

# Perceptions of the Iveragh Environment

a community mapping case study

## Executive Summary

This study was carried out in 2021 as part of the Llŷn Iveragh Ecomuseums (LIVE) project. LIVE is a collaboration between Welsh and Irish community organisations, academic departments and local governments. It aims to enable coastal communities to promote their natural and cultural assets, creating opportunities for sustainable tourism, especially outside of the traditional peak tourist seasons. LIVE was co-funded by the European Regional Development Fund through its Ireland Wales Cooperation Programme.

LIVE will use the Ecomuseum model of co-operative marketing to create a powerful suite of digital and non-digital resources for eco and educational tourism. These resources will be underpinned by knowledge of the local environments of the Llŷn Peninsula in Gwynedd and the Iveragh peninsula in Kerry. The project will facilitate workshops, education programmes and knowledge exchange sessions to build a cohort of active Ecomuseum ambassadors and citizen scientists on both peninsulas who are skilled in digital marketing and engaged with their local environments.

One of the first tasks was to identify knowledge gaps and those aspects of the Iveragh peninsula's natural environment that are important to local communities. This information will steer the development and focus of future knowledge-gathering programmes. Assuming that local communities already hold a high level of knowledge about various aspects of their natural environment, it was important for the project to identify where it should focus attention in order to be of most benefit to communities.

An online survey of local environmental knowledge was conducted, guided by a Public Participatory Geographic Information Systems (PPGIS) approach that involved a participatory mapping task in the survey. The mixed-methods analysis included a two-step qualitative (content) and quantitative (spatial) analysis. Detailed methods are found in the appendices.

This study shed light on a treasure trove of local knowledge. Below are the key findings:

- Environmental knowledge fell into four categories: **specific species** (ex. curlew), **general wildlife** (ex. marine life), **natural features** (ex. Dark Skies), and **cultural aspects** (ex. cultural connections to nature) – in particular, there is a strong desire to learn more about the **relationship between natural and cultural heritage**
- **Natural features** (such as beautiful scenery, mountains, and the coast) have the strongest influence on individuals' well-being and sense of pride in their local area, followed by **cultural aspects** (such as local history)
- Individuals interact with their natural environment through **a variety of outdoor activities**, including walking, hiking, gardening, swimming, and birdwatching

- The main suggestions for sustainable off-season tourism made by communities are: **promotion of outdoor activities, promotion of Dark Skies, local festivals and workshops, nature trails and guided walks, and resources for tourism**
- The data revealed several spatial patterns, including: a **significant coastal trend** for personal well-being, sense of pride, and natural features; a **keen interest in natural heritage**, even with no direct economic benefit; and a **strong link between natural and cultural aspects** across the peninsula

The study identified a number of knowledge gaps and aspects of the natural environment that will guide tailored engagement initiatives and knowledge-gathering programmes. The community-informed approach taken will ensure that these programmes are responsive to the diverse needs, resources, communities, and perceptions present across the Iveragh peninsula.

The full dataset of responses and maps is available on the open access repository Zenodo at <https://zenodo.org/record/4737278>. The persistent digital object identifier (DOI) is 10.5281/zenodo.4737278.

## 1. Introduction

The LIVE Operation is a project in the Ireland Wales 2014 – 2020 European Territorial Cooperation programme which aims to promote tourism in coastal regions through the co-marketing of natural and cultural capital for enhanced socio-economic benefits to coastal communities. To achieve this, LIVE is involved in knowledge-gathering activities to maximise the potential of local natural heritage as a tourism asset. These activities include the gathering together of existing local knowledge, previous research work, and the gathering of new knowledge where gaps are identified. The outputs of these activities will, in all cases, be provided for the benefit of the local communities in a range of appropriate formats. The intention is to provide a suite of digital and printable resources that will be available for business operators, educators, and interested residents and visitors to utilise.

### 1.1. Introduction to study

In line with LIVE’s aim of identifying and highlighting natural assets, this research study was developed as part of a baseline assessment of local knowledge relating to the Iveragh’s natural heritage.

In particular, the study investigated the aspects of their natural environment about which communities would like to know more. The biggest challenge entailed finding a way to ask people about what they *don’t* know. To overcome this, the study implemented a unique approach to develop a survey gauging the perceptions and knowledge of locals towards their environment. This approach and its methodology are described in the next two sections (*2. Background & 3. Methods*).

### 1.2. Research aims & questions

#### 1.2.1. Research aims

The aim of this study was to identify knowledge gaps and any other aspects of the Iveragh natural environment on which local communities would like LIVE to focus its knowledge-gathering



Figure 1. The process this study will use to apply local knowledge in the promotion of natural and cultural heritage.

programmes. The data gathered in this study will be used to develop further projects that will best serve communities in promoting their natural and cultural heritage (Figure 1).

To achieve this, several research questions were developed to better understand the relationship between local communities and their natural environment. This is a two-way, reciprocal relationship, with communities building knowledge and interacting with the environment, and the environment influencing community well-being and providing resources for sustainable tourism in turn (Figure 2). This relationship is extraordinarily complex and nuanced; however, it is hoped that these aspects will serve as a strong, community-led foundation on which to build and expand.

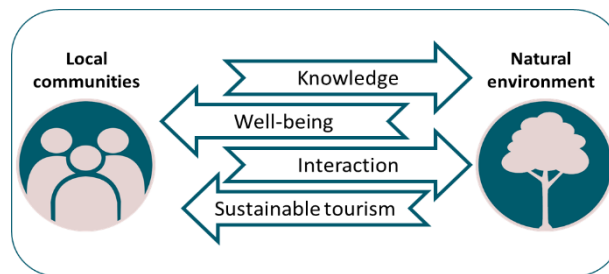


Figure 243. Dimensions of the relationship between local communities and the natural environment that are of interest to this

### 1.2.2. Research questions

1. What is the status of environmental knowledge in communities across the Iveragh peninsula?
2. What aspects of the natural environment influence well-being and a sense of place in communities across the Iveragh peninsula?
3. How do local communities interact with their natural environment through outdoor activities?
4. How do local communities feel they could make better use of their natural environment for sustainable off-season tourism?
5. Do the research questions reveal any spatial trends or patterns?

## 2. Methods

For this study, a survey was created that was open to all members of the public. Ideally, the researchers would have liked to conduct in-depth face-to-face interviews with members of local communities, however due to COVID-19 restrictions they were unable to meet anyone in person. To make the survey as engaging as possible, the researchers were guided by an approach called *Public Participatory Geographic Information Systems (PPGIS)*.

### 2.1. Study approach: Public Participatory Geographic Information System (PPGIS)

A Geographic Information System (GIS) is a way of exploring, collecting, analysing, and visualising geographic information. PPGIS is a method of incorporating public participation into the mapping process, of weaving local and expert knowledge into maps of community perceptions and experiences that could not have been produced otherwise<sup>1</sup>. The PPGIS process consists of identifying and mapping community knowledge; creating maps of local perceptions that indicate

<sup>1</sup> Dunn, 2007; Fagerholm & Palomo, 2017

hotspots of conflict, interest, or potential; and using these maps to communicate and integrate vital local knowledge into a project or plan. In a nutshell, PPGIS aligns with LIVE's objective of building on existing local knowledge through an engaging, community-led approach, and the data it produces will serve as a strong foundation from which to expand its future projects.

## 2.2. Survey development

The survey was split into four sections: a) demographic questions, b) knowledge of the environment, c) interactions with the environment, and d) final comments. There was a mix of qualitative and quantitative questions.

A map of the region (Figure 3) was developed containing pre-defined, numbered units created based on political and administrative boundaries (such as townlands and electoral divisions), as well as taking into consideration cultural boundaries as noted in pre-survey feedback from locals.

The participatory mapping portion of the survey involved asking participants to refer to specific map units when answering the questions so that their spatially explicit responses could be used to create maps visualising their knowledge<sup>2</sup>. To view a detailed, step-by-step method of how this map was created, please refer to *Appendix A: Survey Map Creation*.

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<sup>2</sup> Plieninger *et al.*, 2013







approximately 20-30 minutes to complete, which represents a significant contribution from participants.

## 2.4. Data analysis

The survey data underwent a two-stage analysis: a preliminary content analysis, followed by a spatial analysis in GIS (Figure 4). The content analysis involved extracting and classifying keywords in survey responses to create categories that would subsequently be used in the spatial analysis<sup>4</sup>. For example, if a response mentioned that they knew a lot about the Kerry lily, this was classified as an individual species. If that response also mentioned a section of the map where they know about the Kerry lily, that was included as a spatial reference. Responses may also have referred to more general categories of wildlife or landscape features. The spatial analysis consisted of preparing the data for integration into the GIS, choosing appropriate analysis methods, performing the analysis, and examining the results for spatial patterns<sup>5</sup>. The spatial analysis method deemed most appropriate was frequency analysis, carried out to visualise meaningful patterns in categories and themes across map units. This showed how many times a particular area in the map was referred to in response to each of the survey questions.

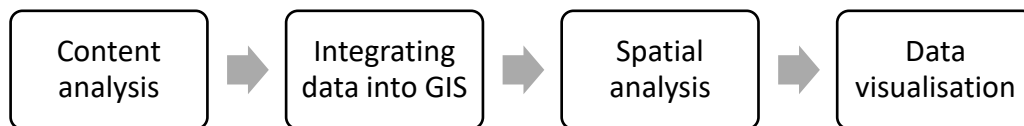


Figure 4. Stages of analysis undertaken after the survey data were compiled and organised.

To view a detailed, step-by-step account of the study methods and data analysis, please refer to *Appendix B: Methods & Analysis*.

## 3. Results

After the data analysis, the results were visualised in a number of formats including geographical maps, mind maps, charts, spreadsheets, and visual graphics. Due to a large number of outputs, only the most representative of these are included in this report. Each sub-section below has a corresponding appendix containing a complete dataset; these appendices can be accessed on the LIVE website.

### 3.1. Profile of survey participants

A total of 80 individuals participated in the survey. This sub-section will describe the respondents' demographic and stakeholder profiles.

#### 3.1.1. Demographic profile

The average age of the respondents was between 45 and 64 years old, while the groups with the least participation were between 15 and 34 years of age. The survey cohort was predominantly female. The respondents participated in the survey from a total of 19 locations, with the highest concentrations in Caherdaniel and Cahersiveen (Figure 5).

<sup>4</sup> Tyrvaïnen, Makinen & Schipperijn, 2007

<sup>5</sup> Boden, 2018

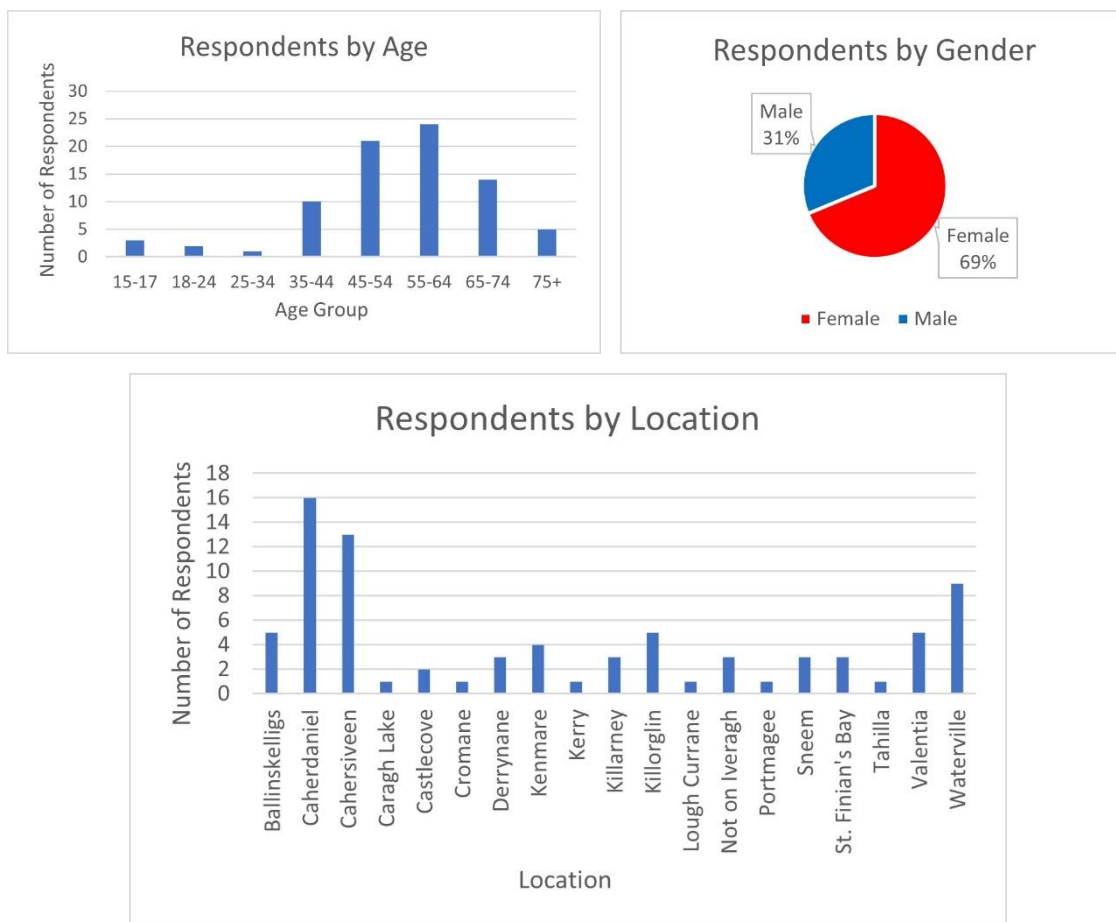


Figure 5. Overview of demographic profile of survey participants, including age, gender, and location of residence.

### 3.1.2. Stakeholder profile

The participants were presented with a number of identity groups and regional priorities and were asked to select which of these they identified with most closely. The lists of identities and regional priorities were developed after reviewing the most prevalent stakeholder groups in the region, as well as the most relevant priorities in the region. They were free to select more than one option.

Table 1 below shows how the stakeholder identities intersect with the regional priorities. For instance, 97% of individuals that identify with ‘community’ also prioritise the environment, while only 48% of individuals in this group prioritise opportunities for local recreation. The most frequently selected priorities across all stakeholder groups were the environment and rural development, while the priorities least often selected were opportunities for local recreation and protecting local interests. This does *not* mean that these priorities are not important; it means that they were simply selected the fewest number of times by survey participants.

Table 63. Intersections between stakeholder identities and regional priorities. The percentages indicate the proportion of participants that identified with an identity or priority.

Stakeholder Identities	Regional Priorities				
	Environment	Protecting local interests	Local recreation	Rural development	Tourism
Community	97%	81%	48%	77%	68%
Farming & agriculture	88%	65%	41%	76%	76%
Fishing & aquaculture	100%	88%	75%	88%	75%
Government	80%	40%	60%	60%	100%
Local business	88%	56%	56%	64%	72%
NGO	100%	60%	80%	60%	60%
Other	87%	73%	33%	73%	47%
Research & academia	100%	71%	59%	82%	47%
Student	90%	40%	50%	70%	80%
Tourism	88%	58%	48%	82%	82%

Participants were asked to rate their environmental knowledge on a scale of 1 to 5, with 1 being the lowest and 5 being the highest. Table 2 below shows the stakeholder identity groups and regional priorities and how they correspond to participants' environmental knowledge. For instance, stakeholder groups with the highest proportion of self-reported environmental knowledge were 'government,' 'student,' and 'farming & agriculture.' The regional priorities with the highest proportion of self-reported environmental knowledge were environment and rural development.

Table 175. Tables of correspondences between stakeholder identities (top) and regional priorities (bottom), and self-reported environmental knowledge. The percentages indicate the proportions of stakeholder groups and priorities that reported a given level of environmental knowledge.

Stakeholder Identity	Self-Reported Environmental Knowledge				
	1	2	3	4	5
Community	0%	14%	71%	0%	14%
Farming & agriculture	0%	0%	18%	53%	29%
Fishing & aquaculture	0%	0%	50%	50%	0%
Government	0%	0%	33%	33%	33%
Local business	0%	0%	26%	53%	21%
NGO	0%	0%	33%	67%	0%
Other	0%	14%	57%	14%	14%
Research & academia	0%	0%	33%	67%	0%
Student	0%	0%	67%	0%	33%
Tourism	0%	0%	36%	43%	21%

Regional Priority	Self-Reported Environmental Knowledge				
	1	2	3	4	5
Environment	0%	0%	28%	50%	22%
Local recreation	0%	5%	42%	39%	13%
Protecting local rights and interests	0%	0%	37%	37%	26%
Rural development	0%	0%	0%	50%	50%
Tourism	0%	0%	33%	33%	33%

### 3.2. The state of environmental knowledge across communities in the Iveragh

#### 3.2.1. Environmental knowledge (and knowledge gaps)

As the main aim of the survey was to identify gaps in environmental knowledge, participants were asked what they knew a lot about, and what they would like to know more about in relation to their natural environment. Participants were also asked to explicitly refer to specific numbered areas on the map when responding to questions (for example, "I know/would like to know more about curlews and marine life in regions 5 and 7"). This way, their knowledge could be affixed to maps of local environmental knowledge.

The maps in Figure 6 below show the distribution and type of environmental knowledge (and knowledge gaps) across Iveragh. The map on the left was created from the responses to the



survey question, “What aspects of the natural environment do you know a lot about?” and the map on the right was created in response to the survey question, “What aspects of the natural environment would you like to know more about?” The responses to these questions fell into four categories: specific species (ex. curlew, natterjack toad), general wildlife (ex. marine life, bird life), natural features (ex. mountains, walking trails), and cultural aspects (ex. cultural connections to nature, Irish words for nature).

Each point on the map represents one ‘unit’ of data: for instance, a light green point representing specific species might refer to knowing a lot about curlew, while a dark green point representing general wildlife might refer to wanting to know more about marine life. The points on the map represent a knowledge (or knowledge gap) of that specific area (rather than the location of someone living in that area). Someone living in the south coast, for example, may want to know more about the north coast, or may already know a lot about the north coast from frequent visits to the area.

To view the full database of knowledge, including the specific pieces of knowledge attached to each point on the map, please refer to *Appendix C: Content Analysis Results (Map Questions)*.

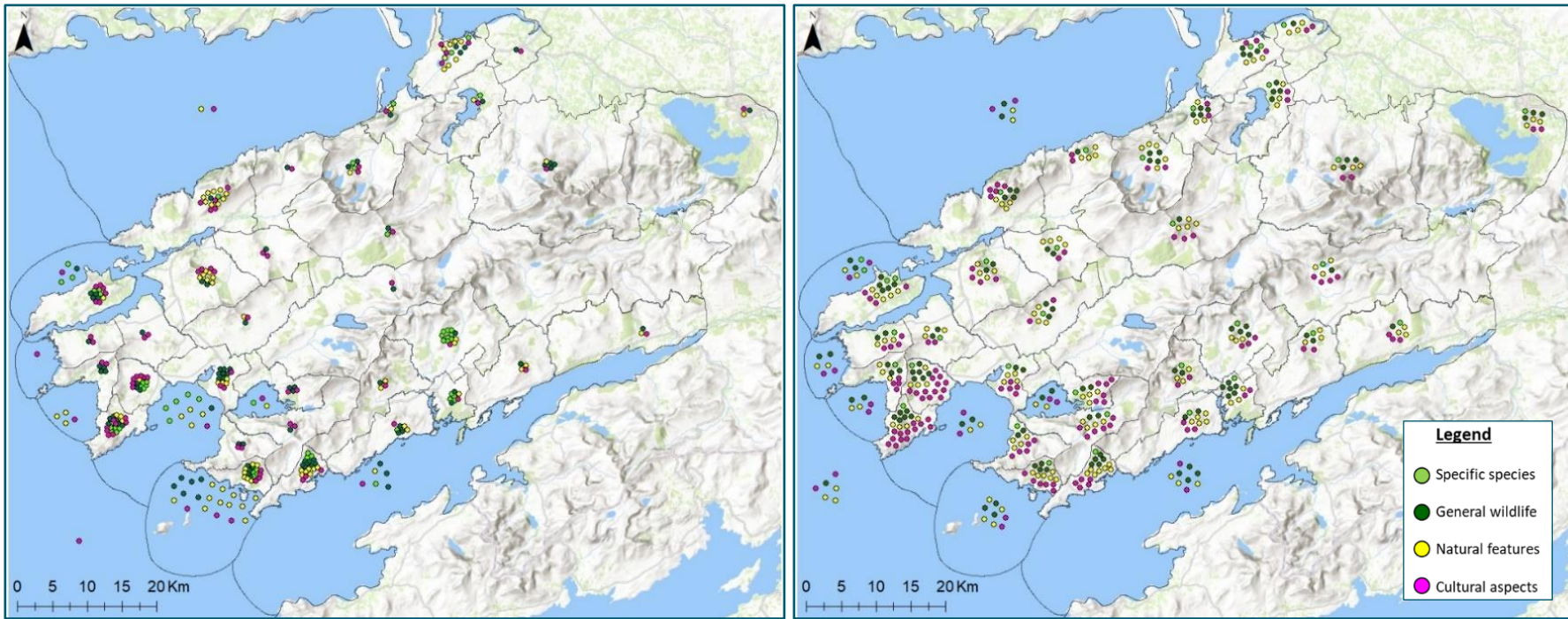


Figure 6. Left: map of aspects of the natural environment people know a lot about. Right: map of aspects of the natural environment people want to know more about. Participants' environmental knowledge fell into four categories: specific species, general wildlife, natural features, and cultural aspects.

### 3.2.2. Barriers to learning more about the environment

Participants were asked whether they felt any barriers to learning more about their natural environment. Several themes emerged in participants' responses, with the most frequently cited barriers being a lack of accessible knowledge or personal motivation. Additionally, there were several barriers of varying nature that fell into an 'other' category, including concerns about a lack of communication among local projects and not feeling qualified enough to learn more. Figure 7 shows the full spectrum of these barriers (and the proportion of participants that cited them), as well as direct quotes from participants that serve as examples of concerns expressed for each category.

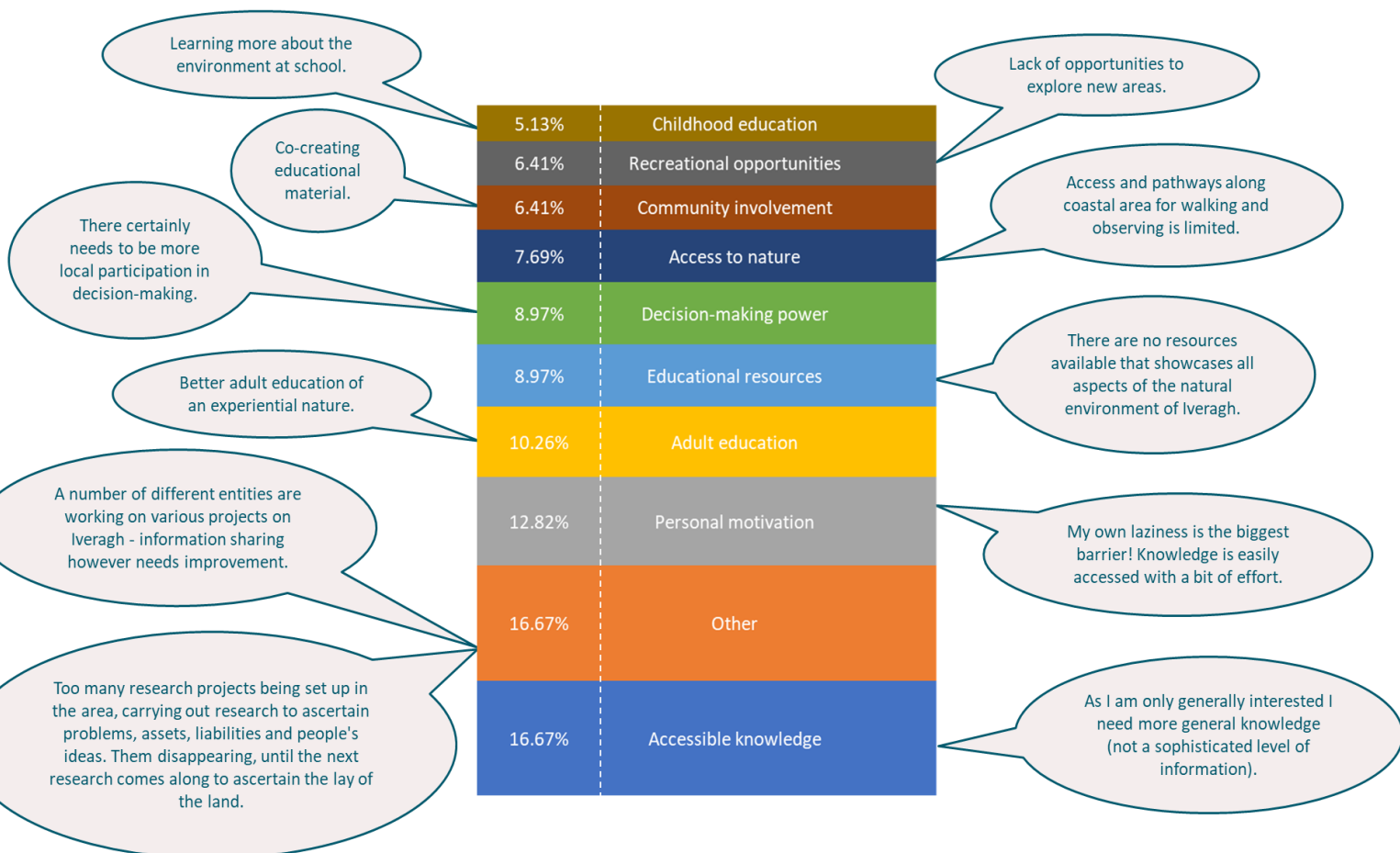


Figure 7. Categories that emerged from participants' responses to the question, "Do you feel any barriers to learning more about your environment?"

Participants were also asked whether they had any suggestions to overcome these barriers. Some examples of suggestions include: creating interactive apps and holding workshops for locals to share their expertise (to increase accessible knowledge); improved information sharing among projects in the area (to increase communication); and more initiatives involving locals to brainstorm ways to protect, appreciate, and utilise the natural environment (to enhance community involvement and adult education).

To view the full list of barriers and corresponding themes, please refer to *Appendix D: Barriers to Environmental Education*.



### 3.3. Aspects of the natural environment contributing to well-being and a sense of pride in one's local area

#### 3.3.1. Well-being

Participants were asked about what aspects of their natural environment contributed their sense of well-being (both economic and personal). Figure 8 shows the distribution and type of aspect influencing well-being in individuals across the Iveragh. Similar to the maps of points in section 3.2.1., each point on the map corresponds to one 'unit' of data, and falls within the four categories of specific species, general wildlife, natural features, and cultural aspects. The points on the map represent a knowledge (or knowledge gap) of that specific area (rather than the location of someone living in that area). Someone living in one area, for example, may feel work or visit another area very frequently and feel that this area has a great influence on their well-being, even though they don't live in it.

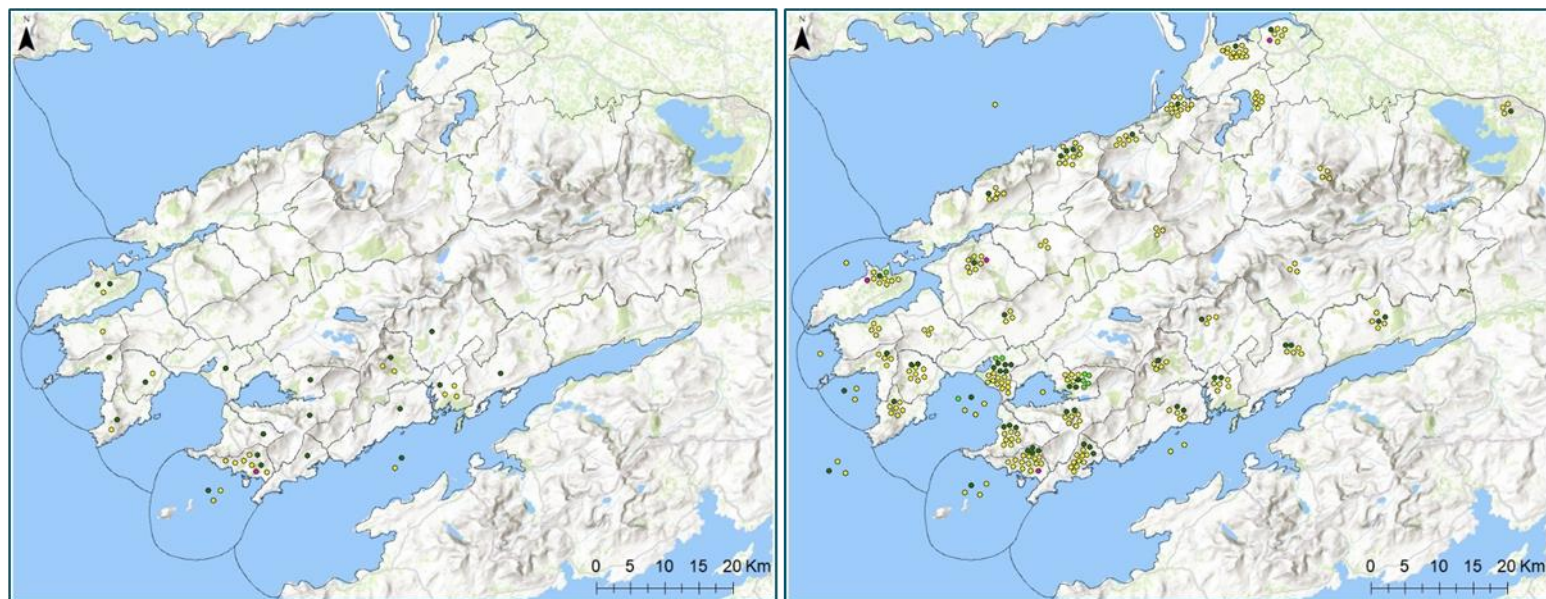


Figure 8. Left: map of aspects of the environment influencing economic well-being. Right: aspects of the environment influencing personal well-being.

The most frequently cited aspects with an influence on economic well-being were natural features and general wildlife (ex. 'I do marine tours and wildlife watching in region X'), while natural features had the heaviest influence on personal well-being (ex. 'beach X in region 17 is the place I find peace and the coping skills to face the challenges of life'). Comparing the two maps below, it is evident that the natural environment has a big influence on individuals' personal well-being, and a smaller influence on economic well-being.

To view the full database of aspects contributing to well-being, including the specific units of data attached to each point on the map, please refer to *Appendix C: Content Analysis Results (Map Questions)*.

### 3.3.2. Sense of pride in one's local area

Participants were asked about what aspects of their natural environment contribute to their sense of pride in their local area. Figure 9 shows the distribution and type of aspect contributing to a sense of pride. As in the maps above, each point on the map corresponds to one 'unit' of data, and falls within the four categories of specific species, general wildlife, natural features, and cultural aspects.

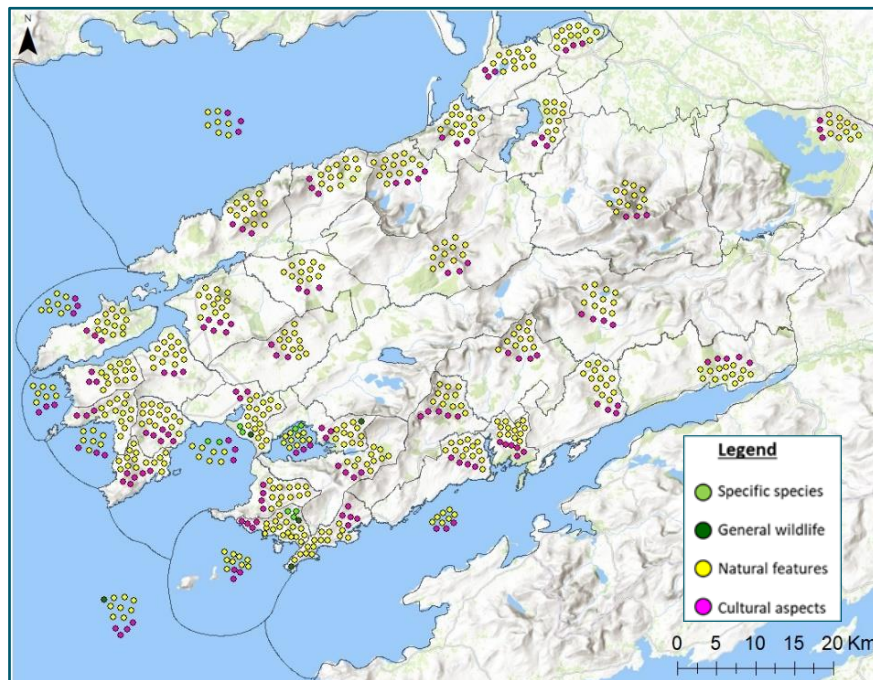


Figure 9. Aspects of the natural environment contributing to a sense of pride in one's local area.

Of the four categories of data, the most frequently cited was natural features (ex. *'The diversity of landscapes and seascapes, ranging from mountains, cliffs, lakes, peatland, forestry, beaches instils a sense of pride'*), followed by cultural aspects (ex. *'The long, complex and ongoing relationship between people, land and culture is a source of pride'*).

To view the full database of aspects contributing to locals' sense of pride in their area, including the specific units of data attached to each point on the map, please refer to *Appendix C: Content Analysis Results (Map Questions)*.

### 3.4. Interactions between local communities and the natural environment through outdoor activities

Participants were asked about the types of outdoor activities in which they take part. Figure 10 shows the distribution of these outdoor activities and the aspects of the environment with which they interact. For instance, activities such as stargazing, kayaking, and hill-walking all interact with natural features. Birdwatching, rockpooling, and wildlife-watching interact with specific species and general wildlife. Visiting historic sites interacts with cultural aspects of the environment.



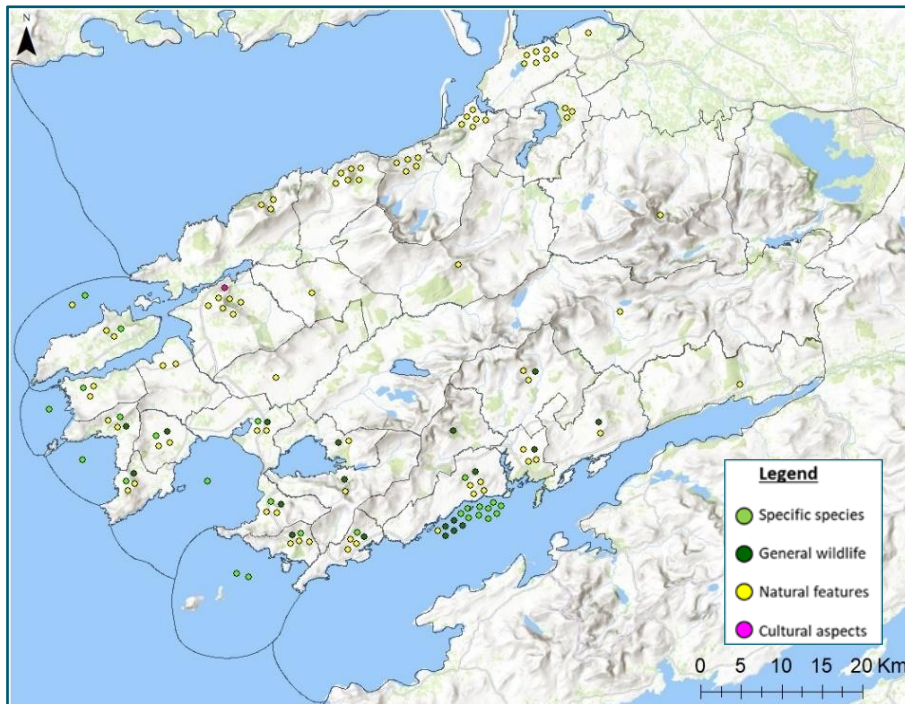


Figure 10. Distribution of outdoor activities and aspects of the natural environment with which they interact.

Outdoor activities predominantly interacted with natural features (ex. ‘I go hillwalking in most areas around Kerry and travel the waters by boat nearly every day’), followed by specific species (ex. ‘There are seasonal migrating flocks that we are fortunate to be able to watch... In January, especially during the colder days, we have flocks of redwings, mistle thrushes and some fieldfares. If we get some snow, we get lapwings.’)

To view the full database of outdoor activities in the area, including the specific units of data attached to each point on the map, please refer to *Appendix C: Content Analysis Results (Map Questions)*.

### 3.5. How local communities feel they could make better use of their natural environment for sustainable off-season tourism

Participants were asked how they felt their communities could make better use of the natural environment around them to promote sustainable off-season tourism. Figure 11 is a mind map of all the suggestions made by participants, linked to the communities to which they relate and overlaid on top of a geographical map of the peninsula. This figure may guide future engagement and research programmes by providing suggestions and ideas that are informed by and tailored to individual communities, rather than taking a one-size-fits-all approach.

Across the various communities on the peninsula, the most popular themes to emerge were: marketing and promotion of local natural and cultural assets; promotion of outdoor activities; local festivals and workshops; nature trails and guided walks; promotion of Dark Skies; and enhanced resources for tourists. To view the full database of off-season tourism suggestions, please refer to *Appendix E: Suggestions for Off-Season Tourism*.

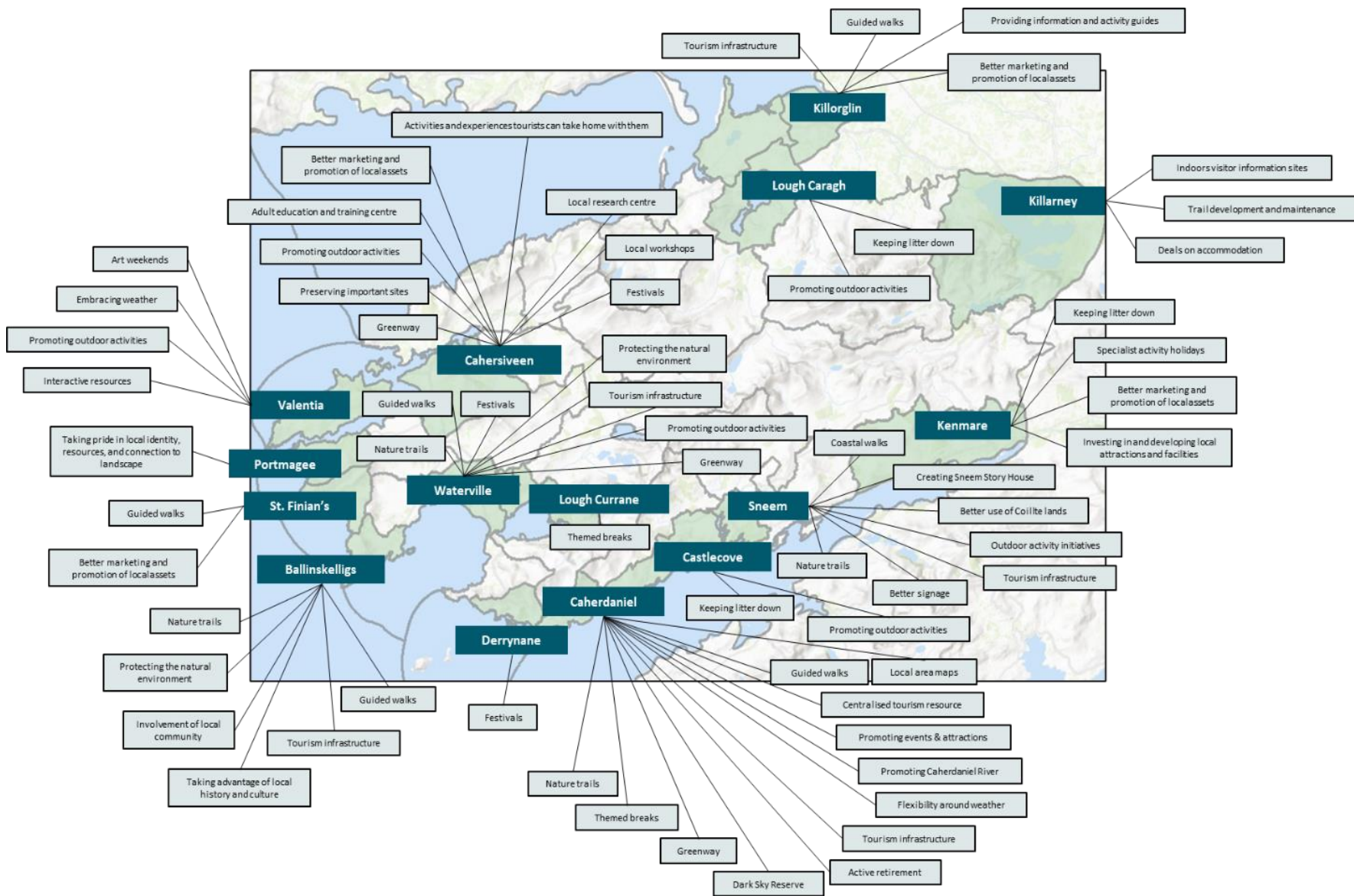


Figure 11. Mind map of off-season tourism suggestions made by survey participants, linked to relevant communities and overlaid on a geographical map of the Iveragh peninsula.



### 3.6. Spatial patterns emerging from the data

The data revealed a number of spatial patterns across various survey questions and themes. The heatmaps in Figure 12 illustrate these patterns by showing the concentrations of values (related to environmental knowledge, a sense of pride in one’s local area, etc.) across the region; darker areas contain higher concentrations of values, while lighter areas contain lower concentrations. This does not mean that areas with lower concentrations of values are less important, interesting, or significant; these maps simply indicate areas that survey participants have a high degree of knowledge of or close relationship to.

The main spatial patterns present across the data are as follows:

- The ‘Natural features,’ ‘Personal well-being,’ and ‘Sense of pride’ maps share a distinct pattern of high values around the coast.
- The ‘Specific species,’ ‘General wildlife,’ and ‘Outdoor recreation’ maps share a common south-west concentration of values. Though this is a genuine spatial pattern, it is likely skewed to the south-west coast due to a large number of participants from those areas.
- The ‘Economic well-being’ map does not bear strong similarities to any of the other maps.
- There is a strong link between the high concentration of values in the ‘Cultural aspects’ map, and all the rest of the maps.

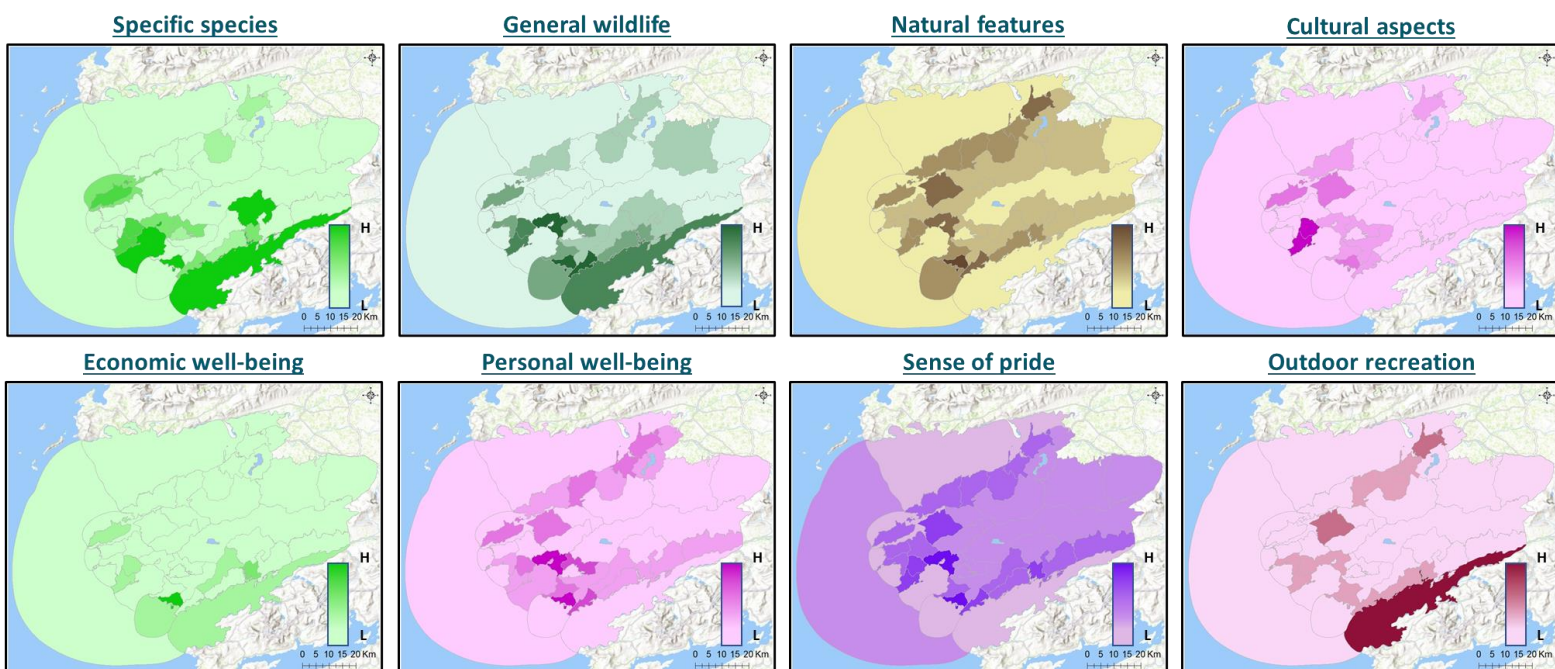


Figure 12. Heatmaps of themes and participant responses to survey questions. Lighter colours indicate a low concentration of values, while darker colours indicate a higher concentration of values.

## 4. Discussion

This section will briefly interpret and discuss the implications of the survey data. The sub-sections below correspond to the sub-sections in *Section 3. Results*.

### 4.1. Profile of survey participants

#### 4.1.1. Demographic profile

Looking at the demographic profile of the survey participants in Figure 5, it is clear that the data are skewed in various directions. First, there is a significant disparity in the gender of participants, with females making up  $\frac{2}{3}$  of the survey cohort and males only  $\frac{1}{3}$ . Moreover, the vast majority of participants fell within the two consecutive age groups of 45 – 54 years and 55 – 64 years, with very few participants under 35 years of age. Lastly, the geographic distribution of participants across the region was uneven: participants located in Caherdaniel and Cahersiveen combined made up 36% of the survey cohort, while the remaining peninsula was represented by fewer individuals spread out across 15 different locations, in addition to two locations off the peninsula. Based on these results, the average survey participant was a woman between the ages of 45 and 64 living in either Caherdaniel or Cahersiveen.

The skewness of these results may be attributed to a number of factors. For instance, it is widely documented and accepted that women display higher levels of concern and interest towards the environment than men; this may partially explain why the majority of participants were women. The unequal representation of age groups may be due to the higher proportion of adults willing to participate in projects and initiatives aimed at community engagement; younger people may be less interested or willing to engage in matters they feel do not directly affect them, particularly with no incentive. Lastly, the unequal geographic distribution of participants may be due in part to the recruitment strategy: in addition to recruiting random community members across the peninsula, the survey was sent to many individuals personally known to members of LIVE, with many personal connections based in Caherdaniel. Cahersiveen is the largest town in the region, so it is unsurprising that a high number of respondents were from there.

The skewness of the demographic results have undoubtedly had a heavy influence on the wider results of this study. However, they also highlight underrepresented demographic groups that need to be targeted in a more focused or varied way, including men, individuals younger than 35 years of age, and smaller communities across the region. For instance, though the survey was advertised publicly for several weeks across a number of social media platforms, and thus should have reached younger people, it failed to do so. In the future, outreach efforts might include involving schools or families to increase engagement<sup>6</sup>.

#### 4.1.2. Stakeholder profile

The analysis of participants' stakeholder profile (Table 1) yielded valuable information that may inform targeted approaches in the future. For instance, the environment was the highest priority across all stakeholder groups, while opportunities for local recreation was the lowest. There was also a negative correlation between the priorities of protecting local interests and developing tourism opportunities: most (though not all) stakeholders with local interests as a priority had a lower interest in tourism, while stakeholders prioritising tourism had a lower interest in local interests. Most (though not all) stakeholder groups highly prioritised rural development as well. Most tellingly, 100% of individuals identifying with 'government' prioritised tourism, while only

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<sup>6</sup> This was the original plan for engagement; however, due to COVID-19 restrictions, the researchers were unable to make any arrangements with schools, neither in person nor online.

40% prioritised local interests. The same interpretation can be applied to Table 2 to understand the level of environmental knowledge present across stakeholder groups.

This information may be used to tailor initiatives to the specific interests and priorities of different stakeholder groups. For instance, engagement with community groups may have a strong emphasis on local interests and rural development in relation to the environment, while engagement with local government or decision-makers may emphasise the potential of the natural environment to contribute to flourishing sustainable tourism.

## 4.2. State of environmental knowledge

### 4.2.1. Environmental knowledge (and knowledge gaps)

Participant responses to environmental knowledge questions fell into four broad categories: specific species, general wildlife, natural features, and cultural aspects. Existing environmental knowledge contained an even spread of these categories, however knowledge gaps lean heavily towards cultural aspects of the natural environment.

Based on the knowledge gaps (which can be seen fully in *Appendix C: Content Analysis Results (Map Questions)*), future knowledge-gathering programmes have a wide selection of topics from which to choose. However, Iveragh is a region in which cultural and natural heritage are intertwined. The landscape is deeply storied and rich in culture and biodiversity. It is strongly recommended that the project should not overlook this connection, but rather weave strands of it into every subsequent programme, however few. It would be difficult to create truly sustainable and regenerative tourism otherwise.

### 4.2.2. Barriers to learning more about the environment

The survey yielded a number of barriers to environmental education (Figure 7). There were several barriers that fell within the scope of LIVE, the most important being a lack of accessible knowledge about the environment and a lack of coherence and collaboration among the many projects in the area. In particular, many individuals cited a lack of general knowledge: there is either no knowledge at all, or knowledge that is too high-level and specialised, and many people would like something in between in order to learn more about the environment.

Though some barriers are outside the scope of LIVE (ex. participation in decision-making, access to nature), they are still valuable to consider when creating programmes in the future. The barriers mentioned should inform the project's way of working by ensuring that these barriers are overcome rather than reinforced.

## 4.3. Aspects of the natural environment contributing to well-being and a sense of pride in one's local area

### 4.3.1. Well-being

Looking at the maps in Figure 8, it is clear that natural features (ex. sea, mountain views, beautiful scenery) have the strongest impact on personal well-being. In addition, there doesn't appear to be any link between economic well-being and personal well-being in terms of the environment. The lack of this link may suggest that individuals have a strong interest and connection to the environment despite not benefitting from it directly. It is also possible that people do not make the connection between their economic well-being and the natural world. For example, tourism is a leading economic activity in the area, and we can assume that many tourists visit because of the natural heritage of the region. The LIVE project could investigate these links and whether local communities fully understand the reasons why the region is popular with tourists and how natural heritage can be better utilised to attract off-season tourism.



### 4.3.2. Sense of pride in one's local area

Looking at the map in Figure 9, it is clear that individuals take an immense amount of pride in the natural features of the environment, as well as its cultural aspects. LIVE may focus on these aspects when creating programmes and initiatives, as themes that evoke strong emotions (like pride and a sense of identity) are much more likely to engage local communities.

### 4.4. Interactions between communities and the natural environment through outdoor activities

Responses from participants yielded a wide range of outdoor activities undertaken across the peninsula, as well as the seasonality of those activities. Looking at the map in Figure 10, it is clear that the majority of outdoor activities interact with natural features, such as mountains, hills, walking trails, and bodies of water.

LIVE may use this information in conjunction with other results to create more engaging or successful programmes. For instance, one of the most frequently cited suggestions for off-season tourism was increased promotion of outdoor activities; this suggestion could be informed by specific types of activities and seasons that are popular with locals to create more authentic experiences.

### 4.5. How local communities feel they could make better use of their natural environment for sustainable off-season tourism

There was a large number of suggestions made for off-season tourism in the peninsula (Figure 11). Some of these are outside the scope of LIVE, but many of them can be woven into future projects. For instance, a large majority of individuals suggested more guided walks and nature trails; LIVE could use this (in conjunction with the results of the environmental knowledge gaps and educational barriers) to develop community-informed, informative walks that contain an abundance of general knowledge.

Overall, the results were in line with the goals of the LIVE project, i.e. provide more information to both locals and visitors regarding the natural heritage of the area. The most common suggestions were for better information and resources to support outdoor activities. The development and maintenance of walking trails was a common theme. Making use of the wild winter weather was also a repeated suggestion. There were a number of people who also noted that they liked the quiet off-seasons. Conversations with local residents often echoed this as they are worn out by the end of the busy summer season and struggle to find staff once universities and schools are open. Concerns around protecting, rather than developing, the natural environment were also frequently mentioned. One person suggested reducing the number of tourists. Many people suggested that more guided walks and outdoor activities would not only appeal to visitors, but also help local residents to value their own locality and be able to share it with visitors, which is a key aim of the LIVE project. Two people suggested that it would be better to try to attract long-term residents here and many people noted that many businesses close in winter so there is little to attract visitors and accommodation is harder to come by.

LIVE will incorporate these suggestions into future activities by:

- Focussing on providing information for both residents and visitors
- Focussing efforts on existing marked trails and working with SKDP to develop new trails
- Providing guided walks for residents and visitors over the quieter months
- Ensuring that the focus is on marketing the region in the shoulder seasons of spring and autumn, thereby not adding to the busy summer season and also extending the existing

season rather than trying to focus on year-round tourism where locals and the environment never get a chance to recover.

- Ensuring that marketing resources focus on the natural environment and also include notes on how to interact with the environment in a low impact way.

Looking at the off-season tourism suggestions in the context of specific communities may also allow LIVE to tailor its initiatives to these communities. For instance, individuals in Sneem would like to see the development of the Sneem Story House. Using this information, combined with the results of the educational barriers, LIVE could get involved in the Story House project not only for tourism purposes, but also to increase communication and collaboration among projects in the region (which was a barrier to education mentioned several times).

#### 4.6. Spatial patterns emerging from the data

Several interesting spatial patterns emerged from the data (Figure 12), which may have implications for future knowledge-gathering programmes. For instance, the coastal pattern present in the ‘Natural features,’ ‘Personal well-being,’ and ‘Sense of pride’ maps may suggest that natural features could be used as points of focus in initiatives as a way to increase engagement and enthusiasm across different groups or communities. Further, the pattern found in the ‘Specific species,’ ‘General wildlife,’ and ‘Outdoor recreation’ maps may indicate that outdoor recreation is strongly linked to interacting with wildlife; this could be incorporated into the promotion of outdoor activities that contain elements of watching or learning about wildlife. Moreover, as mentioned earlier, there is a lack of correlation between economic well-being and the other survey questions; the implications of this are as of yet unknown. Finally, there is an overwhelmingly strong link between cultural aspects of the environment and all other maps. This is in line with the environmental knowledge discussed in *Section 4.2.1.: Environmental knowledge (and knowledge gaps)*, as well as the strong influence on individuals’ sense of pride in their local area, and supports the notion that cultural elements of the environment should be woven into all future programmes, no matter how small.

#### 4.7 Additional comments from participants

In addition to the map and focussed questions, participants were asked if they had any final comments.

Of course, the content of some of these final comments falls outside the scope of this project and provided a space for people to air personal grievances, the majority of the comments were relevant and contained very valid suggestions and information points. It is clear from the comments that there is no lack of local passion for the region. Also evident in the responses is an awareness that the region has far more to offer visitors than the usual bus tour or beach break, but it seems that a level of despondency with the number of separate initiatives that have tried and failed in this area.

Key for the LIVE project is the evidence that local residents already have the answers, but that they need to be brought together in a coherent way. It was also clear that respondents are keen that new developments for tourists should also benefit residents. As well as noting that various projects have failed to work together, communicate and learn from each other, it was also noted that this is true for communities and businesses as well. It seems that fragmentation is an issue in many sectors and at many levels in the region. Although many of the comments in this section were out of the scope of the LIVE project, there is certainly potential for the project participants to further explore some of the topics raised and develop recommendations from them.

## 5. Conclusions

This study was carried out to identify knowledge gaps and aspects of the Iveragh peninsula's natural environment peninsula important to local communities, to steer the development and focus of future knowledge-gathering programmes. The community-informed approach taken will ensure that these programmes are responsive to the diverse needs, resources, communities, and perceptions present across the Iveragh peninsula. Although this was not a representative sample, it does provide insight into the range of opinions, experiences and knowledge levels that are present within the community. It also raises certain follow-up questions.

They key findings from this study revealed varied types of knowledge that people know and want to know more about; the significant influence of natural features on local well-being; the keen interest of locals to learn more about cultural aspects of their environment; a number of spatial patterns across the data; and invaluable suggestion for sustainable off-season tourism and improved environmental education.

### 5.1 Recommendations for the LIVE project

The following are recommendations that the LIVE project can implement as a result of the survey:

1. Make a concerted effort to engage with the less responsive groups. These include men of all ages, people under 34, communities to the east of Cahersiveen and Caherdaniel. These groups should be the focus of communications and marketing plans.
2. When speaking to community groups, emphasise the local interest and rural development potential of increasing knowledge related to the natural environment. When speaking to local government and policy makers, highlight the tourism and economic potential.
3. In designing knowledge gathering programmes, weave aspects of cultural heritage and environmental links to human history and experience into everything. This should include the Irish language.
4. To remove barriers to environmental education, LIVE will include the following in its knowledge sharing work:
  - a. Organise guided walks and lectures for local residents that include knowledge sharing between communities and community members as well as 'top-down' activities.
  - b. Ensure a high level of accessibility of all outputs that includes
    - i. tailoring outputs to different audiences and different levels of pre-existing knowledge
    - ii. creating activities and outputs that are engaging and motivating
    - iii. ensuring activities are free or affordable.
  - c. Involve and collaborate with local communities to design and implement knowledge sharing activities.
  - d. Provide resources for adults and children who are both local and visitors to the region.

## 5.2 Recommendations for future projects or research

Examples of some of the comments and suggestions that were made within the survey but that are out of the scope of the LIVE project are listed here. They are in no particular order of priority as this survey is not a representative sample of the population of the peninsula, but it does provide insight into the opinions and insights that are present within the population.

- Safe infrastructure for cycling and walking
- More 1 or 2 night accommodation (hostels, campsites, B&Bs)
- Changes in legal frameworks such as liability and access to land
- Promotion and protection of local food
- Integrated plans for how to improve issues in the region such as unemployment, depopulation, accommodation
- Tackle illegal dumping and litter
- Solutions for parking during busy season
- Reduce light pollution in the dark sky reserve
- Development of indoor facilities, information hubs
- Review of local community organisations

Observations noted by respondents:

- Lack of morale in general, and a lack of faith in policymakers and government
- Community fragmentation
- Lack of enforcement of environmental protection
- Prioritisation of services and accommodation for visitors over residents

## 6. References

The list below contains the references cited in this report. For a complete list of works consulted to guide, develop, and implement the research, please refer to *Appendix F: Bibliography*.

- Boden, 2018. *Use the Five-Step GIS Analysis Process*, accessed on 4 November 2020 at: <https://community.esri.com/t5/esri-training-blog/use-the-five-step-gis-analysis-process/ba-p/899436>
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- Moore, S.A., Brown, G., Kobryn, H. and Strickland-Munro, J., 2017. Identifying conflict potential in a coastal and marine environment using participatory mapping. *Journal of environmental management*, 197, pp. 706-718.
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## Appendix A - Survey Map Creation Steps

Step	Action	Notes/Method	Justification
1	Create folder in C: drive for GIS files		
2	Open new map in ArcMap 10.8		
3	Add basemap (topographic)	Geographic Coordinate System: WGS 1984 (keep same for all layers)	Topographic basemap shows environmental features (like mountains, green areas, roads, contours); participants can easily see features and this can help them respond more accurately; will also help during analysis because it's easy to see where the uplands, countours, etc. are
4	Add Irish geography layers	Co. Kerry county boundaries; Co. Kerry townlands and Electoral Divisions (downloaded from <a href="http://www.townlands.ie">www.townlands.ie</a> )	To create divisions guided by EDs and variations in the landscape by grouping together townlands
5	Create pre-defined land units	Group townlands together (selected individually and exported into a new layer per land unit); put all initial land unit layers into "Land_Divisions" folder	Townlands were grouped on the basis of EDs, but taking into consideration psychological and cultural boundaries not necessarily reflected by purely political boundaries; townland groups were created after feedback from locals
6	Make pre-defined land units into solid shapes	Geoprocessing --> Buffer (Distance: 5 metres; dissolve type: all); put all buffered land unit layers into "Land_Div_Merged" folder; add field for "Name"	Land units were made into solid shapes for later merging into one land unit layer (to make it easier to adjust symbology and add additional fields based on environmental variables or to join to response layers)
7	Make pre-defined water units	"Land_Units" --> Editor --> draw freehand polygons that snap to existing land units --> add "NAME_ID" field in "Properties" --> assign name IDs to all water units	Water units were drawn by hand to encompass the entire coast and offshore area of the peninsula; water units were created after consulting with Lucy and Orla; same layer as land units was used so that water units could snap to existing land units so that no gaps would remain between polygons
8	Make pre-defined mountain range units	Same as above (group + buffer); group townlands into 3 mountain ranges (Glenbeigh, Dunkerron, Macgillycuddy's Reeks)	To find a way to cover the rest of the peninsula



9	Assign names and legend numbers to all units	ArcCatalog --> right-click on shapefile properties --> add field (Name and Legend_No) --> Editor --> open attribute table and assign names and numbers	So that names and numbers can then be used correspondingly on the finalised map
10	Assign feature category to land units layer (land vs. water)	ArcCatalog --> right-click on shapefile properties --> add field (Feature) --> Editor --> open attribute table and assign feature type	Land and water units are in the same layer, so need a way to distinguish between the two for subsequent symbology and display on map
11	Determine symbology of pre-defined units	Land units are light, bright green; mountain ranges are dark green; water units are dark blue to distinguish from blue of basemap water; transparency was set to 60%, so participants could still see the topography and features of the landscape	Need to distinguish between the 3 types of pre-defined areas for ease of use of the final map in the survey; categories are easy to define and refer to
12	Create copies of land and mountain unit layers to keep dark outlines of polygons	Copy and paste layers into Table of Contents --> choose "Hollow" from symbology	Original layers are set to 60% transparency so boundaries are hard to see; the copy layers have strong dark boundaries that are more easily seen
13	Label units with legend numbers	Label manager --> turn on "Legend_No" fields for land and mountain unit layers --> adjust font, size, and make bold so the numbers are big and easily seen but not obscuring any boundaries or features	Numbers on the map will correspond to place names in a key next to the map (the key was created in PPT)
14	Create map in map viewer	Try different layouts to see what suits the map best (modern, classic, letter, conservation landscape); choose one where units and labels are big and visible	To maximise the visibility, usability and legibility of the map for participants taking the survey
15	Export map as JPEG	Export map --> name file and destination and choose JPEG	To be joined with key in PPT
16	Create key for map	PPT --> make text box containing numbered list of place names and divide by feature (water, land, mountains) --> group text box with map --> save as new image	To create map with key that will be uploaded to the finalised survey

## Appendix B - Methods and Analysis

Step	Action												
<b>1</b>	<b>Frame the question</b>												
	<p><b>Main aim</b> What aspects of the Iveragh natural environment do local communities want us to focus our knowledge gathering programmes on?</p> <p><b>RQ1</b> What is the state of environmental knowledge (knowledge, knowledge gaps, barriers to knowledge) among local communities in the Iveragh?</p> <p><b>RQ2</b> What aspects of the natural environment influence dimensions of well-being and sense of place among local communities in the Iveragh?</p> <p><b>RQ3</b> How do local communities in the Iveragh interact with their natural environment through outdoor activities?</p> <p><b>RQ4</b> How do local communities in the Iveragh feel that they could take better advantage of their natural resources?</p> <p><b>RQ5</b> Do the research questions above reveal any spatial trends or patterns across the Iveragh?</p>												
<b>2</b>	<b>Prepare and explore the data</b>												
<b>2a</b>	<b>Prepare data before GIS</b>												
	Prepare CSVs of survey responses to be integrated into the GIS (based on results of content analysis)												
<b>2b</b>	<b>Prepare data in GIS</b>												
	Add CSV data and organise into folders												
	Convert CSVs into shapefiles and add metadata												
<b>2c</b>	<b>Explore data</b>												
	Explore data (geography, attributes, metadata) to determine what data are useful for analysis												
	Extract and merge meaningful layers and organise into folders (by map unit, by survey question)												
<b>3</b>	<b>Choose analysis methods &amp; tools (consider which methods &amp; tools will answer each research question)</b>												
	<table border="1"> <thead> <tr> <th>Question</th> <th>Methods &amp; tools</th> </tr> </thead> <tbody> <tr> <td>What is the state of environmental knowledge (knowledge, knowledge gaps, barriers to knowledge) among local communities in the Iveragh?</td> <td>Examine spatial distribution of aspects of environmental knowledge (by map unit, by self-reported environmental knowledge, by what people know lots about, by what people want to learn more about, by types of barriers to knowledge); word clouds of responses</td> </tr> <tr> <td>What aspects of the natural environment influence dimensions of well-being and sense of place among local communities in the Iveragh?</td> <td>Examine spatial distribution of influence on dimensions of well-being and sense of place (by map unit, by type of influence, by dimension of well-being and sense of place); word clouds of responses</td> </tr> <tr> <td>How do local communities in the Iveragh interact with their natural environment through outdoor activities?</td> <td>Examine spatial distribution of outdoor activities (by map unit, by activity, by season); word clouds of responses</td> </tr> <tr> <td>How do local communities in the Iveragh feel that they could take better advantage of their natural resources?</td> <td>Examine spatial distribution of suggestions and ideas (by map unit, by type of suggestion); word clouds of responses</td> </tr> <tr> <td>Do the research questions above reveal any spatial trends or patterns across the Iveragh?</td> <td>Examine spatial distribution of above by demographic characteristics (age, gender, location of residence, identity group, regional concern); spatial overlap of mapped values, or correlation analysis (self-reported environmental knowledge vs. outdoor activity, economic/personal well-being vs. sense of pride, environmental knowledge vs. sense of pride, etc.); investigating spatial patterns (spatial arrangement of clustering/dispersion, intensity/richness calculations [Shannon diversity index], hot spot identification); spatial concurrence analysis (overlay analysis to explain the relationship to physical land features or ecological data); statistical analysis (hierarchical cluster analysis, Spearman's rank correlation coefficient, multiple correspondence analysis); relation between mapped values, land use and demographic characteristics (clustering); absolute and relative numbers (demographic characteristics, mapped values, total number of answers and relative proportion; and land units associated with answers)</td> </tr> </tbody> </table>	Question	Methods & tools	What is the state of environmental knowledge (knowledge, knowledge gaps, barriers to knowledge) among local communities in the Iveragh?	Examine spatial distribution of aspects of environmental knowledge (by map unit, by self-reported environmental knowledge, by what people know lots about, by what people want to learn more about, by types of barriers to knowledge); word clouds of responses	What aspects of the natural environment influence dimensions of well-being and sense of place among local communities in the Iveragh?	Examine spatial distribution of influence on dimensions of well-being and sense of place (by map unit, by type of influence, by dimension of well-being and sense of place); word clouds of responses	How do local communities in the Iveragh interact with their natural environment through outdoor activities?	Examine spatial distribution of outdoor activities (by map unit, by activity, by season); word clouds of responses	How do local communities in the Iveragh feel that they could take better advantage of their natural resources?	Examine spatial distribution of suggestions and ideas (by map unit, by type of suggestion); word clouds of responses	Do the research questions above reveal any spatial trends or patterns across the Iveragh?	Examine spatial distribution of above by demographic characteristics (age, gender, location of residence, identity group, regional concern); spatial overlap of mapped values, or correlation analysis (self-reported environmental knowledge vs. outdoor activity, economic/personal well-being vs. sense of pride, environmental knowledge vs. sense of pride, etc.); investigating spatial patterns (spatial arrangement of clustering/dispersion, intensity/richness calculations [Shannon diversity index], hot spot identification); spatial concurrence analysis (overlay analysis to explain the relationship to physical land features or ecological data); statistical analysis (hierarchical cluster analysis, Spearman's rank correlation coefficient, multiple correspondence analysis); relation between mapped values, land use and demographic characteristics (clustering); absolute and relative numbers (demographic characteristics, mapped values, total number of answers and relative proportion; and land units associated with answers)
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<b>4</b>	<b>Perform the analysis</b>												
	Symbolise results to explore different ways of visualising data												
<b>5</b>	<b>Examine and refine results</b>												
	Examine results to see if further in-depth analysis can be conducted, and refine based on final results												

Source: <https://community.esri.com/t5/esri-training-blog/use-the-five-step-gis-analysis-process/ba-p/899436>

<b>Step-by-Step Data Analysis Methods</b>			
<b>1 Frame the research questions</b>			
<i>Step</i>	<i>Action</i>		
1	Frame the questions		
	Main aim	What aspects of the Iveragh natural environment do local communities want us to focus our knowledge gathering programmes on?	
	RQ1	What is the state of environmental knowledge (knowledge, knowledge gaps, barriers to knowledge) among local communities?	
	RQ2	What aspects of the natural environment influence dimensions of well-being and sense of place among local communities?	
	RQ3	How do local communities in the Iveragh interact with their natural environment through outdoor activities?	
	RQ4	How do local communities in the Iveragh feel that they could take better advantage of their natural resources?	
	RQ5	Do the research questions above reveal any spatial trends or patterns across the Iveragh?	
<b>2 Prepare the data</b>			
<b>2a Prepare data before GIS</b>			
<i>Step</i>	<i>Action</i>	<i>Notes/Method</i>	<i>Justification</i>
2	Downloading raw data from Google Forms spreadsheet	Data to be analysed: 21/1/2021 to 24/2/2021	21/1-24/2 are the dates the survey was open to responses
3	Removing sample responses 9/12/2020 to 15/1/2021	15/1 response was submitted before ethics approval	Sample entries not needed for data analysis
4	Timestamp analysis	Analysis of peak periods for responses throughout the day	To reveal peak periods that can inform future surveys
5	Data cleaning	Renaming question fields and demographic choices	To prepare for subsequent analysis (stakeholder + GIS)
		Standardising res_loc (location) and res_dur (years)	To prepare for subsequent analysis (stakeholder + GIS)
		Corresponding res_loc to map units	To prepare for subsequent analysis (GIS)
		Calculating % of life lived in Iveragh (res_dur:age ratio)	To prepare for subsequent analysis (stakeholder)
6	Initial demographic analysis	Creating pivot tables for demographics (respondents by age, gender, res_loc, % of life lived in Iveragh)	To form an initial impression of the demographic profile of the survey respondents
7	Stakeholder analysis	Identifying stakeholders (using Python and Excel to compare identity, regional priority and environmental knowledge: total counts of identities and priorities; matrix of total counts and percentages)	To analyse and classify stakeholders based on identity groups, regional priorities, and self-reported environmental knowledge
8	Content analysis of non-demographic, non-spatial questions	Identifying and classifying key attributes in the response text	To explore perceptions of educational barriers and how people think their landscape and natural resources could be better taken advantage of
		Creating mind maps of non-demographic question responses (off-season suggestions, educational barriers)	To visualise relationships and trends among responses from different communities

9	Content analysis of spatial questions	Same as content analysis above (according to Tyrvalinen, 2007)	To condense and prepare spatial information for incorporation into GIS
		Creating spreadsheets of frequencies of categories of data	Frequencies of specific species, general wildlife, natural features, and cultural aspects of the natural environment, and map units were based on explicit references to the above categories in answers to map questions (ex. In region 31, I know about curlew...)
		Creating spreadsheets of categories of data per question	Divided map-based responses into 4 categories (specific species, general wildlife, natural features, cultural aspects) to examine the geographic distribution of these aspects of the natural environment people know about and want to know more about
10	Preparing CSVs for incorporation into GIS	Creating a CSV comprising all non-spatial data of all participants (demographic data, educational barriers, off season tourism suggestions)	
		Creating CSVs comprising spatial data (frequencies, data categories, etc.)	Frequency maps contain only the frequency to which a specific map unit was explicitly referred (no differentiation among categories); frequency point maps contain data points belonging to categories of data (specific species, general wildlife, etc.) explicitly referred to in each map unit
<b>2b Prepare data in GIS</b>			
11	Adding CSVs (demographics, stakeholders, frequencies, frequency points) into GIS and converting into shapefile	Creating feature class from XY table (point layer); defining projection (WGS 1984); using editor toolbar (advanced editing: replace geometry tool) to create new points corresponding to each attribute in each CSV	To create points in each layer to be used for data analysis; points were placed in corresponding map units, but placed in clusters arbitrarily within those map units (since nothing more specific than a map unit was specified)
12	Organising CSVs into folders	Organising shapefiles into folders in LIVE_GIS file folder	To keep data organised and easily-findable and accessible in order to promote FAIR principles
13	Adding metadata	Metadata consists of information such as title, date, author, format, subject, and keywords for numerical and text data; as well as creation date, data author, map projection and coordinate system, scale, explanation of symbology and attributes, and licensing for spatial (GIS) data. Metadata was created by embedding it into the documents, as well as organising it in a separate supporting document.	To enable easily-findable, accessible data and promote the FAIR principles



<b>2c Explore data</b>			
14	Exploring demographic data	Creating group layers for identity groups and regional priorities; determining symbology for each individual layer (transparency 40%, different shape and colour)	To more easily visualise the geographic distribution and concentrations of identity groups and regional priorities
15	Exploring map-based question data	Merging <i>env_know_lots</i> and <i>env_know_more</i> into <i>env_know_MERGE</i> ; selecting by attribute and splitting into one layer per category (species, gen_wildlife, nat_features, cultural); symbolising each layer as <i>env_know_lots</i> vs. <i>env_know_more</i>	To see the overall distribution of environmental knowledge (both what people already know about and want to know more about), and to see which species, general wildlife, natural features, and cultural aspects feature most prominently in people's environmental knowledge, and where
<b>3 Choose analysis methods &amp; tools</b>			
<i>Step</i>	<i>Action</i>	<i>Notes/Method</i>	<i>Justification</i>
16	Visual examination of spatial distribution of environmental knowledge, dimensions of well-being, outdoor activities	Symbolising categories of attributes in each layer (cultural = pink, natural features = yellow, general wildlife = dark green, specific species = bright green)	To see the distribution and intensity of different types of knowledge more easily
<b>4 Perform analysis</b>			
<i>Step</i>	<i>Action</i>	<i>Notes/Method</i>	<i>Justification</i>
17	Hotspot analysis of environmental knowledge	Optimized Hot Spot Analysis --> count incident within aggregation polygons (map units) --> symbolise join_count (quantities --> graduated colors) into 5 classes (equal interval)	Points were placed within map units arbitrarily (since only map unit was known), so it wouldn't make sense to create hotspots out of these arbitrarily-placed points; instead, join_count was selected to represent areas on the map with highest incident counts)
18	Merging all question layers	Geoprocessing --> Merge --> all question layers (all_freq_pts_merged)	To extract layers for each data category
19	Extracting layers for data categories (species, wildlife, natural features, cultural)	Select by attribute --> category; data --> export data --> new layer; symbolise points by category	To enable hot spot analysis of data categories
20	Hotspot analysis of data categories	Optimized Hot Spot Analysis --> count incident within aggregation polygons (map units) symbolise join_count (quantities --> graduated colors) into 5 classes (equal interval)	See justification for step 17 above
<b>5 Examine &amp; refine results</b>			

**Appendix C - Content Analysis Results (Map Questions)**

Specific species	Map Unit	General wildlife	Map Unit	Natural features	Map Unit	Cultural aspects	Map Unit
Hares	20	Botany	41	Walking routes	All	Irish names for nature	22-30, 36
Natterjack toad	10	Zoology	41	Coastal erosion	17	Cultural connections to nature	22-30, 36
Sea otter	2	Bird migration	22	Coast	23-24	Local history	23-24
Edwardsia delapiae	2	Birds	33	Inland areas	16, 18, 37	Historical features	23-24
Kerry lily	All	Insects	33	Geology	15	Historic relationship between land	23-24
		Wild plants	33	Coast	14-15	Links to Skellig Rocks	23-24
		Interrelation in nature	33	Geology	All	Ballinskelligs Abbey	23-24
		Fauna & flora	23-24	Geography	All	Holy wells	23-24
		Wildflowers	23-24	Impact of weather	20	Ballinskelligs cable station	23-24
		Birds	23-24	Lakes	13	Ballinskelligs Castle	23-24
		Marine life	15	Countryside	13	Coast Guard station	23-24
		Birds	18	Coastal walks	1-7	Potential for development	29-30, 32
		Wildflowers	8	Geology	15	Heritage	21
		Bird migration	8	Sea	7, 29	Community involvement and participation	15, 17
		Birds	1-7	Bog formation	30	Environmental protection	20
		Plant life	1-7	Sand dune formation	30	Transatlantic cable	20-21
		Wildlife	11	Coastal erosion	30	Environmental protection	40
		Plants	34	Wild-growing fields	30	Interaction between environment and development	15
		Hedgerow food	34	Island	20	Transatlantic cable	20, 23-25
		Biodiversity	15	Geology	All	Environmental protection	17
		Migratory birds	23-24	Igneous rocks	All	Aquaculture (oyster and fishing)	10
		Marine life	7, 29	Coastal features	7-8	Archaeology	All
		Marine life	10-13	Coastal features	7-8	Social history	All
		Birds	10-13	Geology	All	Archaeology	1-7
		Animals	10-13	Geology	38	Rock art	37
		Indigenous trees	30	Bogs	32	Natural health produce	34
		Insects	30	Bogland restoration	32	Archaeology	15
		Undergrowth life	30	Derrynane National Park	29	Local history	15
		Fauna & flora	15-35	Coastal erosion	25	Archaeology	15-35
		Birds	29	Dark Sky Reserve	26-29	Rich culture and historical significance	15
		Birds	61-62	Ocean area	9	Local history	31-33
		Wildlife	1	Island	20	Archaeology	29-30
		Wildlife	38			Local history (how people lived and worked)	29-30
		Plants	38			Local history	All
		Marine life	7-8			Cable station museum	26-27
		Marine life	7-8			Standing stones heritage	26-27
		Wildlife	All			Famine village	28-29
		Wild birds	20				
		Bird migration	20				
		Bird behaviour	20				
		Wildlife	25				
		Wildlife	26-29				
		Ecology	38				

## Appendix D - Barriers to Environmental Education

Barriers to Environmental Education	Themes	Barriers	Suggestions
Lack of opportunities to explore new areas, e.g guided walks, etc.	Lack of recreational opportunities	Recreational opportunities	Guided walks
Better adult education	Inadequate adult education	Adult education	
I think the people most involved in environmental issues tend to be very set in their outlook and tend to lay blame without looking at the broader picture. This is a pity as the biggest problem is buy-in from the farming and fishing communities. One example of this is I was recently at a meeting of our local environmental group who do great work in the area. I was flabbergasted by the lack of knowledge of the group of the farming and tritonal land use in our area. One person stood up and said she often saw farmers emptying tanks of slurry into the local river whereas the farmers were actually filling slurry tanks with water to dilute their slurry in the slurry tanks. Education is the key but the education has to be for everyone. We need to get people to look at the wider picture and stop playing the blame game.	Narrow focus of education; lack of environmental knowledge in key stakeholder groups; environmentally-damaging behaviours; lack of focus on bigger picture	Environmental awareness	Focus on bigger picture in education
For me it is making the time to learn. I try to take advantage of local talks, guides, etc.	Lack of personal motivation and time	Personal motivation	Local talks; guided walks
It would be good if we had lectures on different aspects of wildlife and to get the community involved in surveys	Lack of community involvement	Community involvement	Wildlife lectures
I decided to write a book because there are no resources available that showcase all aspects of the natural environment of Iveragh	Lack of community involvement		
Although the laying of the transatlantic cable was a major feat of engineering and innovation, there is no central place to discover the information. The history, etc. is found in piecemeal locations - a bit here, a bit there, etc.	Lack of resources (educational)	Accessible knowledge	
A number of different entities are working on various projects on Iveragh - information sharing however needs improvement	Lack of collaboration and connection (intersectoral); lack of accessible information	Intersectoral collaboration	Improved information sharing among local projects
In terms of coastal erosion in Derrynane at high tide, how loss of dunes can be prevented; who is in charge of any decisions made with respect to this - OPW, local groups?	Lack of power in decision-making process	Power in decision-making process	Transparency in decision-making
Sometimes my own laziness in travelling out of my own parish; perhaps group travel	Lack of personal motivation	Personal motivation	Group travelling opportunities

As the area is very much aimed at tourism, there is a lack of resources for people outside the summer season	Lack of off-season resources	Off-season resources	
Accessibility and transport are barriers for some in rural areas, it can be difficult to get to other areas; more adult education about the immediate environment might be beneficial, as well as more initiatives that involve locals in brainstorming when it comes to thinking of ways to better protect, appreciate and utilise our natural environment	Lack of accessibility and local public transport; inadequate adult education; lack of community involvement	Public transport; adult education; community involvement	Adult education about local environment; initiatives involving locals to brainstorm ways to protect, appreciate, and utilise natural environment
Lack of teaching in school; suggestions could include class trips and talks in school	Inadequate childhood education	Childhood education	Class trips; talks in schools
The ordinary local people of the area need more knowledge	Lack of knowledge for locals	Accessible knowledge	Knowledge for local people
The people in the area need more training in the area	Lack of training for locals		Training for local people
Co-creating educational material	Educational resources; community involvement		Co-creating educational material
Better adult education	Inadequate adult education	Adult education	Improved adult education
We are not constrained by external factors in discovering more; only restricted by time and our other commitments, including the maintainance, in our 80s, of our property (4 acres)	Lack of personal motivation; lack of time	Personal motivation	
No barriers, just a lack of time and probably laziness on my behalf	Lack of personal motivation and time	Personal motivation	
I believe people using environmental argument's to block planning applications is damaging environment awareness in the long run			
Time to get out in the environment	Lack of personal motivation and time	Personal motivation	
Select few making decisions that impact environment; most locals have no say in decision-making. The cost of adult education is prohibitive.	Lack of power in decision-making process; adult education is expensive	Adult education; power in decision-making process	



As I am only generally interested I need more general knowledge (not a sophisticated level of information)	Lack of non-specialised, general knowledge	Accessible knowledge	General knowledge
The region of Castlequin, especially the area known as 'over the water,' is bursting with natural and cultural heritage from rock outcrops, to stone forts, Ballycarbary castle (which is about to fall), the ruins of a charcoal factory, forestry walks, holy wells, beaches, mountains to hike, etc. Unfortunately, there is a significant lack of investment here to enable locals and tourists alike to gain a better understanding of the unique environment and the connectivity that exists between environment and cultural aspects of this region	Many natural and cultural assets but lack of resources (financial)	Financial resources	Investment in natural and cultural assets
There is an appalling lack of trails leading to some outstanding scenic spots, areas like I mentioned on the coastal (Dingle Bay) side of areas 14 and 15	Lack of access; lack of recreational opportunities	Access to nature; recreational opportunities	Trails in scenic areas
To be able to devote more time	Lack of personal motivation and time	Personal motivation	
Not qualified enough to make specific suggestions	Feeling unqualified	Feeling unqualified	
More participants in decision-making	Lack of power in decision-making process	Power in decision-making process	Participation in decision-making
An insufficiency of material	Lack of resources (educational)	Educational resources	
More community-level access to professional/knowledgeable people, e.g. tours, walking, wild bird guides	Lack of access; lack of recreational opportunities; lack of community involvement	Accessible knowledge	Tours; walking; bird guides
There are proposed oyster farms for the Renard strand/Derrean river area and the Ballycarbery area; the local community has not been consulted about this; these will take away our access to nature	Lack of community involvement; lack of power in decision-making process; lack of access to nature	Power in decision-making process; access to nature; community involvement	
I should make an effort to recognise the wild birds of the area	Lack of personal motivation	Personal motivation	

More participation in decision-making, better adult education and co-creating educational material	Lack of power in decision-making process; inadequate adult education; lack of community involvement	Power in decision-making process; adult education; community involvement	Participation in decision-making; improved adult education; co-creating educational material
More educational resources such as the displays at Derrynane National Park	Lack of resources (educational)	Educational resources	Signage & information boards
Access and pathways along coastal area for walking and observing are limited	Lack of recreational opportunities	Access to nature; recreational opportunities	
Participation in decision-making	Lack of power in decision-making process	Power in decision-making process	
More people could go to schools to teach kids about it	Inadequate childhood education	Childhood education	Talks in schools
Lack of educational resources; local educational courses	Lack of resources (educational)	Educational resources	Local courses
Increased local and national political emphasis on environmental issues			Political emphasis on environmental issues
I have not experienced any barriers. There's always room for more local information; a one-off workshop specific to locality; could be online	Lack of local knowledge; local workshops and online courses		Local workshops; online courses
I don't feel qualified enough; I think signage & information boards would be useful; improved access to nature for people with all types of different needs including people with sight impairments	Don't feel qualified enough; lack of signage/public information; lack of access to sites (for people of different needs)	Feeling unqualified; access to nature	Signage & information boards; improved access to nature for people with different needs
Better adult education of an experiential nature	Inadequate adult education	Adult education	Improved adult education
Lack of access is becoming increasingly difficult; easily accessible information	Lack of access to sites; lack of accessible knowledge	Accessible knowledge	
Lack of rural public transport	Lack of public transport in rural areas	Public transport	

Adult education; talks by local people sharing their expertise	Inadequate adult education; lack of locals sharing expertise	Adult education	Talks by locals sharing their expertise
Better adult education (free) regarding our local ecology, etc. would be great	Inadequate adult education; adult education is expensive	Adult education	Courses on local environment
Access to some archaeological sites - over Christmas I used an older OS map to find some archaeological sites no longer present or now on a golf course; planning permissions could include conditions of retaining access to specific sites (without liabilities for the landowner)	Lack of access to sites; lack of recreational opportunities	Access to nature; recreational opportunities; accessible knowledge	Retaining site accessibility in planning permissions
I know a very basic amount; would love more opportunities for bird watching or wildlife watching with someone knowledgeable	Basic level of knowledge; wanting to know more		Watching wildlife and birds
I need to find out how to access educational materials and field guiding	Lack of accessibility of educational resources	Accessible knowledge	Access to educational materials and field guiding
Local courses needed	Lack of local education	Educational resources	Local courses
A lot of written information can be overwhelming; shorter facts in many places or an interactive app	Lack of easy to understand knowledge; lack of accessibility	Accessible knowledge	Easy to understand knowledge; interactive app
Lack of connection between sectors; more formal and informal interaction	Lack of collaboration and connection (intersectoral)	Intersectoral collaboration	Formal and informal interactions
No, but I think educational materials easily available (for example via local library) would be welcome	Lack of resources (educational)	Accessible knowledge	Educational material in local libraries
Too many research projects being set up in the area, carrying out research to ascertain problems, assets, liabilities and people's ideas. Then disappearing, until the next research comes along to ascertain the lay of the land	Lack of continuity of initiatives	Continuity of initiatives	

We have been fortunate in Sneem to have a group of people interested in nature on our TidyTowns working group and have been able to secure funding to hire environmental professionals such as Ian McGrigor and Niamh Ni Dhuill from Gortbrack Organic Farm to carry out biodiversity feasibility studies and plant surveys in our area, however the process of getting funding was laborious and can be off-putting at times	Difficulty obtaining funding (financial resources)	Financial resources	
Lack of adult education facility	Lack of resources (adult education facility)	Educational resources	Adult education facility
Lack of research carried out in local area	Lack of local research	Local research	
Don't feel any barriers; I have no problem learning and finding out about the area myself	None		
Have found some books on the region but there aren't many as far as I'm aware	Lack of knowledge of the area	Accessible knowledge	
More local knowledge should be available; less use of fertiliser	Lack of availability of local knowledge	Accessible knowledge	
Not enough simplified, down-to-earth information or means of being involved in local research or forums; very little dissemination to a wider audience of generalised information that may be of interest to individuals	Lack of accessible, easy-to-understand knowledge; lack of general knowledge	Accessible knowledge	General knowledge
As mentioned above, the physical inaccessibility of <i>Edwardsia delapiae</i> and most of the igneous rocks on Beginish, etc. as well as the short flowering period for the Kerry Lily I think make them more difficult to share with visitors. But visuals, etc. in the ecomuseum would be amazing to have	Lack of access to nature	Access to nature	Visuals of natural features and processes
Time constraints	Lack of time	Lack of time	
My own laziness is the biggest barrier! Knowledge is easily accessed with a bit of effort	Lack of personal motivation	Personal motivation	
Learning more about the environment at school	Inadequate childhood education	Childhood education	More environmental focus in schools
More education needed on the benefits of preserving the local environment and of cautious development	More education needed on environment	Environmental awareness	More education on benefits of preserving environment and cautious development

Zoom; nature walks; bird watching			Nature walks; birdwatching
Yes, lack of signage at heritage sites; no museum for the heritage of the cable station; no Celtic mythology sites in the area	Lack of signage; lack of museum; lack of historic sites	Accessible knowledge; educational resources	Signage; heritage museum; Celtic mythology sites
Time; guides to handy starting points of where to go to for further information	Lack of time	Lack of time	Central information resource
Learning more about the environment at school	Childhood education	Childhood education	Learning more about the environment at school
There certainly needs to be more local participation in decision-making	More participation in decision-making process	Power in decision-making process	Local participation in decision-making process



## Appendix E - Suggestions for Off-Season Tourism

Barriers	Suggestions	Barrier	Count
Educational resources	Easy to understand knowledge	Accessible knowledge	13
Accessible knowledge	Formal and informal interactions	Personal motivation	10
Local research	Guided walks	Adult education	8
Personal motivation	Focus on bigger picture in education	Educational resources	7
Financial resources	Local talks	Power in decision-making process	7
Intersectoral collaboration	Guided walks	Access to nature	6
Recreational opportunities	Interactive app	Community involvement	5
Adult education	General knowledge	Recreational opportunities	5
Environmental awareness	Political emphasis on environmental issues	Childhood education	4
Personal motivation	Investment in natural and cultural assets	Feeling unqualified	2
Continuity of initiatives	Trails in scenic areas	Financial resources	2
Personal motivation	Talks by locals sharing their expertise	Intersectoral collaboration	2
Personal motivation	General knowledge	Public transport	2
Adult education	Local courses	Environmental awareness	2
Power in decision-making process	Local workshops	Continuity of initiatives	1
Accessible knowledge	Online courses	Local research	1
Accessible knowledge	Participation in decision-making	Off-season resources	1
Power in decision-making process	Courses on local environment		
Accessible knowledge	Retaining site accessibility in planning permissions		
Access to nature	Signage & information boards		
Access to nature	Improved access to nature for people with different needs		
Recreational opportunities	Educational material in local libraries		
Financial resources	Wildlife lectures		
Recreational opportunities	Tours		
Accessible knowledge	Guided walks		
Personal motivation	Birdwatching		
Adult education	Participation in decision-making		
Accessible knowledge	Adult education		
Educational resources	Co-creating educational material		
Feeling unqualified	Talks in schools		
Power in decision-making process	Improved information sharing among projects in area		
Adult education	Wildlife tours		

Public transport	Birdwatching
Educational resources	Adult education
Access to nature	Transparency in decision-making
Recreational opportunities	Group travelling opportunities
Accessible knowledge	Local courses
Personal motivation	More environmental focus in schools
Accessible knowledge	Signage & information boards
Feeling unqualified	Visuals of natural features and processes
Access to nature	Adult education facility
Accessible knowledge	Adult education about local environment
Community involvement	Initiatives involving locals to brainstorm ways to protect, appreciate, and utilise natural environment
Accessible knowledge	Class trips
Power in decision-making process	Talks in schools
Adult education	Knowledge for local people
Community involvement	Training for local people
Childhood education	Co-creating educational material
Intersectoral collaboration	Adult education
Recreational opportunities	Access to educational materials
Adult education	Guided walks
Power in decision-making process	More education on benefits of preserving environment and cautious development
Personal motivation	Nature walks
Educational resources	Birdwatching
Power in decision-making process	Signage at heritage sites
Access to nature	Heritage museum
Community involvement	Celtic mythology sites
Childhood education	Central information resource
Educational resources	Learning more about the environment in school
Access to nature	Local participation in decision-making process
Educational resources	
Off-season resources	
Public transport	
Adult education	
Childhood education	

Accessible knowledge  
Community involvement  
Community involvement  
Adult education  
Accessible knowledge  
Personal motivation  
Personal motivation  
Environmental awareness  
Accessible knowledge  
Educational resources  
Personal motivation  
Childhood education  
Power in decision-making process

## Caherdaniel

The only way to protect the environment is to decrease the numbers of tourists visiting

Focused, themed short breaks, such as Foodie Tours (organising route to meet local food producers, touring their farms, baking and eating scones together), to meet genuine local people

Nature trails with local experts on geology, flora and fauna

Foraging walks

Targeting active retirement visitors: more reasonable accommodation rates and mid-week rates; entertainment in a local pub in the evenings; taking advantage of the travel pass (being picked up by a local transport provider, preferably a Failte Ireland Regional Guide/Driver)

Flexibility around weather during the winter months (having a Plan B, for example visiting Muckcross House and Gardens, Derrynane House, etc.)

Sometimes it's nice not to have tourists

More accommodation

Developing more cycle lanes on the roads; the weather is quite mild year-round, so cycling holidays are feasible throughout the year

Astronomy information points

Many people see the value in quieter months, especially people who are working from home and choose this area to work from; it's steadier in terms of permanent residents in the last year

The Discover Derrynane events based in Derrynane house seem very interesting, but attendance is poor, and many people said afterwards that they were unaware of it happening; difficult to know how to get around this

Accommodation is the biggest hurdle, followed by a lack of a central resource for holidaymakers to view all the available options; there tends to be a lack of sharing resources, with local groups/areas overly protective of their "piece of the pie"

There are amazing walking trails that could be marked more easily

The Dark Sky Reserve should have an information centre

More facilities for campervans

The Caherdaniel river is a beautiful resource that goes from Coomnahorna mountain and runs down through Caherdaniel village, before continuing on and ending up in the sea at Derrynane. I feel that this could be made into more of an attraction, with the history and biodiversity of the river focused on, and walks created alongside it. There is a local Caherdaniel River Project group that is investigating this possibility.

General guided walking tours in the quieter months would be a good way of attracting visitors to the area

The Kerry Greenway would be something that would attract visitors all year round, and would be good for the area

Create more signposted hikes and walks for tourists to find

The Greenway would be a great attraction for tourists

Creating maps including local folklore and history (ex. copper mines in Coad)

Using an educational centre

Promoting the Dark Sky Reserve more

Mapping all the natural attractions in the area

Dark Sky festival funding
Better signage on walks
Attracting older, non-local retirees to live here and taking better advantage of natural resources. It is to do with more than attracting visitors in the quieter months, and the multifaceted vibrancy of the communities here
<b>Killarney</b>
More trail development and maintenance
Better hotel deals to encourage people to visit the area
More indoors visitor information sites for when the weather is bad; these buildings could be beautiful and enhance their location
<b>St. Finian's Bay</b>
More advertising
Better bilingual signage
Guided winter walks exploring local flora and fauna
<b>Cahersiveen</b>
Winter festivals (solstice)
Promotion of astronomical possibilities (Dark Sky)
More outdoor activities
Focusing on interests or activities that tourists can do when they return home: sky-watching (Dark Sky reserve); local crafts demonstrations (ex. collecting sheep's wool from barbed wire, spinning wool, using natural dyes); foraging (cooking with seaweed, using garden herbs like dandelions for lemonade); soapmaking using resources from the garden (ex. lavender); outdoor yoga, exercise (diving), and meditation (ex. on the beach, in the woods, by a river)
More properly trained guides
Hosting an Iveragh Green Festival or a Sea Week
Providing lectures and workshops that coincide with the regatta
A main Greenway but also a series of more localised greenways (ex. over to Whitestrand or Crooscrome) would enable tourism assets in the area to be sustainably developed
Develop and market mountain hikes and coastal routes (ex. greenways, blueways)
Using a commercial-public unit as a research centre for third-level students and locals
Promote "Storm Watching"
Inform tourists on safe hiking practices (ex. wearing proper clothes and footwear)
The Greenway is vital to our area
Attracting locals in being interested about local nature and scenery
More painting workshops
Exploring local wildlife and beaches
Promoting the Dark Sky Reserve



A cycling and walking greenway
More marketing for the area
Another school similar to the Daniel O'Connell school
Greater promotion of links with Hugh Flaherty
Greater accessibility (ex. a shuttle bus to take people to walking routes)
Preserving sites (such as Cahergal) from damage and utilising them for the benefit of the town and local surroundings
Incorporating the marina into the town, as currently only the boating community is familiar with it; potential for educational centre and wild garden at the marina
Promoting the biodiversity of the area
Promoting the rich birdlife and wildlife, the clear waters, the rich culture of the area's songs, poetry traditions and important historic sites
<b>Sneem</b>
More tourist infrastructure (hostel and campsite in motorhome, cycle track, BMX track or skateboard park for teenagers, accessible loop walks)
Creating a Story House to house archives of Geopark material, along with a venue for storytelling and guided tours
Better nature trails to get people to look beyond towns and villages to the countryside
Developing initiatives to get people to go outside
Better walks along the coast
Better use of Coillte lands
Better signage
<b>Ballinskelligs</b>
Guided tours that combine landscape with food or cultural activities
More guided walks
Leaving tourist premises open during the winter
Taking advantage of local history and culture
Investing in protecting natural resources
Encouraging nature trails and walks for both tourists and locals: since COVID, lots of locals are discovering local areas and walks, and more people would use these if they knew about them
Keeping amenities in recreational areas year-round (bins, etc.)
Local community is already involved in this, having developed walks, organised talks, and made films on certain aspects of the area; several annual festivals take place (ex. Éigse na Brídeoige, Amergin Poetry Festival)
<b>Waterville</b>
Walking festivals
Sea-based activities
Having the Greenway nearby would help

Outdoor activities that are not impacted by the weather
Having an indoor nature centre somewhere in south Kerry
Protecting the natural environment
Kayaking, birdwatching, fishing, walks (promoting outdoor activities)
Walking trails
Mick O'Dwyer museum
Star-gazing trail to take advantage of dark skies
Resurface and maintain promenade used by locals and visitors
Enforcement of derelict properties to create more retail space
Organised hillwalking and seashore walks (guided walks)
Birdwatching
<b>Portmagee</b>
Taking pride in local identity and resources and connection to the landscape: "We are forged from the landscape. We need to be able to tell our story."
<b>Valentia</b>
Embracing the weather like Scandinavian countries and hygge
Art weekends with music and painting
Encouraging walking and hiking tours
Taking advantage of the Dark Sky Reserve
Interactive resources on history and the natural environment
Promoting the far more impressive wildly exhilarating weather that is here to experience in the winter months
We are doing a good job protecting and promoting our natural resources. Community Employment schemes are a big help. Local people in Iveragh take pride in where they live, partly because of the economic benefits in terms of tourism. Maybe focus more on walking, hiking, cycling, and the Dark Sky Reserve.
<b>Derrynane</b>
Focus on different types of festivals (ex. harvest, birdwatching, landscape learning, painting, walking, food)
It's good to have downtime in the area; there's not enough staff around to have a very busy winter
It is actually quite nice to have the quieter months
<b>Kenmare</b>
Further development of local archaeological and historical attractions
More investment in Dark Sky (ex. observatory facilities)
Providing lots of information
Keeping litter down
Off-season promotion of Co. Kerry
Specialist activity holidays

**Lough Currane**

Affordable breaks with classes and hiking included (ex. Irish or painting class with social night at the bar, followed by a local hike the next day)

**Killorglin**

Advertising local wildlife that can be seen in the area

Advertising fine dining options for eating out (when it is allowed again)

Setting up glamping site and water sports

More local guides, especially among the farming community who are already there and have something to show (farm walks) and have more knowledge and information on their area than will be found on a map; liability issues need to be addressed first though; retired people are a great resource that can be tapped in this area

Promoting beaches

Organising local walks from town, in particular for those who don't have many activities to do already

Providing information and activity guides

**Caragh Lake**

Litter is a big problem, so we need volunteers to keep it clean

Cold-water swimming and cycling

**Castlecove**

Connection, communication, and collaboration

Have off-season weekends like the OPW run "Discover Derrynane" weekend

**Not living in Iveragh**

Quiet months should be for the local community to enjoy

Being better informed and more confident and organised in sharing what is special

Resources are limited, specifically accommodation in rural areas

Workshops using local knowledge and materials

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