



Report on the 2021  
**Inishowen River  
Guardians Training  
Programme**  
November 2021

The Inishowen Rivers Trust is an Inishowen-wide environmental charity dedicated to the conservation, protection, and enhancement of the rivers and natural water bodies of Inishowen for the benefit of the environment and the advancement of environmental awareness and skills for the benefit of the community.

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## Inishowen River Guardians Training Programme 2021

A report on the design and delivery of a training programme funded by Rethink Ireland's Innovate Together Grant 2020

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# HIGHLIGHTS

Creating a strong, skilled volunteer base to deliver effective projects and take action to reverse the decline in the health of our rivers.

## Capacity



**481**

training places filled

**59**

new river guardians

**11**

volunteer events



## Delivered

- Blended learning
- 29 training events
- 14 educational videos
- 8 certified courses

## Influence

Growing the reach of the Trust

- 20 landowner collaborations
- 5 agency collaborations
- Workshop for farmers
- Workshops for schools
- Nominated for 2 awards
- Won ME4U award
- Increase in FB, Eventbrite & YouTube subscribers



**137%**

Increase in registered River Guardians  
Increase in volunteer engagement  
9 projects completed on rivers

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# INTRODUCTION

In November 2020 the Inishowen Rivers Trust (IRT) was awarded a cash grant of €59,491 from Rethink Ireland under their Innovate Together Fund 2020. This funding was awarded to assist the Trust in developing their community based Inishowen River Guardians Training Programme.

The Inishowen River Guardians Programme provides specialised training on river monitoring and restoration techniques. The strapline for the programme is **Survey | Monitor | Restore** which underpins the importance of understanding how rivers work and how local communities can learn techniques to help restore natural waterbodies to healthy, functioning systems.

The aims in the funding application were to:

1. develop blended learning opportunities for the programme including online courses, face-to-face workshops and video training;
2. develop a format and strategy for programme delivery including providing opportunities for practical experience with local projects;
3. promote the river guardians approach and develop a sustainability plan for the future delivery of the programme.

The Rethink Ireland award was granted in late November 2020 to provide one year of funding and other non-financial supports through consultancy, mentoring support and the Accelerator Programme.



**Figure 1:**  
The launch of the Inishowen River Guardians Training Programme in December 2020  
(Photo credit: Clive Wasson on behalf of Rethink Ireland).

The Inishowen River Guardians programme ran as a pilot project in 2019 using funds from the EU LEADER Programme. This project was highly successful and there was a clear need and appetite to develop the programme further. In 2020 only one River Guardians course was offered due to lack of funding and also due to Covid restrictions. Considering the future implications of social distancing and the impact of face-to-face learning opportunities, the development of a flexible delivery model seemed prudent. The IRT application to Rethink Ireland's call in 2020 highlighted the importance of developing a blended learning approach.

# CREATING AN ACTION PLAN

Rethink Ireland provided a mentor (Emma Lane-Spollen) as part of the Innovate Together programme and the Project Officer began discussions with the mentor to develop a project action plan. This plan clarified 3 goals and 11 objectives with 43 specific actions and indicators for success. The specific goals identified were:

1. Develop the Inishowen River Guardians programme, providing specialist training through blended learning, reaching 70 students (12 months).
2. Create a strong volunteer base of well trained, experienced River Guardians
3. Grow the reach and influence of the Inishowen Rivers Trust by promoting the River Guardians approach and collaborating with stakeholders to form new partnerships and identify long term solutions for sustainability.

The action plan was submitted to Rethink Ireland for approval by the end of November 2020 (Appendix I).

A 'Brainstorm' online discussion was held in mid-December to gather feedback from the previous cohort of river guardians and seek their input in the types of courses which would be most beneficial. The IRGs were asked to distinguish between beginner, intermediate and advanced courses so that the new programme could provide opportunities to develop their knowledge and skills on a gradual basis. A second workshop with the guardians was held in May 2021 once a number of online workshops had been held. This meeting ('Brainstorm 2') was focused on the development of a Citizen Science programme for Inishowen based around rivers and what data could be gathered by community volunteers.

In January 2021 the Trust advertised for the position of Training Co-ordinator for the programme and Bren Whelan was appointed as the co-ordinator in February 2021. This was a part-time role funded by the Innovate Together award and over the next few months the Training Co-ordinator and Project Officer worked together to develop the activities for the programme.

# THE TRAINING PROGRAMME

Based on the Trust's existing knowledge of the needs of volunteers, a training programme was developed to attract new volunteers as well as supporting existing volunteers. It was considered important to strike a balance between theory and practical skills and learning by doing.

The programme activities were grouped into:

- Basic skills and certification on health and safety when working on rivers (7 activities)
- Introductory webinars and workshops to a topic, followed by fieldtrips and hands-on, experiential opportunities (9 activities)
- Medium to advanced course options for existing volunteers (13 activities).

Two programme schedules were advertised for the Spring (March – April) and Summer (May – September) periods and communicated through social media, the Trust's website and *RiverView* newsletter (see Managing & Communicating the programme).

**Figure 2:** Published schedules (Spring and Summer) of the training programme providing potential participants with advance notice of the upcoming courses.



Over nine months (March to November) a total of 29 separate courses, workshops, fieldtrips and webinars was offered to the community (see Table 1). Some of these activities were linked e.g., on the theme of nature-based solutions (NBS), a webinar facilitated by Féidhlim Harty was held one evening in May and was followed two weeks later by an open fieldtrip to three farms to discuss how NBS solutions can benefit farms. In September a further course on how to build a pond was held and Féidhlim was filmed discussing several aspects of NBS and demonstrating simple techniques. Eight of the 29 activities were blended events. In total 38 days of training were offered to the volunteers with 8 courses providing some level of certification. The majority of courses were held over the weekend or in the evening for webinars and online courses.

A range of videos were developed as part of the programme to contribute to the blended learning opportunities and covered five themes (see Table 2). These videos were intended to:

1. act as a knowledge library for volunteers;
2. provide visual demonstrations for particular techniques;
3. provide some element of training, particularly for basic courses and to fill a gap before the next course runs;
4. communicate the work of the Trust and encourage further engagement.

The videos were recorded over 7 days and condensed to produce 14 videos with a total footage time of 2 hours and 11 mins. These videos are available to view on the Trust's YouTube channel on <https://www.youtube.com/channel/UCxUuFTCWIPm5rV58qazAYZQ>.

A full list of the videos with links is available in Appendix II.

DATE	TYPE	TITLE	FACILITATOR	DURATION
18th March	Webinar	Glaciation and Glacial Features in Donegal	Peter Wilson, Ulster University	1.5 hours
25th March	Webinar	After the Ice	Peter Wilson, Ulster University	1.5 hours
8th April	Webinar	An Introduction to Maps and Mapping	Daragh McDonough, Donegal CoCo	1.5 hours
14th April, 28th April, 12th May	Course	Digital Mapping Using QGIS	Fiona Stapleton, Peasy Maps	3 x 1.5 hour sessions
11th May	Webinar	Nature Based Solutions for Farm Water Quality	Féidhlim Harty, FH Wetlands	1.5 hours
20th May	Webinar	An Introduction to Weather	Joanna Donnelly, Met Eireann	1.5 hours
22nd May	Course	Angler's Riverfly Monitoring Training (ARMI)	Ballinderry Rivers Trust	1 day
24th May	Workshop	Water Quality for Farmers	Inishowen Rivers Trust	2 hours
25th May	Workshop	Water Quality for Farmers	Inishowen Rivers Trust	2 hours
28th May	Fieldtrip	Nature Based Solutions on Farm	Féidhlim Harty, FH Wetlands	1 day (3 farms)
29th-30th May	Course	Wilderness First Aid	Ronan Lenihan, Mountain Training Ireland	2 days
4th June	Course	Willow Spilling on Rivers - Train the Trainer	Lawrence McMinn, Ness Landscapes	half day

**Table 1:** Complete list of courses, workshops, fieldtrips and webinars offered in the 2021 Inishowen River Guardians Programme.

DATE	TYPE	TITLE	FACILITATOR	DURATION
5th June	Workshop	Planting a Wildflower Meadow	Claire Thompson, Foraging Donegal	2 hours
6th June	Course	Willow Spilling on Rivers	Brendan Farren, Big Green Art	half day
10th June	Course	An Introduction to Water Chemistry for Rivers	Ray Smith, EPA Monaghan	2.5 hours
26th-27th June	Course	Safe Working in Water	Ronan Lenihan, Mountain Training Ireland	2 days
30th June	Webinar	Fish Movement on Irish Rivers	Gareth Pedley, WTT; Ken Whelan, East Wicklow Rivers Trust	1.5 hours
2nd-8th July & 15th-24th Nov	Course	Chainsaw use	North West Forestry Services Ltd	5 days
4th July	Fieldtrip	Fieldtrip with Dr. Peter Wilson	Peter Wilson, Ulster University	half day
9th July	Course	Developing a Catchment Restoration Plan	River Restoration Centre, Cranfield University	1 day
18th July	Course	Downstream Change Investigation	Mark O'Connor, Field Studies Ireland	1 day
24th & 25th July	Course	SSIS - Advanced Riverfly Training	Martin McGarrigle, Limnos Consulting	2 days
14th Aug	Workshop	Forest Bathing	Daniel Connaghan, BirdWatch Ireland	1 day
15th Aug	Fieldtrip	Fish Passage	Gareth Pedley, Wild Trout Trust	1 day
17th Aug	Fieldtrip	Woody Debris in Rivers	Gareth Pedley, Wild Trout Trust	2 day
3rd Sept	Workshop	A Plan for the Cloontagh River Part	River Restoration Centre, Cranfield University	half day
4th Sept	Workshop	How to Build a Pond	Féidhlim Harty, FH Wetlands	1 day
24th Sept	Workshop	A Plan for the Cloontagh River Part 2	River Restoration Centre, Cranfield University	half day
2nd & 3rd Oct	Course	Teaching River Processes	Mark O'Connor, Field Studies Ireland	2 days

**Table 1 (cont/d):**  
Complete list of courses, workshops, fieldtrips and webinars offered in the 2021 Inishowen River Guardians Programme.

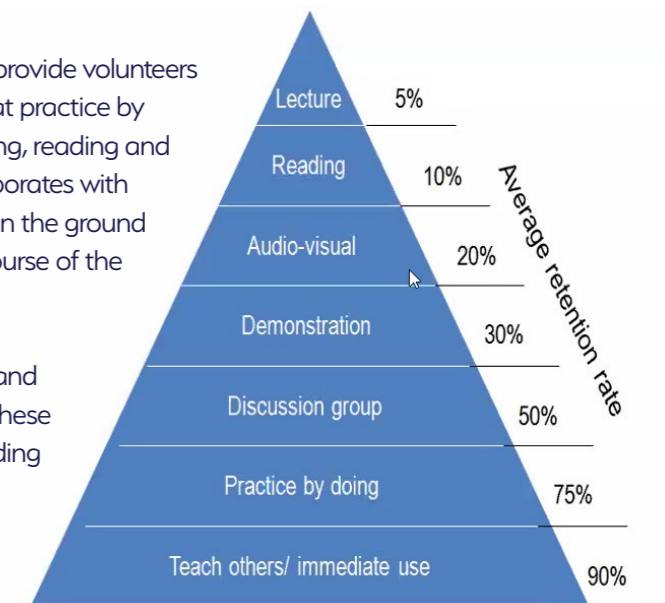
FILMING DATE	THEME OF VIDEOS	FACILITATOR / INSTRUCTOR	No. Videos	Total Mins Footage
14th May	Water Chemistry on Rivers	Aisling Reilly, Catchment Scientist LAWPRO	5	22.61
4th June	Willow Spiling	Lawrence McMinn, Ness Landscapes	1	21.28
26-27th June	River Water Safety	Ronan Lenihan, Mountain Training Ireland	1	9.54
5th Sept	Nature Based Solutions on the Farm	Féidhlim Harty, FH Wetlands	6	72.76
17th Aug	Woody Debris in Rivers	Gareth Pedley, Wild Trout Trust	1	5.28
			<b>14</b>	<b>131 mins</b>

**Table 2:**  
Videos filmed as part of the 2021 Inishowen River Guardians Programme covering 5 themes. (All videos available on the Trust's YouTube channel.)

## PRACTICAL EXPERIENCE

An important part of the programme was the ability to provide volunteers with experiential opportunities. Research has shown that practice by doing provides a much higher retention rate than listening, reading and audio-visual (Figure 3). The Inishowen Rivers Trust collaborates with landowners and community groups to deliver projects on the ground and a number of projects were developed during the course of the programme that encouraged volunteer participation.

Nine projects were run during the summer field season and volunteers were offered the opportunity to take part in these to gain practical experience. These events included building natural revetments to repair eroded banks, eradicating invasive species, willow spiling, wildflower planting, building leaky dams, planting a pond, forest clearing and taking part in Dublin City University's national WaterBlitz event. With their newly acquired skills, river guardians are encouraged to engage in citizen science and a number of survey forms (created using ArcGIS Survey123) have been made available to volunteers to enable them to record specific data which is automatically returned to the Trust.



Source: National Training Laboratories, Maine, USA

**Figure 3:**  
Average learner retention rates for a variety of teaching tools (Source: National Training Laboratories, Maine, USA).

At the second 'Brainstorm' event with the volunteers in May 2021, the focus group of volunteers discussed the development of a citizen science programme for Inishowen rivers in more detail. A number of additional courses were suggested as well as the idea of a River Champion for each river or sub-catchment. This will be looked at going forward for the new year. Surveys and data recording can now be achieved for:

- Macroinvertebrate monitoring
- Invasive species monitoring
- Basic water chemistry
- Basic habitat condition
- Biodiversity indicators (e.g., redd counts)

A number of challenges were highlighted including the technology barrier for some volunteers (working in areas with poor internet connectivity) and low confidence was considered to be an issue for some who had little scientific background.

# MANAGING & COMMUNICATING THE PROGRAMME

The Training Co-ordinator was responsible for managing the day-to-day delivery of the programme.

The role of the training co-ordinator was to advertise the courses, keep in contact with volunteers, provide them with pre-course information, liaise with facilitators, arrange venues and refreshments when needed and co-ordinate activities with the videographer. When a course was running the co-ordinator was also required to be on site to manage the event and support the trainer as needed. A course planner (Appendix III) was developed to ensure that all elements of a course ran smoothly.

This was a part-time role and due to the large number of courses delivered and absence of the Training Co-ordinator due to personal circumstances, the Project Officer became more involved in the arrangements for the programme later in the summer.

As part of the training, volunteers are provided with a welcome sheet, training passport, a folder for storing notes, pencils, and a health and safety leaflet (see Figure 4).



**Figure 4:** Materials provided to each volunteer when participating in their first course.

The training passport allows participants to keep a record of the training courses they attend including certificate numbers and is signed and stamped by the Project Officer.

Maintaining information on each of the volunteers is critical to maintaining a communication link with the volunteers. All information gathered from the participants when registering is stored in a spreadsheet. Currently this spreadsheet is managed using MS Excel but a dedicated volunteer management system would greatly improve communication and management of the programme allowing the Trust to track the progression of volunteers as they move from casual volunteers to river guardian, to core guardians.

## COMMUNICATING THE PROGRAMME

A variety of communication channels were used to advertise the training programme to as wide an audience as possible. The launch of the programme was featured in traditional media and courses were promoted on Facebook, Eventbrite, the Trust website, newsletter (Figure 5) and through posters and leaflets in local shops. Information about the programme featured in a number of publications as listed in Table 3 (and examples provided in Appendix IV). Feedback from the participants showed that Facebook and word of mouth were the most common ways that participants became aware of the courses.



**Figure 5:** RiverView, the IRT's newsletter, featured the IRC programme twice during the year.

In addition, as the programme is a core element and driver of the work of the Trust, it featured in a number of presentations delivered by the Project Officer to regional and national audiences (see Table 4).

Date	Publication
10/12/2020	<a href="https://www.donegaldaily.com/2020/12/10/inishowen-rivers-trust-receives-over-59000-in-funding/">https://www.donegaldaily.com/2020/12/10/inishowen-rivers-trust-receives-over-59000-in-funding/</a>
11/12/2020	Highland Radio news snippet
15/12/2020	Inishowen Independent article – River Guardians awarded €59,000
16/12/2020	Inish Times article – Major financial boost for Inishowen Rivers Trust
Spring 2021	Catchments.ie newsletter
Summer 2021	Horticulture Connected magazine
Jan 2021	RiverView Issue 1
May 2021	RiverView Issue 2
December 2021	RiverView Issue 3

**Table 3:** Articles featured the River Guardians Programme in a number of publications

DATE	PRESENTATION TO	TITLE
28/11/2020	Irish Rivers Trusts Seminar	Citizens & Science: Motivating & Retaining Volunteers
12/12/2020	Longford Water Seminar	Community Engagement in Water Management: An Inishowen Experience
14/01/2021	Border Regional WFD Committee	River Restoration: Glennagannon River, Inishowen
27/02/2021	Roscommon Water Conservation Workshop	Why Rivers Trusts make such good sense
23/03/2021	Reimagining Irish Rivers	The Role of Rivers Trusts in Connecting Communities and Other Stakeholders
27/04/2021	CIEEM Conference 2021	Nature Based Solutions on Inishowen Rivers
29/04/2021	Natural Capital Ireland workshop to Donegal CoCo	Nature Based Solutions on Inishowen Rivers
19/05/2021	Donegal Volunteer Centre	Down by the River: Volunteering for Nature
14/10/2021	Trinity College Dublin	Nature Based Solutions on Inishowen Rivers
14/10/2021	Donegal County Council	Volunteering in Nature
20/11/2021	Communities Caring for Water Conference 2021	Natural Flood Management in Inishowen: A pilot for the future

**Table 4:**  
Presentations delivered by the Trust in which the Inishowen River Guardians programme was highlighted.

On Facebook, each course was advertised with a poster or an appropriate image (Appendix IV). A link to the Eventbrite booking page was also provided. The number of followers on Eventbrite grew from 4 to 88 during the programme. Approximately one third of participants first learned of the course through this channel. The videos created as part of the programme were uploaded to YouTube and the number of followers there increased by 73% (from 22 to 38). The Trust has 1.3K followers on Facebook and this is the primary means of communicating with the local community. Details of events and courses are also emailed directly to the community from time to time e.g., Spring and Summer schedules.

All the marketing material acknowledged the funding received from Rethink Ireland who were tagged when possible on social media.



# FINANCIAL MANAGEMENT

Rethink Ireland's Innovate Together Fund provided 94% (€59,491) of the financial resources for the IRC Programme 2021. Match funding was provided through an existing Trust project (Resilience Pilot Project) funded through the Local Authority Waters Programme by the Department for Housing, Local Government and Heritage and managed by The Rivers Trust. This match funding primarily covered the time of the Project Officer.

An analysis of the finances for the project illustrated the impact of Covid on the projected budget. Travel was limited and it was not possible to book venues for some events. This reduced the amount of spending in these categories. In addition, with the increased number of courses delivered a reassignment of funds was requested for salary costs for the Training Co-ordinator and additional funds for the video contractor.

The Project Officer dedicated a considerable amount of time to the project, well above the projected allocation. This was due to a number of reasons including increased number of courses delivered and absence of Training Co-ordinator due to a family bereavement. The additional time was absorbed by the Trust's core funder.

For the future sustainability of the programme the recruitment of a permanent or part-time Volunteer Manager is essential. Delivery costs have been established for a wide range of courses and with the increased skills within the Trust, there is the option to provide in-house training. This will considerably reduce the outlays for some training courses. In addition, this increased skillset could allow the Trust to deliver specialised training in the area of natural flood management and nature based solutions.

For the other identified courses quotations were sought from facilitators for bespoke training. This information has been used to create a draft IRC Training Programme for 2022 (see Appendix VI). These costings include facilitator fees, equipment, venue hire, catering and administration but does not cover the cost of the Volunteer Manager. A detailed proposal for this additional staff resource will need to be developed over the winter months.





# PROFILING RIVER GUARDIANS AND VOLUNTEERS

Detailed records of the attendees at each of the courses were maintained. This allows some analysis of the participating volunteers although it was not possible to clearly profile every individual especially those participating in webinars. Seventy five river guardians were trained in 2021, 59 of these being new guardians. It should be noted that a guardians status will change over time (because they move away, are no longer interested, etc) and there is a continual need to recruit new volunteers. Table 5 provides some statistics from the live database.

	Number of Guardians
Total number trained in 2021	75
Number of new guardians for 2021	59
Total number of guardians trained to date	103
Total number of 'live' guardians	96
Number of 'active' guardians	28
Number of guardians completing 10 or more courses	8
Average number of courses completed	2.5

**Table 5:** Guardians statistics. 'active' guardians are those that attend volunteer events regularly.

For the 2021 data, analysing a cohort of 300 training places, it was found that 86% of individuals were community based and 4% were agency staff. The remaining 10% were from other rivers trusts and catchment groups. Statutory agency staff who attended the courses were from 6 different agencies, including 2 in Northern Ireland.

Overall, approximately 80% of the participants were Inishowen based with a further 14% based regionally or nationally and 6% from Northern Ireland. 1% of attendees were international participants.

A desired outcome of the project was the development of a software solution for managing volunteers. This database will help to manage volunteers, particularly as the number of volunteers grows. A quote for a Salesforce based CRM has been obtained but there are insufficient funds to cover the costs as of the publication of this report. The benefits of a CRM would be:

- Increased efficiency of communication with volunteers.
- Enable more effective analysis of the data.
- Ability to monitor progress of volunteers and guardians.
- Help maintain good GDPR practice with a growing dataset.

The Trust will work towards securing additional funds to develop this database.

# EVALUATING THE PROGRAMME

The participant uptake for each of the activities was evaluated and the results were broken down into courses (certified and non-certified), workshops/webinars/fieldtrips and face-to-face and online delivery. The results are summarised in Figure 5 and an analysis of all courses delivered is available in Table 6 and Table 7.



**Figure 5:** A simple breakdown of the river guardians programme for 2021



COURSES	Certified (Y/N)	No. places	No. Participants	Uptake (%)
Digital Mapping with QGIS	Y	15	17	113
ARMI	Y	12	10	83
Wilderness First Aid	Y	12	11	92
Willow Spiling - Train the Trainer	N	7	7	100
Willow Spiling 2	N	15	12	80
Basic Guide to Water Chemistry	N	50	16	32
Safe Working in Water	Y	10	10	100
Chainsaw Use & Maintenance	Y	3	3	100
Developing a Catchment-wide Restoration Plan	Y	20	16	80
Downstream Change Investigation	N	20	8	40
SSIS	Y	7	7	100
Teaching River Processes	Y	15	11	73
<b>Average Uptake (%)</b>				<b>83</b>
<b>Average Uptake (%) for certified courses</b>				<b>93</b>
<b>Average Uptake (%) for uncertified courses</b>				<b>63</b>
<b>Median</b>				<b>88%</b>

**Table 6:** Analysis of the uptake of places for the 12 courses delivered. The median shows that 50% of the courses had an uptake of 88%.

WORKSHOPS / WEBINARS / FIELDTRIPS	No. places	No. Participants	Uptake (%)
Glaciation and Glacial Features in Donegal	100	77	77
After the Ice - Landscape Changes since the Glaciers disappeared	100	49	49
An Introduction to Maps, Data and Online Mapping Tools	100	45	45
Nature Based Solutions for Farm Water Quality	100	20	20
An Introduction to Weather Forecasting	100	21	21
Planting a Wildflower meadow	5	5	100
Water Quality on the Farm	10	10	100
Water Quality on the Farm	10	10	100
Nature Based Solutions for Farm Water Quality	15	21	140
Fish Migration Patterns in Irish Rivers	100	12	12
Geography Fieldtrip in Urris	15	15	100
Fish Passage	15	10	67
Woody Debris	15	8	53
Forest Bathing	15	14	93
Building A Pond	15	20	133
A Plan for the Cloontagh River Part 1	15	8	53
A Plan for the Cloontagh River Part 2	15	8	53
<b>Average Uptake (%)</b>			<b>72</b>
<b>Median</b>			<b>77%</b>

**Table 7:** Analysis of the uptake of places for the 17 workshops/webinars/fieldtrips delivered as part of the IRG Training Programme 2021. The median shows that 50% of these activities had an uptake of 77% with two activities over-subscribed.

Further analysis looking at the breakdown between face-to-face courses and online courses (Table 8) shows a clear preference for face-to-face activities (92% compared to 51%) and no significant difference between certified and non-certified courses. In an online setting there was a significantly greater uptake in certified courses online, although only 2 out of the 3 online courses were certified so this statistic should be viewed cautiously.

The median figure shows that face-to-face courses are predicted to be more popular with a greater uptake. This should be viewed in the context of the type of volunteers this training is directed towards. River volunteers tend to be outdoor people with a preference for physical activity. This may also contribute to the lower figure for online participation.

	Face-to-Face	Online
Average Uptake (%)	92	51
Average Uptake (%) for certified courses	93	97
Average Uptake (%) for uncertified courses	92	40
<b>Median</b>	<b>80%</b>	<b>53%</b>

**Table 8:** Summary analysis of courses broken down into Face-to-Face training (n=18; 6 certified) and Online training (n=11; 2 certified).

## BLENDED LEARNING AND VIDEO PRODUCTION

Eight of the activities were blended in some way e.g., an online pre-cursor component to a face-to-face course. This decreased the cost of the course by reducing the need for a venue and reducing mileage costs for all participants. It is difficult to assess the uptake of the blended learning option using videos as it is not possible to know if the participants who take part in an online course will also view the related videos. Anecdotal feedback from participants however can be recorded e.g., via comments on FB and YouTube.

The majority of the training videos were released from 7th October 2021 to the 12th November 2021. The water chemistry videos were released one per day to celebrate Science Week 2021. The total number of subscribers to the Trust's YouTube channel increased by 73% (22-38 subscribers). Videos were initially just published on YouTube but by Science Week (November) the videos were also shared on Facebook to help increase the audience reach.

A look at the analytics of the YouTube channel for the period Nov 01-Nov 28 2021 are shown in Table 9.

Views	Watch Time	Impressions	Click through rate
1,170	85 hours	3,335	7.6%

**Table 9:** Analytics from the Inishowen Rivers Trust's YouTube channel for the period 01 Nov – 28 Nov 2021

The most popular videos were those that focused on nature based solutions:

- Nature Based Solutions on an Inishowen Farm
- NBS on Farm Drains
- Water Chemistry 1: Temperature and Dissolved Oxygen
- Leaky Dams Clonmany, Inishowen
- (Domestic) Constructed Wetlands System

Analytics on Facebook for the Water Chemistry videos showed that the main reach of the videos was to followers of the Trust (up to 58-90%) but the reach extends to UK and other counties in Ireland e.g., Wicklow and Cork where other rivers trusts are based. In terms of gender, the audience was on average 65% male.

Post	Impressions	People Reached	Engagement	Comments	Shares
WATER CHEMISTRY PART 5: Our last video on water chemistry loo...	570	499	17	0	2
WATER CHEMISTRY Day 4 of learning about water chemistry in ou...	243	216	12	0	1
WATER CHEMISTRY 3 When we think about water chemistry, pH is...	846	734	27	0	3
WATER CHEMISTRY 2 For Science Week we are looking at water c...	397	359	25	4	2
Water Chemistry in Rivers 1: Temperature and Dissolved Oxygen ...	899	816	37	2	5

Figure 6: Facebook analytics of the water chemistry videos posted.

## SCHOOLS ENGAGEMENT

Engaging with a younger generation is an important goal in many organisations. As part of the programme the Trust delivered 3 workshops to primary aged children on riverfly monitoring and one on climate change. This programme can be developed moving forward but will require a dedicated programme development officer. This engagement has income generation potential.

## PARTICIPANT EVALUATIONS

For each course participants were asked to complete a registration form, a Contact Tracing Form for Covid, asked to sign an attendance form and for some course asked to complete an evaluation form.

Some of the facilitators also requested participants to complete their in-house evaluation and registration forms for certified training. Feedback from the participants on each course was gathered where possible. Evaluation forms were not disseminated for some courses such as fieldtrips and webinars. For the evaluations that were returned there was a wide variability in the return rate, and this may have been for a number of reasons.

- **Indoor Training:** Easier to gather feedback at indoor training as time could be set aside for them to be completed and returned.
- **Outdoor Training:** For outdoor training, participants sometimes left a little earlier and it was more difficult to ensure forms were completed. This was also the case in poor weather conditions.
- **Online Training:** For online training, feedback could be requested through the chat function on Zoom or via polls. Evaluations were sent via Google Forms or editable PDF but there was a low return rate.

A standard evaluation form was developed for most courses (Appendix V) which aimed to capture general comments, general feedback (venue, catering etc), specific feedback (training materials, Q&A) and assess the impact of the training on knowledge, skills and attitude. Online forms asked more context specific questions.

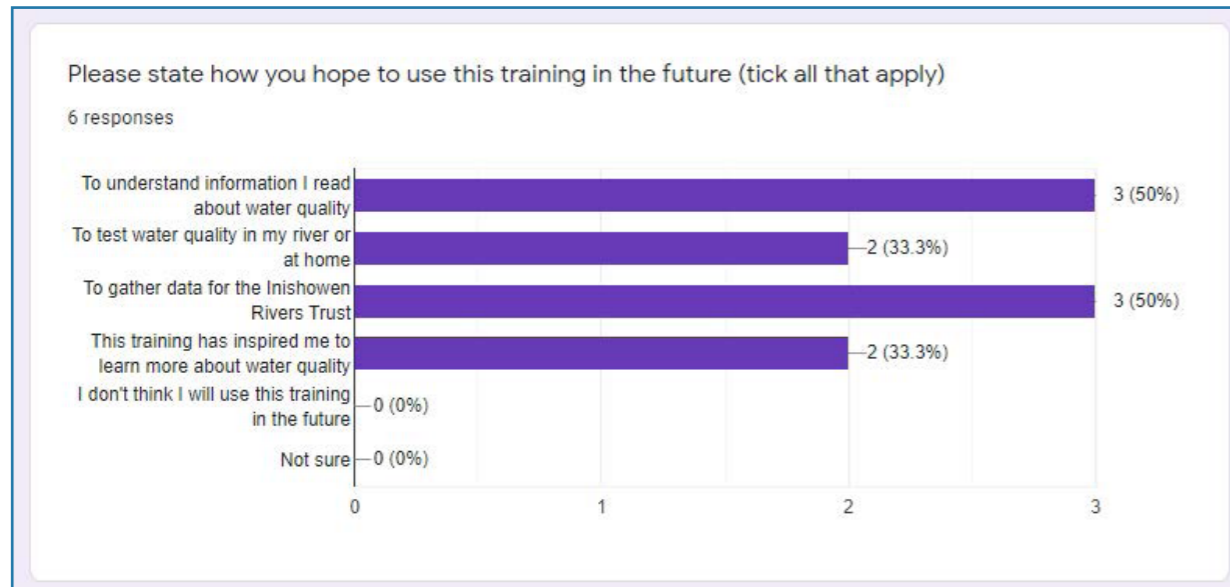
It was found that there was little information to be gleaned from the general evaluation form that would be relevant to the development and sustainability of the programme. The most relevant questions and results are presented in Table 10.

Theme of question - on a scale of 1 (no change) to 5 (much change)	Average Score
Was the course beneficial?	5.0
Degree to which knowledge improved	4.3
Degree to which attitude changed	4.3
Degree to which skills improved	4.3

Table 10: Analysis of standard feedback evaluations.

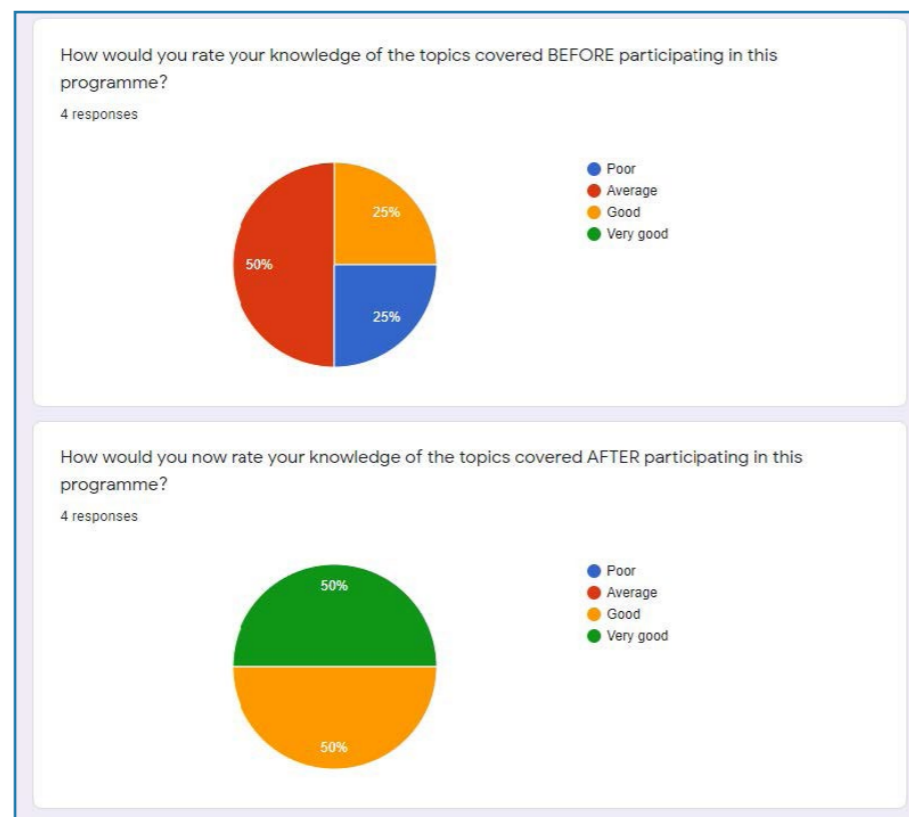
More valuable insight was achieved through the online forms. Each online form was specifically created to suit that course. Three of these forms provided useful comments and suggestions, in particular the final General Evaluation Form sent to all participants.

For the online *A Basic Guide to Water Chemistry* course participants were asked how they hoped to use the training in the future (see Figure 7). This information is valuable in understanding the motivation to participate in training and probes a deeper understanding of the impact of the Trust. Questions similar to this could be developed specific to each course.



**Figure 7:** Responses from participants when asked specifically how they hoped to use the knowledge they had gained through the training. (Data collected using on Google Forms).

For the *Catchment Restoration Plan* workshops, the participants were asked to rate their knowledge before and after attending the course. This couplet of comparative questions could provide useful trend data for the future showing an increase (or decrease) in community knowledge around rivers. This is more meaningful than asking a single question asking the participant to assess the degree to which their knowledge improved.

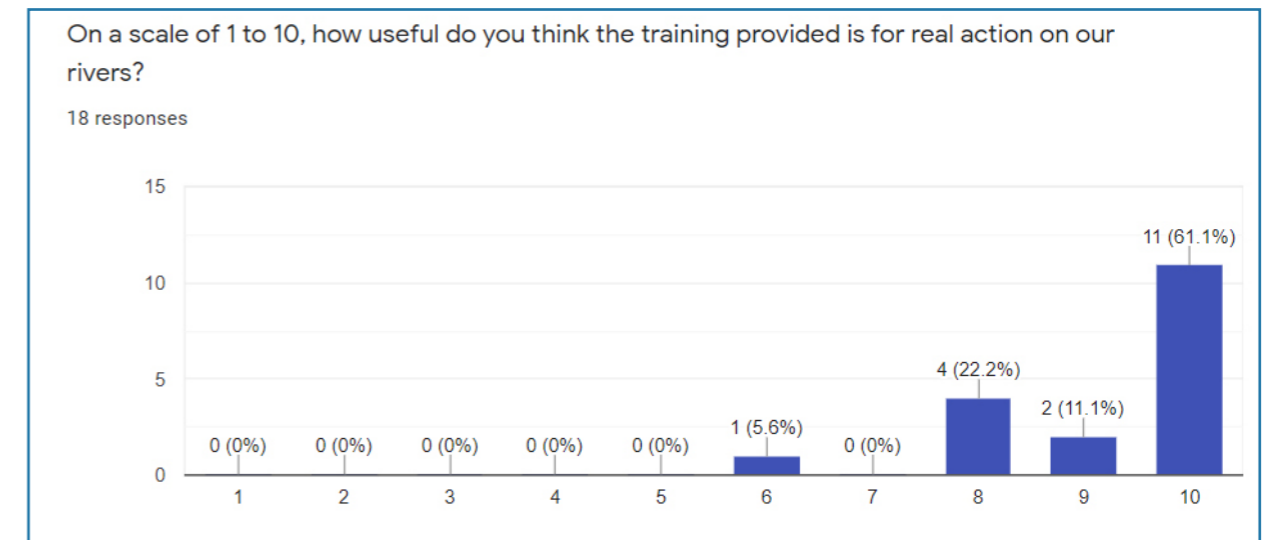


**Figure 8:** Participant self-assessment before and after the *Developing a Catchment-wide Restoration Plan* workshop. (Data recorded using Google Forms).

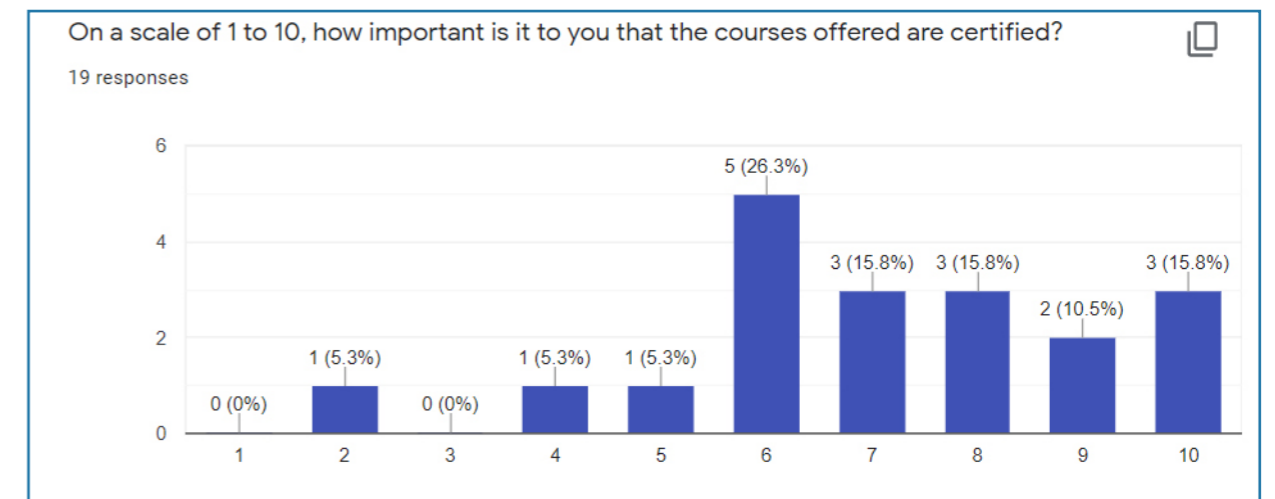
The final General Evaluation Form for the programme was sent to all participants via email. To encourage response, prizes were offered to those who responded rapidly. This resulted in much prompter feedback than had been previously experienced. Participants were asked broader questions such as:

- what courses and topics they enjoyed most during 2021;
- did they volunteer with the Trust after the training;
- how useful did they think the training provided is for enabling real action on our rivers (Figure 9).

Participants were also asked how important certification was to them (Figure 10). There was a mixed response to this question although there was a tendency for it to be of some significance. It is clear also that the participants felt that the programme could have a real impact on the ground, most likely through the delivery of projects.



**Figure 9:** Participants responding to the perceived impact of the training on the ground. (Data recorded using Google Forms).



**Figure 10:** Responses of participants when asked about the importance of certification for courses.

In order to increase efficiency of analysis and gain a greater understanding of the drivers in river training, the following recommendations are suggested:

1. Registration forms are only necessary for new volunteers
2. Allow participants to register online in advance to reduce the paperwork at courses.
3. Create a simple evaluation form to ask no more than 10 questions. Questions should be kept to multiple choice, checkbox or rating questions. Questions should provide useful answers.
4. Online evaluation preferable (stores data, less human error, graphical representations) but needs to be promoted and participants encouraged to respond
5. Specific questions should be tailored to each course evaluation. This will require a clear understanding of what the training aims to achieve and how it can impact on the work of the Trust.

# IMPACT

The Inishowen River Guardians Programme 2021 has proven to be highly successful. The programme has increased the skills and knowledge of participants inspiring them to become more active on their local rivers. The river guardians approach has been used to demonstrate the potential of community groups to provide meaningful engagement in river projects that have positive outcomes for your rivers.

The IRG programme has been communicated widely across Inishowen and Donegal but also nationally through presentations, published articles and the iCatch Network. In August the Trust was awarded the ME4U award by the Donegal Volunteer Centre in recognition of the educational and participatory approach of the project. In October the collaborative approach of the Trust was recognised nationally by the nomination for a Knowledge Transfer Ireland Award in the Industry Engagement Impact category.

(<https://www.knowledgetransferireland.com/Events/KTI-Impact-Awards/KTI-Impact-Awards-2021/Finalists-and-Winners/>)



The Inishowen Rivers Trust is a lead partner in the iCatch Network, a national support network for rivers trusts and catchment groups in Ireland. The river guardians programme was promoted to the network and 29 participants from these groups completed some training. The IRG programme is a model that could be replicated in other trusts and some groups are starting to develop their river guardians team. The Trust has also provided recommendations to iCatch on suitable training and facilitators.

It is difficult to quantify the direct impact of the volunteer programme on the status of our rivers but outcomes contribute to positive environmental gains for the rivers.

- Two new community river groups formed to protect single river systems
- Nature based solutions implemented in collaboration with landowners
- Developed good working collaboration with agencies to deliver positive projects on the ground
- Enabled the Trust to secure additional funding for projects
- Mobilised volunteers to deliver 9 action-based projects on the ground in 2021

The reach of the IRT is growing as a result of the programme. This is evident in the increased followers through our internet channels and increased recognition of the work of the Trust by all stakeholders.

## DISCUSSION

The Inishowen River Guardians Programme delivers high quality, specialised training to a wide range of stakeholders. The programme has become a core element of the work of the Trust and aids the Trust in achieving its strategic goals.

The support from Rethink Ireland has been a key enabler for focusing attention on the value and importance of upskilling volunteers. Highly skilled volunteers are creating awareness in the community and creating conversations around rivers, climate change, and biodiversity. Their increased knowledge, based on sound scientific research and techniques, has increased their confidence in delivering actions both personally and as a strong workforce. A community of river guardians has developed and with careful planning can be extended and enhanced for the future.

The IRG programme has also been a key enabler for other projects that increase the impact of the Trust. In 2021 the Trust worked on projects that use nature based solutions to solve particular challenges. These projects have largely revolved around green engineering solutions which can provide multiple benefits for the environment and the community. The skills and experience of the core river guardians team on these projects has been recognised nationally. Case studies of volunteer projects have demonstrated to statutory agencies the benefits and positive outcomes of collaborating with a skilled volunteer team.

The original application to Rethink Ireland, committed to developing and delivering 8-10 courses and creating video training material around 4 themes. The completed programme has exceeded these goals almost tripling the number of activities delivered and created 14 videos across 5 themes. This was made possible due to the lower costs associated with venue hire and travel and the use of a blended approach – more online delivery.

Covid restrictions did impact on the delivery of courses, particularly at the start of the programme up until June. It also increased the administration burden for each course with the requirement for contact tracing, provision of additional PPE, higher cost at some venues and higher costs for some catering as lunches needed to be individually wrapped. However, it did also reduce the amount of venue hire required and with travel restrictions in place for a number of months, there were also savings on travel and subsistence. As the majority of courses are outdoor, practical courses, the Covid restrictions did not prevent any of the courses from taking place and volunteers felt safer in an outdoor environment.

The blended approach provided increased opportunities for engaging expert facilitators. It was more cost effective for experts to engage online where they were also more available. A significant cost for the Trust in the past has been fees to bring an expert to the remote North West. Going forward a blended approach will have many benefits and be a more sustainable option for the Trust. A draft training programme has been prepared for the 2022 season (Appendix VI). This proposal suggests a schedule of 16 courses based on three levels – introductory, intermediate and advanced. Participants are not expected to complete all 16 courses in one year but to progress through these courses as listed. For example, a participant may spend 2-3 years completing all courses.

Additional activities such as webinars and volunteer projects will also be available through the average season. Based on feedback from participants, a key consideration is the popularity of each course. It was clear that some courses were particularly popular e.g., pond building, nature based solutions and forest bathing. The geography webinars and fieldtrip were also popular as a basic knowledge of the landscape and would be considered an important introductory course for new volunteers. These kind of fieldtrips are also popular for group bonding which increases retention rates of volunteers and encourages a team approach to projects.

The more specialised courses tended to be more popular with the core river guardians team. This may be because these guardians tended to have been involved for longer or have completed more courses and were more confident. Water chemistry is a vital understanding for anyone working in the field of river monitoring but is not considered a vital skill amongst volunteer who consider this 'more technical'. The videos on water chemistry will help to clarify understanding on water chemistry and volunteers can go back to these videos on the YouTube channel at any time.

Another specialised webinar was the fish migration discussion. Although rivers trusts are often considered to have a primary focus on fishery issues, similar to an angling club, this is not necessarily the case. Many angling club members are involved with rivers trust as is the case with the Inishowen Rivers Trust. Fish are an important consideration for river monitoring as a high level indicator species of the health of a river.



The final objective of the programme is the development of an Inishowen-wide RiverWatch Survey. This has been discussed with a focus group of volunteers and the more advanced volunteers already engage in collecting and returning data to the Trust. The return of data is a critical part of citizen science and our observation is that confidence is a key issue. The more knowledgeable the volunteer, the more likely they are to return data. It is of course not the only issue. The collection of data needs to be as simple as possible and volunteers need the right equipment and support to take part.

## RECOMMENDATIONS

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The Inishowen Rivers Trust makes the following recommendations for the future direction of the river guardians programme. An Exit Action Plan is available in Appendix VII.

### CORE ACTIVITIES

- Secure core funding for a permanent Training Co-ordinator or Volunteer Manager (0.5 or 1.0 FTE). Develop a cost proposal for the new staff member to include projected cashflow from the increased staff resource due to the possibility of income generation.
- Invest in additional technology to improve communication and drive volunteer recruitment. Develop a volunteer database management interface.
- Invest in new equipment for training and for volunteer monitoring.

### TRAINING PROGRAMME

- Develop a training schedule that is based on three levels – basic/introductory, intermediate and advanced. Develop a Schools Programme or River School to include river ecology, biodiversity and climate action.
- Develop a Climate Education Programme that is aligned with the river guardians.
- Maintain blended approach to training. This will reduce overall costs and can provide access to high quality facilitators.
- Specific recommendations have been made on training evaluations.

### INFLUENCE

- Continue to engage with landowners. This is key to the success of projects going forward.
- Develop a mentor programme to encourage knowledge and skill transfer between volunteers. A river champion on each river will also be encouraged.
- Seek collaborations with other stakeholders especially other local community groups, statutory agencies and regional and national groups. This may help to develop funding partnerships on shared themes of interest.
- Develop an Inishowen-wide RiverWatch Survey as a complete citizen science programme to engage existing volunteers and encourage new volunteers.

## ACKNOWLEDGEMENTS

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We would like to sincerely thank all of the participants who engaged so enthusiastically in the 2021 Inishowen River Guardians Training Programme. Many thanks also to the landowners who generously provided access to their property, to the caterers, venue providers and all the expert facilitators who provided such excellent training.

This project has been funded primarily through Rethink Ireland's Innovate Together Fund and we would like to express our deep gratitude to Aisling and her team at Rethink for all their support throughout the year and to Emma for her excellent guidance.

Finally, a special word of thanks to our Training Co-ordinator Bren Whelan, our videographer Simon Barr and graphic designers Big Moo Design and Bizzprint.



# APPENDICES

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Appendix I – Action Plan

Appendix II – List of videos created

Appendix III – Course Planner

Appendix IV – Communications & Advertising

Appendix V – Standard Evaluation Form

Appendix VI – Draft Proposed Inishowen River Guardians Training Programme 2022

Appendix VII – Exit Action Plan



# APPENDIX I

Organisation: INISHOWEN RIVERS TRUST

**PROJECT PURPOSE**

To develop and deliver a highly specialised training programme that will help the RFT and volunteers to deliver effective projects to restore and protect the rivers of Inishowen.

Project Name: INISHOWEN RIVERS GUARDIANS  
Project Lead: Dr. Trish Murphy

GOAL 1												MEASURING PROGRESS			MILESTONE													
Develop the Inishowen River Guardians programme, providing specialist training through blended learning, reaching 70 students (12 months).												01: Dec-Feb			02: Mar-May			03: June-Aug										
No.	OBJECTIVES	ACTION DESCRIPTION	RESPONSIBLE PERSON	DATE TO BEGIN	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Completed date	RESOURCES REQUIRED (staff, tech, etc.)	POTENTIAL CHALLENGES	DISIRED OUTCOME per Objective	No. of applicants	No. of respondents	TC fully operational	04		
1	Hire training coordinator	Develop role description and advertise Manage recruitment process & admin Interview and appoint Training co-ordinator	Trish & Claire Trish Dreaders	01/12/2020 14/12/2020															04/12/2020 21/12/2021	Staff time, € Staff time Staff & board time	Do not attract suitable candidates, have to re-interview Insufficient feedback, poor feedback	Experienced TC appointed						
2	Devise & develop training courses	Training needs analysis Research platforms/specialising infrastructure for online delivery Create project working group - vets & facilitators & creative person Outreach to other River Trusts re online education Develop course outline & module content Determine certification options Design online engaging content Scope content requirement for filming, content and accreditation stacks	Trish & TC Trish & TC Trish & TC Trish TC TC TC	01/01/2021 14/01/2021 01/12/2020 01/12/2020 Jan/Feb Jan/Feb 01/02/2020 14/02/2021														18/01/2021 14/02/2021 07/12/2020 31/12/2020 26/02/2021 26/02/2021 26/03/2021 01/03/2021	Staff time, tech, phone Staff time, phone, web, webinar platform Facilitators, online course design expertise Staff time Facilitators, staff time Staff time, external expertise Staff time, Board input	High quality training resources Potential reach of IRG expertise Modules designed Content received from facilitators Transfer responses								
3	Training Programme set up	Draft course schedule Secure permissions from Fisheries Board & landowners Facilitators scheduled Arrange venues Identify & source equipment needs Develop communication plan and advertise Develop course registration process/online database GDPR for filming participants secured Agree filming schedule	TC Trish, TC, Board TC TC TC TC Trish, TC TC	28/01/2021 28/01/2021 01/02/2021 01/02/2021 01/03/2021 01/03/2021 01/03/2021 01/03/2021														31/03/2021 01/03/2021 15/03/2021 31/03/2021 22/03/2021 31/03/2021 27/06/2021 31/03/2021	Staff time, phone, email, vans Staff time, phone, email Staff time, phone, email Staff time, tech, phone, web, comms, vet? Staff time, database expertise/CRM Staff time Facilitators	Learning platform in place Project focus group established Content outline agreed Certifications issued Online design/approach for content completed Filming commenced								
4	Evaluate Training Programme	Understand what encourages committed involvement via survey/focus group Create action projects opportunities Develop volunteer database Recruit volunteers	TC & Trish TC Trish, Facilitators, Board TC	22/03/2021 12/04/2021 April-Oct 2021 01/05/2021															11/04/2021 April-Oct 2021 01/11/2021 July-Sept 2021	Web, staff time, phone Staff time Staff time Staff, board, web, advertising	Quality evaluation Engagement of training List of recommendations Response rate Analysis completed No issues identified							
GOAL 2												MEASURING PROGRESS			MILESTONE													
Create a strong volunteer base of well trained, experienced River Guardians												01: Dec-Feb			02: Mar-May			03: June-Aug										
1	Convert students into committed volunteers	Understand what encourages committed involvement via survey/focus group Create action projects opportunities Develop volunteer database Recruit volunteers	TC TC & Trish TC & Trish TC & Trish	01/04/2021 01/04/2021 01/02/2021 01/05/2021															01/12/2021 01/05/2021 01/09/2021 31/05/2021	Staff, tech, phone, web, Board, Volunteers Increased volunteer competency No. of new volunteers DB established	Survey volunteers Action based project 1 Vol DB prototype 20 Volunteers							
2	Engage with statutory agencies	Volunteers develop own ideas for CS Database tracks certification and skills (current & required) using metadata approach	TC & Trish TC & Trish	01/05/2021 01/04/2021															July-Sept 2021 01/10/2021	Staff, meeting space, web procedures, new ideas costly Staff, vet, Board, software?	Volunteers do not apply correct procedures, new ideas costly Time consuming to research further opportunities, accurately identifying needs	monitoring volunteer hours No. of employment opportunities/relevant roles by participants						
GOAL 3												MEASURING PROGRESS			MILESTONE													
Grow the reach and influence of the Inishowen Rivers Trust by promoting the River Guardians approach and collaborating with stakeholders to form new partnerships and identify long term solutions for sustainability.												01: Dec-Feb			02: Mar-May			03: June-Aug										
1	Establish new partnerships with landowners to enable action based projects	Develop database of landowners who are willing to participate in projects Attend agricultural shows Tree planting programme Advisory walk-over	TC & Trish Trish, Board Trish Trish, Board	01/03/2021 Jun/Jul/Aug 21 01/12/2020 30/04/2020															01/09/2021 Jun/Jul/Aug 21 31/03/2021 30/07/2020	Staff, vets, volunteers Exhibition material, staff, transport, accommodation, equipment, mapping software Staff, volunteers, vets, meet equipment	Insufficient uptake by landowners Shows cancelled due to Covid, insufficient staff Planning permission, finding landowners to collaborate Finding landowners to collaborate	No. of vets Good relations with landowners No. of landowners interested No. of requests	10 landowners 2 Agric show 7 5	8 landowners 2 Agric show 7 5	5 landowners 1 Agric show 5 3	2 owners 1 Agric shows 5 3		
2	Engage with statutory agencies	Invite to participate in programme Create knowledge sharing opportunities	TC Trish, Board	01/01/2021 01/01/2021															01/06/2021 31/06/2021	Staff, phone, web, meeting Staff, phone, web, meeting	No agencies that collaborative projects or work funded No engagement by agencies	No. agencies that collaborative projects or work funded Increase in community interest in adopting an RG approach	3 agency referrals for training Donegal CC					
3	Promote River Guardians Approach	Discuss IRG programme with ICA/DOH Share resources Investment in website content Develop communications plan (& social media presence)	Trish TC, Trish TC, Trish	01/02/2021 01/06/2021 01/02/2021 01/12/2020															01/06/2021 01/10/2021 31/06/2021 31/06/2021	Staff, phone, web Staff, phone, web Staff, phone, web Staff, phone, web, conferences	No engagement, clash with other agencies Resources rebranded by others Time consuming, does not reach audience	Increase in community interest in adopting an RG approach Level of enquiries	Launch Website refresh complete Communications Plan					
4	Explore long term financial sustainability	Cost all training courses Cost all services provided to landowners Determine core operating figure that should aim to generate through own income Identify income generation and fundraising options that could be embedded within what we do	TC Trish, Board TC TC, Trish	01/04/2021 01/04/2021 01/04/2021 01/04/2021															01/07/2021 01/10/2021 01/10/2021 01/10/2021	Staff, accountant, FR working group	Some elements difficult to quantify by landowners, disadvantaged area, high unemployment Number new courses run per year, Number of additional resources added to training database	DB set up Number of enquiries Website refresh complete Article in catchments.ie Spreadsheet set up DB complete Operating figures identified						

# APPENDIX II

Videos created as part of the Inishowen River Guardians Training Programme 2021

Title of Video	YouTube link to video
Inishowen Rivers Trust – Willow Spiling	<a href="https://youtu.be/KtvGFsb_ToE">https://youtu.be/KtvGFsb_ToE</a>
Nature Based Solutions on an Inishowen Farm	<a href="https://youtu.be/1A_9oVigeiE">https://youtu.be/1A_9oVigeiE</a>
River Safety Training	<a href="https://youtu.be/kWV-ILxhe1U">https://youtu.be/kWV-ILxhe1U</a>
Nature Based Solutions on Farm Drains	<a href="https://youtu.be/a3U7uouNZ4g">https://youtu.be/a3U7uouNZ4g</a>
Ponds for Biodiversity	<a href="https://youtu.be/8aDy-W7muFA">https://youtu.be/8aDy-W7muFA</a>
(Domestic) Constructed Wetlands System in Inishowen	<a href="https://youtu.be/F8_HDuwEB7c">https://youtu.be/F8_HDuwEB7c</a>
Leaky Dams Clonmany Inishowen	<a href="https://youtu.be/-eFhW_Ef5TQ">https://youtu.be/-eFhW_Ef5TQ</a>
Silt Traps for Woodlands	<a href="https://youtu.be/FJ8_A1qihqM">https://youtu.be/FJ8_A1qihqM</a>
Water Chemistry in Rivers 1: Temperature & Dissolved Oxygen	<a href="https://youtu.be/zKOsC1-ah-0">https://youtu.be/zKOsC1-ah-0</a>
Water Chemistry in Rivers 2: Sedimentation	<a href="https://youtu.be/Qk3OakeRMHA">https://youtu.be/Qk3OakeRMHA</a>
Water Chemistry in Rivers 3: pH & Conductivity	<a href="https://youtu.be/9EpZB6v_SpE">https://youtu.be/9EpZB6v_SpE</a>
Water Chemistry in Rivers 4: Nitrates & Phosphates (1)	<a href="https://youtu.be/QY30qHU8g7I">https://youtu.be/QY30qHU8g7I</a>
Water Chemistry in Rivers 5: Nitrates & Phosphates (2)	<a href="https://youtu.be/x2uNjqOGIWs">https://youtu.be/x2uNjqOGIWs</a>
Woody Materials in Rivers	<a href="https://youtu.be/9SqhW7FkIA4">https://youtu.be/9SqhW7FkIA4</a>

# APPENDIX III

**Course Planner** – a checklist of actions required for each course delivery.

Item No.	Action	Responsibility	Check <input type="checkbox"/>
1	Agree on training course – establish need		
2	Contact suitable facilitators to discuss potential course content, format, cost		
3	Consider additional resources required		
4	Secure funding for the course or consider revenue options		
5	Procure trainer, venue and catering		
6	Secure necessary permissions – landowners, agencies, etc		
7	Advertise course, set up on Eventbrite		
8	Send information to registered participants		
9	Source equipment needed for course and venue		
10	Final checks on venue and catering		
11	Deliver course		
12	Follow up Evaluation		
13	Enter volunteer details onto Trust database		
14	Provide certification when available		
15	Provide feedback and support to volunteers		
16	Recommend or invite to volunteer projects		

# APPENDIX IV

**After the Ice - Landscape Changes since the Glaciers disappeared**

Dr Peter Wilson  
Ulster University

RETHINK IRELAND

**FISH PASSAGE TRAINING**

JOIN US FOR A DAY OF DISCUSSION ON FISH MOVEMENT

GARETH PEDLEY  
(WILD TROUT TRUST)

AUGUST 15TH, 2021

Register on <https://irt-fishpassagetraining.eventbrite.ie>

[www.inishowenrivertrust.com](http://www.inishowenrivertrust.com)

**RIVERFLY MONITORING**

Learn how to sample your local river and become a citizen scientist

Certified training provided by Ballinderry Rivers Trust

SATURDAY 22ND MAY 2021 @ 11AM - 5PM  
VENUE: MOVILLE-BREDAGH RIVER

Learn key sampling techniques and river invertebrate identification. Understanding the general trend for insect streams will help understand the health of the rivers.

Register by emailing [Breand@nishowenrivertrust.com](mailto:Breand@nishowenrivertrust.com)

**WILLOW SPILING**

WITH BRENDAN FARREN  
BIG GREEN ART

Sunday 6th June 2021

REGISTER AT: <https://willowspiling.eventbrite.ie>

LEARN THIS NATURAL TECHNIQUE FOR RIVERBANK EROSION CONTROL

**FARM VISITS TO EXPLORE NATURE BASED SOLUTIONS**

Join Feidhlim Marty on a tour of 3 landowners in Inishowen to discuss nature based solutions for water management - including farm drains, sediment traps and farm ponds. Free event but booking essential as spaces are limited.

FRIDAY 28TH MAY 2021

VISIT 1: TURE - 9.30AM - 11.00AM  
VISIT 2: REDCASTLE - 12.00PM - 1.30PM  
VISIT 3: TREMONE - 2.30PM - 4.00PM

Register on <https://nbsa-farm-visits.eventbrite.ie>

**A BASIC GUIDE TO WATER CHEMISTRY**

Workshop by Environmental Protection Agency

THURSDAY JUNE 10TH 2021 @ 2.15 - 4.30PM  
VENUE: ZOOM

Learn why water chemistry is such a valuable tool for helping us understand the status and characteristics of a natural waterbody, plus how it can be used to assess a waterbody's health, and how a method can identify any pressures and impacts.

Register on Eventbrite: <https://water-chemistry.eventbrite.ie>

**WOODY DEBRIS TRAINING**

Join renowned river expert Gareth Pedley (Wild Rivers Trust) as we explore the rivers of Inishowen to discuss how woody debris can be managed and used to enhance the river environment.

GARETH PEDLEY  
(WILD TROUT TRUST)

AUGUST 17TH, 2021

Register on <https://woodydebris.eventbrite.ie>

[www.inishowenrivertrust.com](http://www.inishowenrivertrust.com)

**DIGITAL MAPPING USING QGIS**

WITH FIONA STAPLETON  
PEASY MAPS

APRIL 14TH, APRIL 28TH & MAY 12TH 2021

Learn how to create and edit professional maps for your projects and ideas.

Booking & More info <https://irt-digitalmapping.eventbrite.ie>

**FIRST AID FOR WILDERNESS**

Learn Outdoors with the Inishowen River Guardians

**WILDERNESS FIRST AID**

with Ronan Lenihan  
Mountain Training Ireland

April 10th & 11th  
9.00am - 4.30pm

Register today on <https://irt-wildernessfirstaid.eventbrite.ie>

**SAFE WORKING IN WATER**

Learn Outdoors with the Inishowen River Guardians

WITH RONAN LENIHAN  
MOUNTAIN TRAINING IRELAND

APRIL 24TH & 25TH 2021  
9.00AM - 5.30PM

Register today on <https://irt-watersafety.eventbrite.ie>

**FIRST AID FOR WILDERNESS**

Learn Outdoors with the Inishowen River Guardians

**FIRST AID FOR WILDERNESS**

with Ronan Lenihan  
Mountain Training Ireland

APRIL 10TH & 11TH  
9.00am - 4.30pm

Register today on <https://irt-wildernessfirstaid.eventbrite.ie>

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# Catchments Newsletter

Integrated Catchment Management: sharing science and stories



**Ireland's water quality needs to be better protected:**  
EPA Water Quality Indicators report – see page 20.

## Inside this issue

*Stories from the waterside:* new website with stories from around Ireland

**Slabh Beagh:** 2,200 acres of uplands gifted to An Taisce

**The Caha Project:** a farming community protecting its natural heritage

Local community tackle invasive species and protect Lough Gill in County Kerry

**World Wetlands Day 2021:** water, wetlands and life

**Learning from Group Water Schemes:** community infrastructures for sustainable development

**EPA publish Ireland's Environment:** an integrated assessment

**Nature-based sustainable urban drainage systems**

**Inishowen Rivers Trust launch their Riverview newsletter**

Main photo: River Caragh, County Kerry. Top, L-R: Nature based drainage solutions (p.26), Inishowen River Guardians (p. 13), The Caha project (p.8).

More

## Inishowen Rivers Trust launch their *Riverview* newsletter

The Inishowen Rivers Trust are delighted to announce the publication of our new digital newsletter *Riverview*. This will feature short news items from the Trust as well as information on how to get involved, upcoming events, training and any other items that we feel might be of interest to our supporters. The first issue was published in January 2021, and has some great stories, including:



### Inishowen River Guardians wins major funding for 2021

The IRT are delighted to be one of the recipients of Rethink Ireland's Innovate Together Fund, securing €59,471 to deliver a new training programme for 2021. This funding has allowed the Trust to employ Bren Whelan, a training co-ordinator who will be responsible for liaising with expert facilitators, developing a schedule and creating new ways of learning as we adapt to our Covid world.

As part of this new blended learning approach, we are also engaging the services of a film maker to create instructional videos.

If you are interested in taking part in any of the courses, please contact us by sending an email to inishowenriverstrust@gmail.com. Courses are likely to start in April, but courses booked out very quickly the last time so it's a good idea to get your name in early! This will ensure you are sent the list of modules before they go live on social media.

Through the courses we hope to offer as much practical experience as we can through projects like the one we completed on the Glennagannon River in September 2020.



Inishowen Rivers Trust announce the new River Guardians programme with Innovate Together funding, 9 December 2020. Photo: Clive Wasson.



Natural bank revetment as part of the Glennagannon river restoration project.

### Glennagannon River Restoration Project

This project involved building a natural revetment on the riverbanks to prevent erosion and make the banks more resilient to flooding, installing baffles to improve fish passage, tree planting,

fencing and pasture pumps. It was a rewarding experience and has worked a treat! Thank you to all the landowners and volunteers who engaged on this project that was funded by LAWPRO.

### Natural Flood Management in Clonmany

We're very excited to announce another great project that the Trust will be involved with in 2021. The project entitled 'On the Ground - Natural Flood Management - Inishowen' aims to identify and install natural measures that could alleviate flooding in the Clonmany area. This project follows on from our work with Trinity College and University of Newcastle that looked at the opportunities for NFM in Inishowen.

We hope to work closely with the community on this to co-design and co-produce the measures and engage with flooding experts and ecologists. We have appointed McCloy Consulting as the flooding consultants and a Landowner Liaison Officer will be in place as a central point of contact for both community and the statutory agencies that are engaging in the project. If you wish to find out more about the project and get involved as a landowner or volunteer, please contact us by email or phone Mark on 083 812 3218.

ON THE GROUND  
NATURAL FLOOD  
MANAGEMENT  
INISHOWEN

## The Current Status & History of Eels in Inishowen

Back in November 2020, we were awarded funding under Change Makers Seeds of Change Grant Scheme for a project entitled 'The Current Status & History of Eels in Inishowen'. This project aims to raise awareness around this critically endangered species, and we have commissioned dedicated Trust volunteer Tomás Lawrence to write a report that brings together the current knowledge on eels in Inishowen. Dr Liam Campbell from the Lough Neagh Partnership will also be joining Tomás to discuss eel fisheries on Lough Neagh and the River Bann. Inishowen Rivers Trust will be holding a webinar on the eels of Inishowen on Thursday 1 April 2021 - see their website for details.



Inishowen Rivers Trust volunteers tree planting in 2020.

## Tree Planting Season

At this time of year trees are dormant and this makes it easier to transplant them. November to March is the best time of year to plant bare-rooted trees. Planting young, bare-rooted trees is easy and gives the trees a chance to settle into their new environment. These trees rarely need support, although you may need to mark them, so you don't forget where they are! The IRT have recently produced a guide to tree planting which we are distributing to various outlets around Inishowen (post offices). You can download it from our website too (check out the Downloads page). Many thanks to Donegal County Council for supporting the publication of the booklet.

In the coming weeks, some of our collaborating landowners will be planting trees we have secured from All Ireland charity Trees on the Land. If restrictions lift, we may be able to gather volunteers for a tree planting day. Get those spades cleaned up and ready to go!

**Trish Murphy, Project Officer, Inishowen Rivers Trust**

### Learn more:

[www.inishowenriverstrust.com](http://www.inishowenriverstrust.com)



After a visit to the Inishowen peninsula, **Féidhlim Harty** is hopeful for the integration of sustainable farming practices and the protection of watercourses

Last month, I visited the beautiful Inishowen peninsula to walk some farms. I was there at the invitation of the Inishowen Rivers Trust, a young and dynamic organisation, tasked with exploring opportunities to protect and improve the water quality of the rivers and streams in the area. This northerly peninsula is a broad spread of hilly ground sandwiched between Lough Foyle and Lough Swilly. Small rivers and streams flow from the centre to the sea on all sides, with the usual pressures of effluent from septic tanks and farming affecting the quality of the water. I won't even begin to reflect on the potential impacts on water quality if gold mining in the peninsula is permitted.

On the day of the visit our task was down to earth, to walk those farms that had watercourses on the land and talk with the farmers and farm walk participants. We explored ways to improve water quality and habitat value using a variety of measures, many of which had been implemented already in recent works. One farmer was just beginning to explore the potential options on her farm, whereas two others had already excavated new ponds to act as silt traps and accommodate wildlife. On one of the farms extra in-channel silt traps and generous belts of upland tree-planting had already been introduced. There were also areas of steep land that had been fenced off to protect vulnerable sloping woodland from erosion by overgrazing.

As a guest to the area, I was excited and encouraged to see the work being done here, both by the Rivers Trust itself and the Inishowen Uplands EIP (European Innovation Partnership), which facilitated the recent pond and tree planting works. All across the country similar solutions are urgently needed. Small streams and farm drains are the headwaters of our river systems. The degree of pollution in these small headwaters sets the level of pollution in our nation's watercourses which suffer ill health and

roll out around the country, what would it include? Well, all of the measures I saw on my visit to these farms in Inishowen: Farm-scale buffer zones along drain and stream edges; silt traps and settlement ponds; in-channel wetland planting with check-dams to slow the flow and create mini pools in each drain section; upland tree-planting and strategic fencing for protection of vulnerable ground from livestock

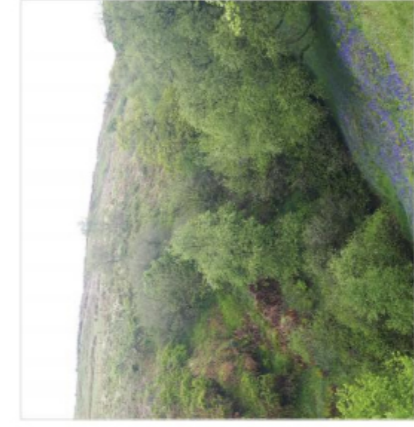
have poor quality as a result. The corollary is also true. If we can keep all the small drains and streams clean, clear and vibrant, our river water quality will have a chance to recover and revitalise. That's no small task. If your kitchen tap, toilet or milking parlour wash-water eventually ends up being the spring that feeds your local headwater, then treating the grey water, sewage or farm run-off is crucial if we want pristine rivers and groundwater. But it's doable. It's readily achievable. Just as our collective lack of focus on this area up to now has led to a steady reduction in water quality, so too a collective focus can reverse this trend.

So, if I had a wish-list of measures to roll out around the country, what would it include? Well, all of the measures I saw on my visit to these farms in Inishowen: Farm-scale buffer zones along drain and stream edges; silt traps and settlement ponds; in-channel wetland planting with check-dams to slow the flow and create mini pools in each drain section; upland tree-planting and strategic fencing for protection of vulnerable ground from livestock

and protected space. We will never have enough human knowledge to ignore the process of evolution and the experimentation active in wild nature. Yet we can learn from nature and enjoy the many gifts that nature gives: crops and livestock for fuels, fodder, food and fibres. But we still need wild space, untamed, protected space, on our farms and off them, where nature can do its thing, unseen, unregulated and uncontrolled.

It's the edges that I love on farm walks. The wildflowers that push up through the grasses around newly fenced stream edges, the scrubby corners yearning to be ancient forests, the watercress pushing into the exposed sediments where a drain enters a newly dug pond. These are the meeting of worlds, where the busy farm life meets the space for the bumblebee, and crucially where water gets time to settle, to rest, to drop silt and release nutrients to the plants that emerge.

As I walk the works of Rivers Trusts and EIP projects I have hope for the future. Policy will catch up. Previous policy positions served post-war Europe at a time when we were hungry. Now policy needs to serve a new balance that honours the origins of agriculture itself, the foundation of wild nature in which farming ultimately has its roots. I believe it will not only give us better soil, cleaner water and fewer floods, it will also give us abundant healthy and delicious food. 🌱



**FÉIDHLIM HARTY** is the director of FH Wetland Systems, a writer and advocate for the introduction of catchment-scale riparian buffer zones. His most recent books are, *Permaculture Guide to Reed Beds and Towards Zero Waste.* [www.wetlandsystems.ie](http://www.wetlandsystems.ie)



Also, as is being done in Donegal, changes to main farm practices. On one farm, the intention is to graze a herd of Galloway cows in upland areas to provide a different grazing pattern to lands traditionally grazed by sheep. This measure is designed to shift the vegetation type away from purple moor grass, preventing it from becoming a monoculture, as is typical with sheep overgrazing. Closer to my own home in Co. Clare, the Burren Programme uses similar measures in the management of grazing patterns, ultimately helping to create a sward of spectacular Burren wildflowers. In general terms, what is good for wildflowers, wildlife and soil is good for water quality. Permanent pasture holds soil in situ and prevents silt spreading into nearby streams. It's not rocket science, but it's all important work that needs to be done. The more diverse the pasture the better. Multispecies swards are used on a third Inishowen farm, providing variability in root depths, in turn providing a greater spread of micronutrients for livestock and greater drought resilience due to the use of deeper rooting species within the mix. Variable root depths also ensure that nutrients from dung and urine are captured at multiple levels within the soil, compared with shallow rooted ryegrass, which will absorb a more limited amount of the valuable Nitrogen and Phosphorous that may otherwise slip through unused, and become groundwater pollutants adding to waterway eutrophication.

Other measures are also available for protection of our waterways. New forestry grants for silvopasture are now encouraging tree planting within grazing lands. Agroforestry offers other ways to diversify farm incomes and use trees in the productive landscape, with all the associated benefits of carbon sequestration, water quality, flood control and wildlife habitat provision. Land management techniques and farm practices such as farm-scale permaculture, farm composting and holistic planned grazing offer multiple benefits for food, farmers and future.

I can't pretend to have a fraction of the knowledge that any farmer has of their land and farm, but I know that if our farm payments policies push farmers in the direction of ever-increasing intensification without due regard for wildlife, water or soil health, then our farms, rivers and inhabitants - human and non-human alike - will be the poorer for it. The EIP programmes, conservation agriculture groups and Rivers Trusts across the country have a growing role in striking a balance between the need for productive land and the needs of nature; the balance between food production and other values the land provides such as flood protection, water filtration, pollination and space for nature. On so many levels the measures that we need to roll out will have benefits for everyone. For example, contour hedgerows protect farm animals from biting weather, provide habitats for pollinators, catch rainfall run-off from fields, filter out silt, recharge groundwater reserves, mop up nutrients and protect rivers and streams further down-hill. The benefits are manifold. This isn't complicated. Jump in. Get muddy. Try it out. Learn from mistakes and move forward. As I write, the next round of CAP is stalling in the apparent conflict between productivity and nature. Who are we fooling? What is farm productivity but the evolution of our relationship with nature. We need to seek out the balance between productive space

# APPENDIX V

## Inishowen River Guardians Training Programme



**Module:** Angler's Riverfly Monitoring Initiative  
**Venue:** Moville Garden Centre, Moville, Co. Donegal  
**Dates:** Saturday 22<sup>nd</sup> May 2021

### Evaluation Form

Please indicate your feedback below by rating each aspect from 1 (poor) to 5 (excellent)

Advertising & Pre-event information	1	2	3	4	5
Venue	1	2	3	4	5
Lunch	1	2	3	4	5
Facilitator	1	2	3	4	5
Course content	1	2	3	4	5

Please respond to each statement by circling one of the numbers on the 5-point scale.

5 = Strongly Agree; 4 = Agree; 3 = Neither Agree or Disagree; 2 = Disagree; and SD = Strongly Disagree

	Agree					Disagree				
1. I understood the course objectives well	5	4	3	2	1					
2. The objectives of the course as I understand them, were met	5	4	3	2	1					
3. The information was clearly presented	5	4	3	2	1					

4. There was enough time for the training	5	4	3	2	1
5. The information was complete	5	4	3	2	1
6. My questions were answered in a clear way	5	4	3	2	1
7. I am satisfied that I can apply what I learned to this job	5	4	3	2	1
8. The location/venue was suitable	5	4	3	2	1
9. The timing was suitable	5	4	3	2	1
10. The training materials (manuals, etc) were appropriate and sufficient	5	4	3	2	1
11. The pre-course information was adequate	5	4	3	2	1
12. Overall the training was beneficial to me	5	4	3	2	1

13. Please list any suggestions or additional comments below; (any additional material you would like covered, reasons why your expectations were not met, etc)

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14. Please indicate the degree to which your **overall knowledge, skill and attitude** has changed as a result of participation in the above course (please tick):

	No change	Little change	Some change	Significant change	Much Change
Knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attitude	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank You for your feedback!


Funded by Rethink Ireland under their Innovate Together Award 2020, supported by the Department of Rural and Community Development via the Dormant Accounts Fund, and corporate partners including the Z Zurich Foundation, Oakfield Trust, Medtronic and Twitter.

**RETHINK IRELAND** Our Social Innovation Fund



# APPENDIX VI

## Level 1



### STAYING SAFE AND RIVER APPRECIATION

- Understanding Landscapes - Geography field trips
- Safe Working in Water
- Wilderness First Aid
- Downstream Change Investigation
- Riparian Biodiversity


## Level 2

### SURVEY AND MONITOR

- Riverfly Monitoring - Citizen Science Streams Index
- Invasive Species Identification and control
- Digital Mapping
- Understanding Water Chemistry
- Reading Meanders
- Hydromorphology


Get Involved

## Level 3



### RESTORE

- Bank Erosion Control
- Natural Flood Management Techniques
- SSIS - Advanced Riverfly monitoring
- Redd Counts
- Desktop Based Assessments

www.inishowenriverstrust.com


# INISHOWEN RIVER GUARDIANS PROGRAMME 2022

DRAFT Proposal for 2022 season

Level 1	Facilitator Cost	Other costs
Understanding Landscape - Geography field trips	€ 400	€ 100
Safe Working in Water	€ 900	€ 250
Wilderness First Aid	€ 900	€ 250
Downstream Change Investigation	€ 400	€ 250
Riparian Biodiversity	in-house	€ 250
	<b>€ 2,600</b>	<b>€ 1,100</b>

Level 2	Facilitator Cost	Other costs
Riverfly Monitoring - Citizen Science Streams Index	in-house	€ 1,100
Invasive Species Identification and control	in-house	€ 200
Digital Mapping	€ 1,900	€ 100
Understanding Water Chemistry	€ 500	€ 500
Reading Meanders	€ 750	€ 500
Hydromorphology	€ 3,000	€ -
	<b>€ 6,150</b>	<b>€ 2,400</b>

Level 3	Facilitator Cost	Other costs
Bank Erosion Control	in-house	€ 700
Natural Flood Management Techniques	in-house	€ 1,000
SSIS - Advanced Riverfly monitoring*	€ 1,300	€ 200
Redd Counts*	in-house	€ 200
Desktop Based Assessments	in-house	€ 700
	<b>€ 1,300</b>	<b>€ 2,800</b>

*Other costs include venue hire, equipment, catering  
 Costs based on 12-15 participants per course  
 staff costs not included  
 \* max 7 participants  
 40 participants per year - €16,350*

# APPENDIX VII EXIT PLAN

## SECTION 1: GOALS

Goal 1: Maintain a core of at least 40 active volunteers (up from 27).

Goal 2: Continued development of the River Guardians Training Programme, shared nationally

Goal 3: Determine an income generation model that sustains the core of the Trust

Goal 4: Increase visibility of the Trust

## SECTION 2: OPPORTUNITIES

- Establish core courses that should be completed by all volunteers. Develop relationship with providers.
- Develop and tweak courses.
- Trading arm - Level of knowledge has increased to high level. Some volunteers can provide quality advice – potential to provide a paying service and establish trading sister company. Possibly employ additional staff member.
- River school – educational opportunities widening. Establish programme for schools. Secure mobile unit for visits.

## BARRIERS

Barriers and Obstacles	Overcome by
Financial resources. Costs high for some courses	Seek further funding. Raise funding internally. Charge for courses
Staff resources – more staff needed to deliver programme	Seek further funding. Explore Community Employment possibility.
Limited population within Inishowen with this interest	Move beyond Inishowen or establish Inishowen as a destination for training (projects in place in the area can be visited). Approach relevant agencies who may support this e.g., rural development company
Volunteer fatigue / drop off	Volunteers need to be kept engaged. Need to see progression. Look at rewards system and investing in a volunteer manager to support and mentor volunteers.

## RISKS

Risks	Risk Mitigation
Lack of sufficient projects	Continue to engage with new landowners. Seek assistance from agencies who have identified areas that could benefit from projects
Lack of landowner engagement	Identify more suitable opportunities for landowners to engage. Provide dedicated training and awareness programme for farmers and landowners
Loss of key staff	Ensure all systems in place. Upskill Board and selected volunteers on programme management. Employ Volunteer manager.

## SECTION 3: EXIT ACTION PLAN

What	Action	Who	By When
<b>People (staff, vols)</b>	Recruit Volunteer Manager and social media person Provide specific training on river systems and communicating work of the Trust. Develop a mentoring programme Develop volunteer award programme.	Board Volunteer Manager	Mar 2022
<b>Funding</b>	Develop an Income generation model Explore feasibility/necessity of a separate trading arm Identify potential sponsor Identify new funding streams	Project Officer	Dec 2021
<b>Programme delivery</b>	Plan schedule of training & courses for next season - Develop as 9 month programme (Jan – September) Offer bespoke training to other organisations, such as Council, farmers groups etc	Project Officer	Jan 2022
<b>Sustaining impact</b>	Database development (CRM) Improve data gathering and use	Volunteer Manager	Feb 2022
<b>Growing the project</b>	Develop syllabus at different levels – Beginner, intermediate and advanced Develop the River School concept Grow reach beyond Inishowen by promoting the River Guardians programme Identify a number of volunteer projects each year	Project Officer / Volunteer Manager	Apr 2022
<b>Communications Plan</b>	Develop communications plan to grow the visibility of the Trust and the River Guardians Expand communications with case studies and further videos etc Increase social media presence	Communication / Volunteer manager	Apr 2022





# INISHOWEN RIVER GUARDIANS

Survey | Monitor | Restore 



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