Caomhnú Árann EIP Project

Annual Report

January – Oct 2019

Togra Caomhnú Árann

Teach Ceann Tuí 2

Inis Oírr

Oileáin Árann

Co. na Gaillimhe

Phone: **083-1523930**

Email: **caomhnuarann@gmail.com**

Website: **www.caomhnuaranneip.ie**

'The European Agricultural Fund for Rural Development: Europe investing in rural areas'.

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

eip-agri
AGRICULTURE & INNOVATION

Ireland's EU Structural and Investment Funds Programmes 2014 - 2020
Co-funded by the Irish Government and the European Union

Contents

1. Introduction

Caomhnú Árann is an EIP-Agri Operational Group co-funded by the Department of Agriculture, Food and the Marine and the EU based on the Aran Islands in Co. Galway. The aim of the project is to examine and develop innovative methods of habitat improvement and conservation, in part by addressing labour intensity of conservation and improvement measures, and in part by addressing low farm income levels. A registered company, Caomhnú Árann ctr., is responsible for the implementation of the project who liaises with the partners involved. The other partners include the Aran Island farmers, Department of Culture, Heritage and Gaeltacht (DCHG), Teagasc, National Parks and Wildlife Service (NPWS) and Fáilte Ireland.

1.1 Geographical scope

Caomhnú Árann is working with farmers on the three Aran Islands, Inis Mór, Inis Meáin and Inis Oírr. The three islands are located on the edge of Galway bay. The main habitat types are Calcareous grassland, Limestone Pavement and Machair grasslands, all extensively grazed with beef cattle.

2. Project Team

2.1 Project start up (company set-up) and Financial Accountability

Caomhnú Árann builds on the work of a previous LIFE project, AranLIFE, which ran from 2014-2018 and was co-ordinated by one of the partners, DCHG with help from Teagasc. To improve both continuity and performance the existing infrastructure from AranLIFE was continued for Caomhnú Árann. AranLIFE had a suitably equipped office based on Inis Oírr and this along with some technical equipment supplied by DCHG, stemming from the LIFE project, were transferred to Caomhnú Árann. This ensured appropriate facilities were available for the Project Team on the first day of their employment which was 1st March 2019. The existing project team from AranLIFE formed a company to manage the project as per the original application. This company is registered with the companies register under the name CAOMHNÚ ÁRANN CUIDEACHTA FAOI THEORAINN RÁTHAÍOCHTA (Number 637672). The project team (Fig. 1) are detailed below:

Figure 1. (L to R) Scientific and Technical Officer: Amanda Browne, Financial and Administration Officer: Gráinne Ní Chonghaile, Project Manager: Patrick Mc Gurn

Caomhnú Árann employs no additional staff though some areas of work have and will be contracted out where additional expertise is required or where there are costs benefits in sub-contracting work out to other parties.

2.2 Operational Group

The project team, Caomhnú Árann Ctr., is supported and advised by the operational group. Participants on the operational group represent a selection of key stakeholders and experts as listed below in Table 1. The operational group was established during the application phase of the EIP (2017) and was responsible for implementing the initial stages of the project in 2018. During the first year the operational group met twice, a third meeting planned had to be cancelled due to weather conditions. It is intended that the operational group will continue to meet on a regular basis for the duration of the project both with formal minuted meetings and through general interaction, phone, email, one to one meetings when the need arises.

Table 1. List of representatives on the Caomhnú Árann Operational Group

Individual	**Organisation**
Patrick Mc Gurn	Caomhnú Árann Ctr
Amanda Browne	Caomhnú Árann Ctr
Gráinne Ní Chonghaile	Caomhnú Árann Ctr
Bertie Joyce	Aran Island Farmers
Enda Mooney	NPWS of DCHG
Sorcha de Brúch	DCHG
John Finn	Teagasc
Daire Ó hUallacháin	Teagasc
Ivan Kelly	Teagasc
Catherine Keena	Teagasc
Letita Wade	Fáilte Ireland
Margaret Jenkins	Fáilte Ireland

3. Project Design and Development

3.1 Administration Structures

The first major role for Caomhnú Árann was to put in place the necessary administration structures to facilitate the successful implementation of the project and ensure full accountability for all financial transactions. The services of an accountant were acquired to advise on suitable software packages and financial responsibilities. Payments to staff are made using the Thesaurus Payroll Manager and running costs are registered using Surf Accounts. Payments from DAFM are recorded in a Bank of Ireland account and used solely for the purposes of the Caomhnú Árann project.

The day to day accounting system operates as follows:

Financial responsibilities are assigned solely to Caomhnú Árann. Two signatures from the project team are required to certify all items of expenditure and approval for payment. All payments are done via EFT out of the Caomhnú Árann bank account. Monthly time sheets are kept to record labour inputs by the project team. The timesheets are checked and approved by the project manager. The project manager's timesheets are verified by another member of the project team. All these records are maintained in digital and paper format.

Costs are recorded in the general ledger on surf accounts and allocated to sub-headings within associated administrative expenses.

A procedures manual was developed for Caomhnú Árann which dictates the approach taken and ensures all expenditure conducted is in line with the Irish Civil Service.

3.2 Stakeholder consultation (NPWS, DCHG, DAFM, Teagasc, Fáilte Ireland)

The expertise on the operational group guided Caomhnú Árann to ensure all necessary protocols were adhered to. This was particularly important in relation to activities within the Natura 2000 sites.

3.2.1 Farmer Engagement

Initial stakeholder group meetings (Fig. 2) were held in December 2018 to inform the farmers of the proposals and to obtain feedback and advice on the best course of action. These were organised and funded by DCHG through the AranLIFE team. Flyers detailing the meeting were issued to every household on the three islands inviting them to attend a meeting held on each island. Details of the meetings and attendee numbers are detailed in Table 2 below.

Figure 2. Farmer Consultation Meeting Halla Rónáin, Inis Mór

Table 2. Caomhnú Árann Consultation Meeting Details

Date:	Type	Location	Participants
05.12.19	Initial Farmer Consultation Meeting Inis Mór	Halla Rónáin, Inis Mór	72
06.12.19	Initial Farmer Consultation Meeting Inis Meáin	Halla Pobail, Inis Meáin	30
06.12.19	Initial Farmer Consultation Meeting Inis Oírr	Halla Pobail, Inis Oírr	17

At these meetings, expressions of interest forms were distributed and any farmer interesting in working with the project was asked to submit a form. These forms were not accepted on the night as the project team wanted farmers to consider the project first rather than spontaneous applications on the night.

3.2.2 Expressions of Interest

By the closing date of 7th January, the project had received a total of 126 expressions of interest, with 80 on Inis Mór, 32 on Inis Meáin and 14 on Inis Oírr.

3.2.3 Participant Information meetings

All farmers who expressed interest in working with the project were invited to a further series of meetings where the next steps were determined. Caomhnú Árann had envisaged working with 100 farmers and costings in the original application were based on that number of farmers. At these meetings, the farming partners thought the best approach was to accommodate the total number of farmers and reduce overall costs to match. This was to allow a wider level of engagement across a range of farms, eliminate the need for selection criteria and ensure there was no resentment towards the project as a result of not being accepted.

Table 3. Caomhnú Árann Participant Farmer Information Meeting Details

Date:	Type	Location	Participants
01.04.19	Farmer Information Meeting Inis Mór	Halla Rónáin, Inis Mór	58
02.04.19	Farmer Information Meeting Inis Oírr	Comhar Caomhán, Inis Oírr	9
01.04.19	Farmer Information Meeting Inis Meáin	Halla Pobail, Inis Meáin	31

4. Online mapping system and Farm plan Development

4.1 Online Mapping System

The first step in the development of farm plans was the acquisition of farm maps for each business. The shapefiles for each farm were supplied by DAFM once consent was obtained by the participating farmers and Caomhnú Árann project team worked with ArcGIS to handle the data. Additional data sources necessary such as Natura 2000 designations, Focal Viewpoints and previous AranLIFE data were also obtained. The project also registered with DAFM to access GLAMS Lite online mapping package. However due to a time lag in the availability of GLAMS Lite all farm plans were developed using ArcGIS. It is proposed that all completed work will be uploaded to GLAMS ensuring a database of completed works under Caomhnú Árann.

4.2 Initial Farmer clinics

The first stage in developing farm plans was liaising with the farmers interested to discuss the work proposals and determine the proposed works on each farm. This was completed through farmer clinics held on each island, where a member of the project team talked to the farmer, went through the farm map and drew up what works the farmer felt were required to aid in management and improve the ecological integrity of land parcels. The process followed a set of procedures to ensure consistency. The farmer clinics were held as follows:

Table 4. Caomhnú Árann Participant Farmer Clinic Details

Date:	Type	Location
15.04.19	Individual Farmer Clinics Initial FMP Inis Meáin	Halla Pobail, Inis Meáin
16.04.19	Individual Farmer Clinics Initial FMP Inis Oírr	Oifig Caomhnú Árann, Inis Oírr
01.05.19	Individual Farmer Clinics Initial FMP Inis Mór	Halla Rónáin, Inis Mór

From these meetings the project team gathered details for each farm on areas where scrub control was required, land parcels needing new or additional rain catchers, access issues and areas requiring application of seaweed (Machair).

4.3 Developing Project design

After the farm clinics, much of the work undertaken by the project team during 2019 was centred around project design and developing farm plans using existing and new remote sensing data. A major element of the project was to see the accuracy of using remote sensing in the development of farm plans. Using the available imagery and new drone footage detailed in Section 5: Developing Drone technology for Best Purpose; parcels of scrub were identified, areas calculated and density level given as low, medium or high using ArcGIS. Location of the rain catchers were added based on farmer preference, focal view points and on site habitat.

4.4 Development of farm plans

The farm plan for each farmer documented the location, area and cost of works in a simple format. At this stage the farm plan only contains details on the areas of scrub to be cleared and the rain catchers to be built. The plan will be developed as the project progress with the details of the quality of the habitat added (based on a scoring system), access improvements and location of any sites for improvements by seaweed application added later. An example of the farm plan developed for each farm is shown in Fig. 3 and Fig. 4.

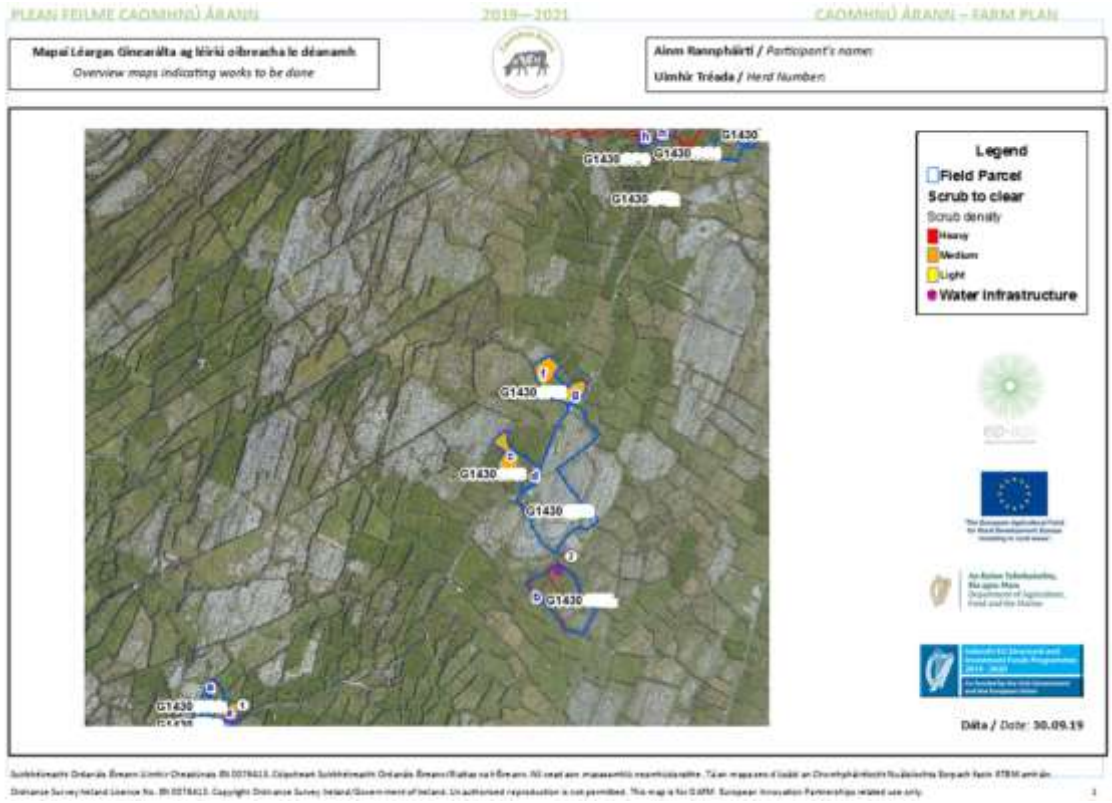

Figure 3. Farm map detail areas for scrub control and location of raincatchers.

Rialú Scrobarnaí agus Raithneach / *Scrub and Bracken control:*

Bainfear scrobarnach agus raithneach trí ghearradh agus leanfar leis an glanadh leantach riachtanach de réir comhairle ó fhoireann Caomhnú Árann. A3

Féach ar na mapaí leis seo a léiríonn na h-áiteacha a bhfuil scrobarnach / raithneach le glanadh.

Scrub and Bracken removal will be done by cutting and the necessary follow-up treatment as advised by the Caomhnú Árann team. Refer to associated maps showing areas where scrub/bracken is to be cleared.

Tá dlús scrobarnaí dathchódaithe mar seo a leanas / *Scrub density is colour coded as follow:*

DEARG / *RED* = **trom** / *heavy* €6,000 p/ha
ORÁISTE / *ORANGE* = **meán** / *medium* €4,500 p/ha
BUÍ / *YELLOW* = **éadrom** / *light* €3,000 p/ha

Uimhir Thréada	Dáileacht Talún	Achar (Ha)	Píosa Scrobarnach	Cineál Scrobarnaí	Dlús Scrobarnaí	Achar Scrobarnaí (Ha)	Íocaíocht €	Glanta go dáta	Íocaíocht 2020	Íocaíocht 2021	Dáta Glanta	Cost Categories (Ha) €
Herd Number	*Land Parcel ID*	*Area (Ha)*	*Scrub Code*	*Scrub Type*	*Scrub Density*	*Scrub Area (Ha)*	*Payment €*	*Cleared to Date*	*Payment 2020*	*Payment 2021*	*Date Cleared*	
G	G1430	0.24	a	blackthorn briars	H	0.08	€178.56		€0.00			6000
G	G1430	0.73	b	briars	H	0.07	€428.50		€0.00			6000
G	G1430	0.33	c	briars	M	0.17	€779.21		€0.00			4500
G	G1430	0.33	d	briars	M	0.03	€131.73		€0.00			4500
G	G1430	0.24	e	briars	M	0.04	€184.31		€0.00			4500
G	G1430	0.38	f	briars	M	0.15	€655.38		€0.00			4500
G	G1430	0.38	g	briars	M	0.10	€463.69		€0.00			4500
G	G1430	0.25	h	briars	M	0.03	€155.64		€0.00			4500
Iomlán:						**0.63**	**€2,977.13**		**€0.00**	**€0.00**		

Sínithe / *Sig* _____

Dáta / *Date* _____

Feirmeoir Rannpháirteach / *Participant Farmer*

Sept 19 - Feb 20												
Sept 20 - Feb 21												

Figure 4. Details in the farm plan with areas for scrub control and associated costs.

4.5 Quality control of farm plans

Each member of the project team developed the farm plans but to ensure continuity additional steps were implemented. A range of field visits took place to relate the remote sensing to what was visible on the ground and compared with estimates based on remote sensing. Procedures were agreed on the process and all farm plans were assessed together by the project team. For example, ArcGIS allowed all areas for scrub removal to be viewed together and any irregularities investigated.

4.6 Terms and Conditions

Along with the farm plan, the project team drew up a "Terms and Conditions" for the project, signed by the participant and the project manager. The "Terms and Conditions" outlined the legal status of the project, the obligations of the participant and the project team and technical details on the work involved.

4.7 Farm plan Distribution Farmer Clinics

For delivery of the farm plans, Caomhnú Árann held another round of farm clinics, where the farmers met a member of the project team (Table 5.). At these meetings final agreements where made on the work committed to, details of the project explained, justification to any changes in the original ideas and discussions on limiting some areas of work due to financial constraints with the higher number of farmers involved. Construction of raincatchers was limited to a maximum of two on any farm, whilst the maximum payment for scrub clearance was set at €5,000.

Table 5. Caomhnú Árann Farmplan Distribution Clinic Details

Date:	Type	Location
09.10.19	Individual Farmer Clinics Final FMP Inis Mór	Halla Rónáin, Inis Mór
16.10.19	Individual Farmer Clinics Final FMP Inis Oírr	Oifig Caomhnú Árann, Inis Oírr
17.10.19	Individual Farmer Clinics Final FMP Inis Meáin	Halla Pobail, Inis Meáin

4.8 Overall total of farm improvement works (raincatchers and scrub control)

Based on the farm plans the total expected works and associated costs for scrub control and raincatchers amount to an estimated cost of €594,000, approximately 88ha of scrub removal at an estimated total cost of €367,000 and 200 new raincatchers at a total cost of €127,000. At the time of writing a small number of plans need amendments so figures are presently a guide and not an overall final figure.

5. Developing Drone technology for Best Purpose

A central aim of Caomhnú Árann is to investigate the use of UAVs/drones to gather information of areas that are proposed for inclusion in the project as a substitute for the labour intensive process of walking each field and also to identify best available software needed for this work. The expertise required here was above the experience of the project team so as stated in the original application early stage assistance was required. This work was tendered, as per protocol, to three firms with sufficient experience. The tender was awarded to GeoAerospace, a geospatial information technology company with core expertise in space borne, airborne & drone remote sensing, cloud platforms and Machine Learning (ML) systems based in Maynooth University, Kildare. After an initial workshop based in Maynooth, GeoAerospace visited the islands to trial different systems to match our requirements (Fig. 5). In a follow up report details were supplied on the hardware required (drone choice and cameras), the computer hardware and GIS software needed, geospatial data products available and the computing requirements. Whilst this was a cost to Caomhnú Árann, the report was supplied to other groups as many of the suggestions will be applicable to their work. These include the EIP groups: Danú, Inishowen Upland Farmers Project, North Connemara Locally Led Agri-Environmental Scheme, the Hen Harrier Project and Burren Programme, an agri-environment programme.

Figure 5. Members of the project team participating in the Drone Workshop held by GeoAerospace on Inis Oírr.

To aid in project management, Caomhnú Árann contracted some drone photography work to GeoAerospace, who took aerial photography imagery over approximately 778 hectares. Examples of the different remote sensing imagery available and used by Caomhnú Árann are detailed below (Fig. 6, Fig. 7 and Fig. 8).

Figure 6. Bing maps 2014

Figure 7. DAFM maps 2018

Figure 8. Caomhnú Árann maps using Mavic Pro drone 2019

6. Seed Collection and Monitoring

6.1 Site identification

Land parcels were reviewed for suitability for seed collection sites in May 2019. Sites that had a high degree of biodiversity with frequent positive indicator species and absence of negative indicator species were deemed to be suitable for seed collection.

Figure 9. The location of three of fifteen seed collecting plots (indicated by the numbered rectangle) on Inis Oírr. Thirteen plots are located on Inis Oírr and two are located on Inis Meáin.

6.2 Monitoring procedures

Fifteen fixed area seed collection plots (10m x10m) were set up (Fig. 9) in each seed collecting parcel. Fixed point photos were taken of the plots, including similar control habitat outside the seed collecting plot.

Relevés ($4m^2$) were taken within the seed collecting plot and in similar control vegetation outside the plot prior to seed collection. Relevés or vegetation quadrats will be used to observe any change in floristic composition of the plots after seed harvesting. Relevés will be repeated in 2020. Vegetation recorded within the relevés also gives an indication of the seed type and quantity that will be collected by the suction harvester.

6.3 Seed collection

Owing to the terrain and inaccessibility of the Aran Islands two methods of seed collecting were initially trialled: hand collecting and suction harvester.

6.3.1 Hand Collecting

Hand collecting of seed is used to collect small volumes of seed and identify different seed types (Table 6 and Fig. 10).

Table 6. Species that seeds have been harvested from by hand.

Agrimonia eupatoria	*Daucus_carota*	*Plantago lanceolata*
Alchemilla mollis	*Euphrasia_officinalis_agg*	*Polygala_vulgaris*
Antenaria dioica	*Galium_verum*	*Rhinanthus minor*
Anthyllis vulneraria	*Geranium robertianum*	*Rumex acestoa*
Blacksonia perfoliata	*Geranium sanguineum*	*Sanguisorba_minor*
Briza media	*Leucanthemum_vulgare*	*Sesleria caerulea*
Campanula rotundifolia	*Linum_catharticum*	*Succisa_pratensis*
Carex flacca	*Lotus corniculatuis*	*Trifoilium dubium*
Centaurea nigra	*Luzula campestris*	*Vicia sepium*
Centaurea_scabiosa	*Pilosella_officinarum*	
Cynosurus cristatus		

Figure 10. Seeds collected by hand form a catalogue from which suction harvested seed can be identified

6.3.2 Suction harvesting

A suction harvester (Fig. 11) was used to collect seed from the 100m^2 plots (Fig. 12). The equipment used was initially borrowed to assess suitability prior to purchasing.

Figure 11. Suction harvesting in a 100m^2 plot.

The seed from some plots were harvested three times from early to late summer and other plots had just one or two harvesting sessions (Table 7). Comparison of the collected seed from each collection period will show whether it is necessary to harvest throughout the summer to obtain seeds from species that flower earlier and may be missed from just a late summer harvest.

Table 7. Schedule of suction harvesting from plots.

Plot	First Collection date	Second Collection date	Third Collection date
4	02/08/2019	18/09/2019	
5	02/08/2019	18/09/2019	
1	24/07/2019	18/09/2019	
11	12/06/2019	18/09/2019	
12	12/06/2019	24/07/2019	18/09/2019
13	12/06/2019	24/07/2019	18/09/2019
16	12/06/2019	24/07/2019	18/09/2019
18	12/06/2019	24/07/2019	18/09/2019
26	01/08/2019		
28	12/06/2019	18/09/2019	
29	12/06/2019	18/09/2019	
30	12/06/2019	18/09/2019	
25	18/09/2019		
31	19/09/2019		
32	19/09/2019		

Figure 12. An example of material collected by a suction harvesting in a 100m^2 plot. Approximately 30% of this material is seed.

7. Publicity

7.1 Publications

Caomhnú Árann initially produced a newsletter in April 2019, which we distributed to farmers and the local community, see Appendix 10.3. We took a decision at the start of the project to postpone press publications until the farmers had received completed farm plans. However the project received interest from the press and the following is a list of publications where the Caomhnú Árann project was highlighted or commented on.

Table 8. List of Publications

Date	Media	Media Type	Who	Title	Link
2018	Teagasc Media	Publication	Teagasc	Teagasc Research Impact Highlights 2018 publication	https://www.teagasc.ie/media/website/publications/2019/Teagasc-Research-Impact-Highlights-in-2018.pdf
2018	Teagasc Media	Publication	Teagasc	Teagasc National Agri-Environment Conference 2018 publication	https://www.teagasc.ie/media/website/publications/2018/National-Agri-Environment-Conference-2018.pdf
10.01.18	Raidió na Gaeltachta	Radio	Gráinne Ní Chonghaile	Iris Aniar Raidió na Gaeltachta Interview	https://www.rte.ie/rnag/iris-aniar/programmes/2018/0110/932261-iris-aniar-d-cadaoin-10-eanir-2018/
Summer 2018	Irish Wildlife Magazine	Magazine	Amanda Browne	Life on the Aran Islands: The AranLIFE project aims to tackle the challenges of farming on the magnificently biologically diverse Aran Islands	https://issuu.com/ashvillemedia/docs/irish_wildlife_summer_2018
15.11.18	Irish Examiner	Newspaper	Stephen Cadogan	Irish Examiner Article: 21 locally led schemes are in the early stages of design or implementation	https://www.pressreader.com/ireland/irish-examiner-farming/20181115/281663961039496
15.05.19	Irish Examiner	Newspaper	Irish Examiner	Irish Examiner Article: 23 schemes to 'get a result' for the environment	https://www.irishexaminer.com/breakingnews/farming/23-schemes-to-get-a-result-for-the-environment-924360.html
10.10.19	Irish Farmers Journal	Newspaper	Peter McCann (IFJ)	Environment Schemes should focus on results	https://www.farmersjournal.ie/environment-schemes-need-to-focus-on-results-500054

7.2 Conferences and Outreach Events

Caomhnú Árann project team have attended and participated at a wide variety of conferences, shows and meetings since the beginning of 2019. We have produced a pop-up banner illustrating the project that can be used at various events we attend, see Appendix 10.4.

Table 9. List of Conferences and Outreach Events Attended

Date	Location	Group	Detail / Title
20.02.19	Dublin	DCHG and Irish Forum on Natural Capital	National Biodiversity Conference: 'How we can we improve biodiversity on farmland?' & 'How do payments for ecosystem services work?'
22.02.19	Portlaoise	DAFM / NRN	EIP Seminar
13.03.19	Maam Cross	Fáilte Ireland	Connemara and Aran Islands Tourism Networking Event
28.03.19	Inis Mór	Teagasc Ivan Kelly	Caomhnú Árann Teagasc presentation / field-trip
08.04.19	Dublin	DCCAE (Climate)	Caomhnú Árann - LIFE talk
17.04.19	Buswell's Dublin	DAFM	Launch Exhibition/booklet EIP_AGRI, NRN website launch
29.05.19	NUI Maynooth	GeoAerospace	Caomhnú Árann GeoAerospace Drone workshop Wed 29th May
03.06.19	Netherlands	EIP-AGRI	EIP-AGRI Workshop 'Cropping for the future: networking for crop rotation and crop diversification'
17.06.19	NUI Maynooth	GeoAerospace	Drone Workshop held on Inis Oírr
18.06.19	Inis Mór	Teagasc	Caomhnú Árann ongoing works field-day with Teagasc staff
31.08.19	Portlaoise	DAFM	Meeting with DAFM on a results based approach
18.09.19	Carlow	DAFM	National Ploughing Championships
01.10.19	Inis Meáin	Coláiste Naomh Eoin	Caomhnú Árann Educational Presentation
07.10.19	Dungiven	UFU North Derry	UFU North Derry Public Talk on EIP approach
23.10.19	Inis Meáin	Donegal EIP	Caomhnú Árann EIP / Cúlra Creafóige EIP field-day Inis Méain
26/27.09.19	Trinity College	Cap4Nature	Workshop delivering details on Caomhnú Árann approach
23.10.19	Ballyvaughan	LIFE Slovenija	Knowledge sharing meeting with LIFE Slovenija
24.10.19	Lisdoonvarna	EIP / Burren Winterage School	EIP Agri Symposium (Patrick presentation) 'Lessons Learned through Shared Experiences' - Irish Booklet Launch
25.10.19	Lisdoonvarna	Burren Programme	BURREN WINTERAGE SCHOOL - HNV FARMING ACROSS EUROPE
29.10.19	Galway	NUIG	MSc students on Ecosystem Services, Caomhnú Árann approach

7.3 Website and social media

A website is presently under construction by the project team to provide a dissemination platform for Caomhnú Árann. (www.caomhnuaranneip.ie.). The website contains details of the project and any reports, newsletters are and will be uploaded to the site for wider dissemination. The website contains links to all partners' pages, the EIP-AGRI website and will link with other EIP-AGRI projects in Ireland with websites.

The project also maintains an active social media presence through Facebook (@CaomhnuArann) and Twitter (@CaomhnuArann) accounts, keeping followers up to date on ongoing project works and posting news about the project regularly. We have recently developed an Instagram account (@caomhnuarann_eip) and hope to reach an even wider audience with this account. We also have a YouTUBE channel where we upload any videos produced by Caomhnú Árann and share any Caomhnú Árann related videos.

Since the commencement of Caomhnú Árann, 13 tweets and 12 Facebook posts on specific items have been released through these outlets which have increased our likes on Facebook to 1,478 and our followers to 1,506 and our Twitter followers to 1,052. The posts on Facebook have reached 14,742 accounts, of which 2,039 have clicked on for further information and 673 of those visits have liked, commented or shared the Caomhnú Árann posts. Through the Twitter account there has been a potential audience reach of 19,982 people of which 990 visited the post.

8. Next Steps (2020)

- Clearance of scrub and provision of raincatchers.
- Farmer training workshops.
- Assessment of works completed.
- Identify areas where improved access is required (clearance of boreens).
- Identify sites suitable for seaweed application.
- Purchase of drones.
- Purchase of software and computer hardware for drone survey.
- Complete drone survey of all land within the project.
- Baseline scoring of all land parcels.
- Determine phosphate delivery methods.
- Clean a selection of suction harvested material and identify the seed composition of the collected material.
- Sow a combination of suction harvested material in test plots both on the islands and on the mainland in a range of soil types and monitor the germination success.
- Re-survey the seed collection plots in 2020 and assess if the collecting methods had any impact on the vegetation.
- Further collection of wildflower seed.