listowel	Sligo
Athboy	Buncrana	Drumlish	Kilcross, Sandyford	Malahide	Sneem
Athleague	Cahir	Drumshanbo	Kilcullen	Maynooth	Stratford-on- Slaney
Baile Slachtmhar Béal an Mhuirthead	Carndonagh	Dunboyne	Kildorrery	Monaghan	Streamstown
Ballacolla	Carrigaline	Dunboyne Senior Primary School	Killane	Monivea	Strokestown
Balla	Castleconnell	Edenderry	Killarney	Mountmellick	Summerhill
Ballina	Castlecoote	Emly	Killenard	Moville	Swords
Ballinamuck	Castlelyons Bridesbridge	Ennis	Killeshandra	Mullaghmore Active	Tarbert
Ballincollig	Castletownroch e	Ennistymon	Killorglin	Mullingar	Templeglantine
Ballintubber	Charleville	Fenor Bog	Kilmaine	Mulranny	Terryglass
Ballyboden	Clifden	Ferns	Kilmoyley	Multyfarnham	Thomastown
Ballyboughal	Clonaslee	Geashill	Kilmuckridge	Naas	Timolin
Ballycanew (Camolin)	Clonbullogue	Glaslough	Kilnaleck	Newtownshand rum	Tinahely
Ballyduff	Clondalkin	Glenroe	Kilross	Phibsboro Village	Tuam
Ballyfarnon	Clonegal	Glin	Kilrush	Portmarnock	Tuamgraney
Ballymore Eustace	Clonmel	Gorthaganny	Kilsheelan	Portrunny	Tullahought
Ballymote	Cloughjordan	Grange	Kilteevan	Raheny	Westport
Banagher	Cobh	Greenore	Kiltegan	Raphoe	Wicklow
Bandon	Collooney	Headford	Kinlough	Roosky	Woodford

**Business Supporters:** As of end of November 2019. Business supporters agree to take one pollinator-friendly action in the first year of signing up and at least another two within the following five years. An annual review of actions by each business supporter is available online <a href="https://pollinators.ie/businesses">https://pollinators.ie/businesses</a>

Abbott Diabetes Care Ireland ABP Food Group Accenture Acheson & Glover Adare Manor Resort AIR Airmid Natural Irish Skincare Alan Feeney Landscape Gardening Aldi Stores Ireland Allergan Pharmaceuticals Ireland Alltech Ireland Analog Devices International An Óige – Irish Youth Hostel Association Anovocare Nursing Home Ard na Gaoithe B&B Ardenode Stud **Arlington Lodge Suites** Arrabawn Co-operative Ltd. Arvato SCM Ireland Ltd. Ash Ecology and Environmental Ltd Astellas Ireland Ltd. Ashdown Park Hotel Austen Associates **Balfour Beatty plc Ballymaloe Cookery School Ballymaloe Foods** Bandon Co-Op Beeactiv Ltd. Bee Green Ireland **Belfast Zoological Gardens** Belview Egg Farm Ltd. Bí Urban Blanchardstown Shopping Centre Blarney Castle Estate & Gardens **Blooming Native Wildflowers Bold Puppy** Boortmalt **Bray Retail Park** Breedon Brick Limited (trades Kingscourt Brick) **Breedon Cement Ireland Limited Brookfield Farm Brookfield Renewable Ireland Bulmers C&C Group Bumblebee Flower Farm Burren Nature Sanctuary Butler Community Centre Buttercup Micro Farm** 

C&J's Animal Park Cabra Castle Hotel Caherbeg Free Range Pork Ltd. Cairn Homes Calor Teoranta **Carbery Food Ingredients** Cathal O'Meara Landscape Architect Celtic Anglian Water Ltd. Claremorris Free Range Eggs **Clarus Property Services** Clinic na gCapall Clóna Dairy Products Ltd. Clondanagh Cottage & Farm on the Lake Clonmel Enterprises Ltd. **Compsey Creamery Conicker Farm Flowers** Conroy Crowe Kelly Architects Urban Designers **Cool Planet Experience Corrin Nature Reserve Country Crest** Croke Park Dale Farm Ltd. Dave Ryan Landscape Architect Dawn Farm Foods Dawn Meats Carroll's Cross Dawn Pork and Bacon **Deaton Lysaght Architects DePuy Synthes Ireland Devenish Research Development & Innovation DLF Seeds Ireland** Diageo Ireland - St James' Gate Brewery DMC Consulting Ltd. Donnelly Fruit and Veg **Down Business Centre Doyle Organic Dairy Farm Dublin Airport Dublin City Gin Company Dundrum Town Centre** E Quinn Civils Ltd. **Eclipse Ireland** Ecoseeds Elavon Elmpark Green **Encirc Glass** Enniscorthy Enterprise & Technology Centre Envirico Facebook Data Centre Clonee

Fairybush Landscaping Ltd. Fairyhouse Steel Faith Wilson Ecological Consultant Farmhand Ltd. **Fingleton White** Finnegan's Farm Fiserv Flowers by Ballycreen Folens Publishers Fota Island Resort FP McCann Ltd. Frank Ryans Bar Fruit Hill Farm **GAA National Games Development Centre** Gannon Homes **Genovese Foods** Glanbia Consumer Foods Glenisk **Glenpatrick Spring Water Glenpipe Apiaries** Grangegorman Development Agency Granville EcoPark Limited Grantstown Nurseries Ltd. Greencoup Ltd. Griffins Garden Centre **GUI National Golf Academy** Gunn Lennon Fabrications Ltd. Hawthorn Nurseries & Landscaping Ltd. **HBMO Solicitors LLP** Heineken Ireland Helsinn Birex Pharmaceuticals Holbein Carpentry and Joinery **Honey Coffee Roasters** Horticulture Consultants Ireland Ltd. ICON plc Intel Ireland Beeswax Wraps Irish Country Meats Camolin Irish Country Meats Navan Irish Distillers Ltd. Irish National Stud & Gardens Irish Register of Herbalists ISME Ltd Janet Dillon Pharmacy Janssen Supply Chain Ireland JCR Lenehan Ltd. JLL Ireland Real Estate John Doyle Funeral Director & Publican John G. Rathborne Ltd. Joseph Brennan Bakeries KARE **Keelings Farms** Kennedy Wilson residential

Kia Ora Mini Farm Ltd. **Killaha Holidays Kilsaran International** Kinahan's Irish Whiskey Ltd. Kinsale Mead Co. **KRA Renewables** KSG Catering Ltd. L. Mulligan Grocer Lakeland Dairies Bailieborough Landmark Designs Ltd. Lidl Ireland Limerick Self Storage Little Green Growers, Fiáin organic farm Living Design Landscapes Ltd Loughnane's Family Butchers Lottie Dolls (Arklu) Love Supreme Coffee Lufthansa Technik Shannon Ltd. Machado Men's Grooming Manor DIY Mattest **McAuliffe Pig Farms** McAuliffe Trucking Ltd. McBride Fishing **McCormack Family Farms** McGill Environmental Systems Meade Potato Company Medite Smartply Merit Medical Ireland Ltd. Michelle Delaney Herbalist & Aromatherapist Millbee Studios **Milverton Landscapes** Mo Bhia Duit Molex Ireland Ltd. Molloys Abbeytown Ltd. Honest Bakery Monsport Ltd. Morleys Garden Centre **Mosney Village** MOY, Roof Waterproofing System Specialists Mr. Jeffares Blackcurrants Mrs. C's Herbs and Candles **Muckross Creamery** Mullingar Golf Club Newbridge Foods Ltd. Newgrange Gold Ltd. Niks Tea Limited Northstone Materials Division Novokem O'Donnell Furniture Makers O'Neills Dry Cure Bacon Co. **Old Velos Bikes** Oliver Carty ULC & VOA Foods Ltd. **Ollys** Farm

PestPlus Ltd. Peter Cuthbert Horticultural Services Petigo Bandanas Pfizer Upjohn Ireland Pharmaceuticals Pfizer Grange Castle Portmagee Distilling & Brewing Company Ltd. Portsalon Luxury Camping Pritchitts A Lakeland Dairies Company **Quinn Building Products** Quinn Packaging Radharc Landscaping Co. Ramen Kitchen Dublin **Recordati Ireland Limited** Redlough Landscapes Ltd. **Regeneron Pharmaceuticals Relaxing Garden Rigney Bros Motoring Services Riverstown Family Practice, Doctors** Roadbridge **Rocker Organic Farm** Rohan Estate Management Ltd. Ronan Mac Diarmada & Associates Ltd. RTÉ SAMCO Agricultural Manufacturing Ltd. SAP Landscapes Schram Plants Ltd., Wholesale Nurseries SEB Life International Secret Valley Wildlife Park Siemens Healthcare Diagnostics Manufacturing Shannon Heritage – Bunratty Castle & Folk Park Shannonvale Landscaping Ltd. Shines Seafood Showgrounds Shopping Centre Clonmel Southern Scientific Services Ltd. SSE Onshore Wind Generation St Mullins Honey Stoneybatter Youth Service Summerhill Lawns Ltd.

Sunnyside Fruit Ltd. SuperValu Sustainable Bio-Energy Ltd. Sweeney Landscape Design Swords Pavilions Shopping Centre Tang cafes **Teva Pharmaceuticals** The Apple Farm The Burren Perfumery The City Hotel Derry The Darkroom MT The Glimmerman Pub The Lismore Food Company The Naked Collective Ltd. The Rediscovery Centre The Tourism Space **Tipperary Distillery Toyota Liffey Valley Triall Teoranta** Turfworks Twin English Centre Dublin Uniplumo Ireland Ltd. **Urru Culinary Store** Veolia Vietnom Dublin Voxpro - powered by Telus Wallaby Woods Donadea Walshs Pub Waterford Oysters West Coast Crab Sales Ltd. Wexford Preserves Wexford Tomatoes Ltd. Wicklow Way Wines Wildacres Wild Kitchen Willie Duggan Wyeth Nutritional Ireland **Young Nurseries** 



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An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta Department of Housing, Local Government and Heritage



