Planning for change: Coastal management and climate adaptation in Derrynane, Co. Kerry

PLANNING FOR CHANGE

COASTAL MANAGEMENT & CLIMATE ADAPTATION

Survey and Workshop Results
Derrynane, Co. Kerry 2022-2023

A roadshow event for coastal communities with an interest in protecting and caring for our coastline, ocean and marine life at Derrynane.

Community Consultation with the Office of Public Works and the University of Galway

OPW

Ollscoil na Gaillimhe
University of Galway

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PHOTO: Sands in motion - Whirlpools carrying and redistributing sand.







EXECUTIVE SUMMARY

This report details the results of a community participatory workshop in Derrynane, Co. Kerry during April 2022. The workshop assessed the perception of the participants to coastal management practices in their area and the potential impacts of climate change. A survey of the participants was designed to gauge their connection to the Derrynane coast and their perception of multiple facets of the coast including amenities available for visitors; human impacts on the coastal areas; habitats and the community; biodiversity and nature conservation site designations; and identifying future coastal management actions that could benefit the community. The report also identifies obstacles experienced by participants to deliver community-led coastal management actions.

Most respondents had a very strong appreciation of the natural beauty and uniqueness of the area and are invested in maintaining the area for themselves and future generations. The results showed that the community is very concerned about the impacts of high visitor numbers and climate change. In particular, degradation of the dune habitats from trampling by visitors, dune erosion from storms and changes in the river channel position were identified as major concerns. Many respondents believe that some of the pressures on the area can be mitigated by the provision of amenities linked to waste, drinking water (at the Blue Flag Beach), parking and access controls, along with signage to highlight a code of conduct and build awareness of the fragile, unique nature of the dunes and visitor impacts. Respondents also highlighted a need for increased on-site staff managing the number of visitors and monitoring antisocial behaviour and activities such as unauthorized camping, motorhomes or mistreatment of the dunes – especially in the late evening and night. Many workshop participants are eager to participate and contribute to community-led actions focused on building the long term resilience of the Derrynane coast. To do this they would require greater guidance, knowledge and establishment of formal lines of communication to effectively work with the OPW in its capacity as the public body responsible for the conservation and management of Derrynane National Historic Park.

INTRODUCTION

On Friday April 8th 2022 (19:00-21:00), a community participatory workshop (advertised as the Derrynane Coastal Roadshow) was held in Derrynane House, Co. Kerry. University of Galway approached OPW to undertake a community participatory workshop with OPW at Derrynane and that their MSc students in the 'Coastal and Marine Environments' programme would co-design and co-facilitate the workshop. The workshop was designed as the first step in a forum through which the local community at Derrynane can participate and actively envision the future of their coast in partnership with the OPW. The philosophy behind this participatory approach is that knowledge and ideas from the community are critical to co-design long-term, sustainable plans for the coast. This approach can embed the Derrynane community within the decision-making processes guiding future coastal management and climate adaptation actions in the area. It was made very clear to participants that the first workshop was not designed to find solutions, rather to create a space for people to share information and build a longer-term framework to engage the OPW in their capacity as the public body responsible for the conservation, management and presentation of Derrynane House and National Historic Park.

METHODOLOGY

The two-hour workshop, convened by Dr. Eugene Farrell (Geography, University of Galway) and Mr. Chris O'Neill (Office of Public Works), consisted primarily of:

(1) Two short presentations (ten minutes each) by the conveners introducing current management practices and new coastal research in the area;

(2) Multiple participatory research techniques designed to document and map community perceptions of coastal management and climate change in Derrynane. These techniques comprised:







METHODOLOGY (cont'd)

(i) A survey of the participants was crafted to assess their connection to the Derrynane coast and their perception of multiple facets of the coast including, but not limited to, amenities available for visitors; human impacts on the coastal areas, habitats and the community; biodiversity and nature conservation site designations; and identifying future coastal management actions that could benefit the community. The survey used quantitative (using Likert scales) and qualitative (open ended questions probed with thematic analysis) questions and visualization and spatial thinking skills of the participants by asking them to draw on maps of the coast.

(ii) Large flipchart posters (A1 size; 58.5 x 81.0cm) on the wall, where workshop participants could place sticky notes, with the following questions:
Your coastline: what do you value?
Your coastline: what are your concerns?
Your coastline: what is your vision for 2040?
Your coastline: what are the enablers and/or barriers for community-led actions?

Additional opinions were given through discussion with graduate student facilitators from the MSc programme 'Coastal and Marine Environments' at University of Galway on each board.

(iii) Two facilitated discussions conducted in plenary with the whole group and guided by the central topics on the poster boards and any other observations of interest to participants.

The workshop results will inform the OPW of priority areas for future management strategies for Derrynane House and National Historic Park over which they have jurisdiction. We shared this report with all participants who provided their contact details at the workshop in order to receive a digital copy via email.

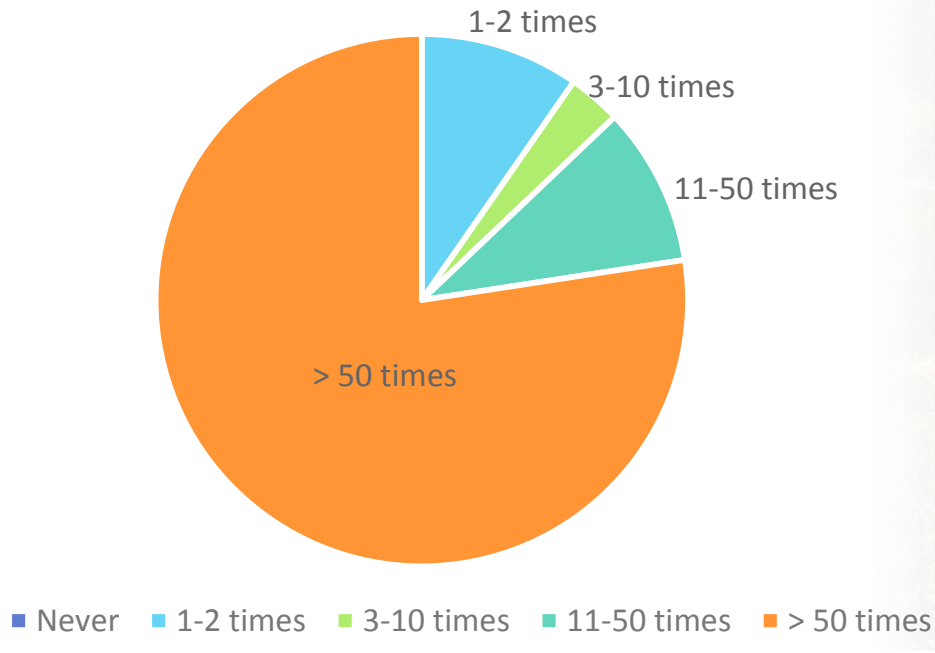
RESULTS

In total, 33 participants attended the workshop and 31 responded to the survey. The results are categorized under five themes: community values of their coast; community concerns for their coast; community visions for their coast; enablers and barriers to community-led actions; and future plans to support coastal management and adaptation.

1: Community values of their coast

Several survey questions assessed respondents' connection to the Derrynane coast by highlighting the frequency of their visits, the activities conducted during these visits and reasons why they enjoyed visiting the area. Nearly 80% of participants had visited Derrynane more than 50 times in the previous 12 months (Figure 1). Most visits comprised of one or two people in the group (87%) without children (84%).

Figure 1. 'In the past 12 months, approximately how many times have you visited the Derrynane coast?' (n = 31).



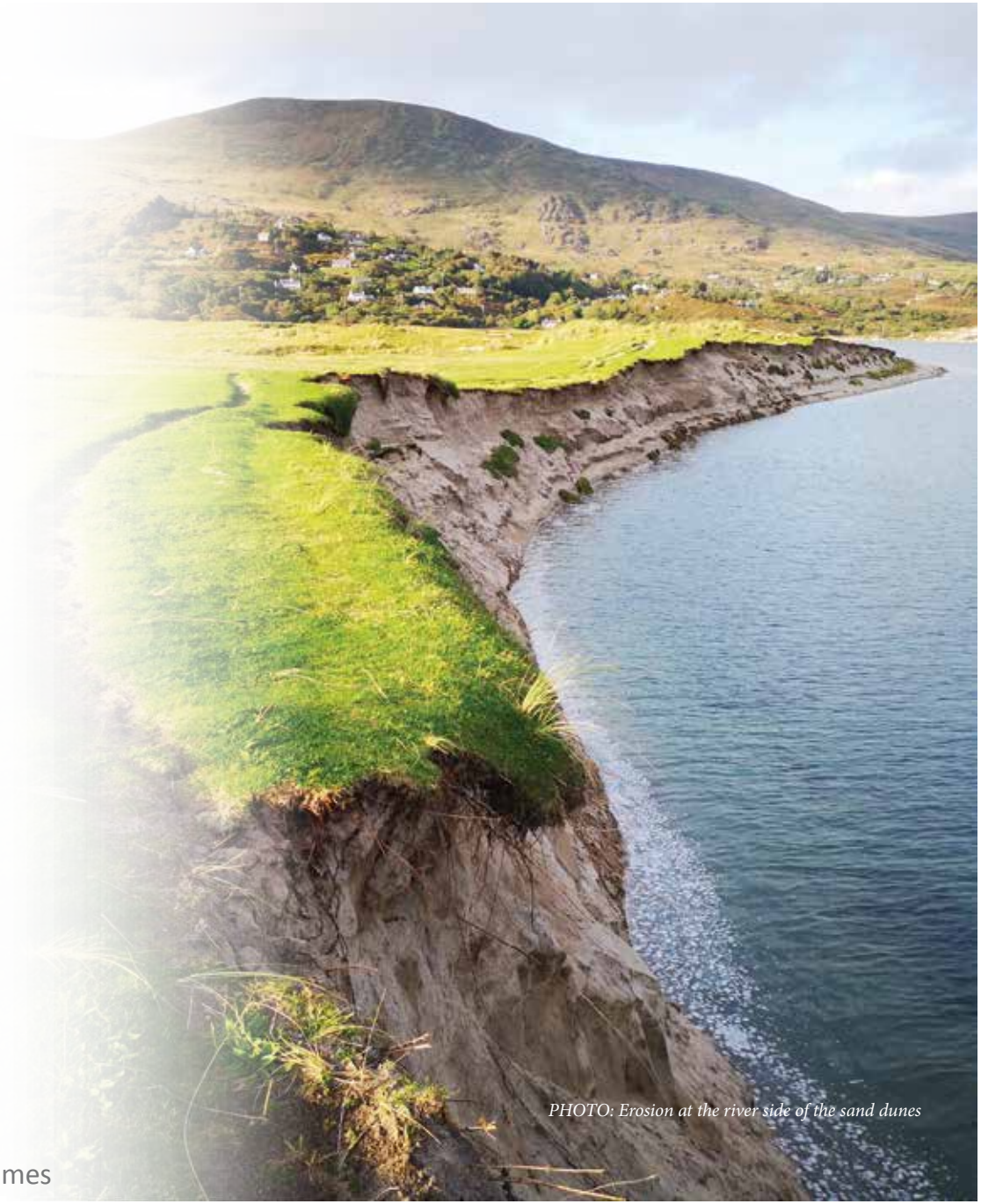


PHOTO: Erosion at the river side of the sand dunes

The average duration of visits to the Derrynane coast is just over two hours with 20% of visitors staying at least one hour and 57% of visitors staying for at least two hours, or more. Figure 2 shows a map of the locations most frequently visited in Derrynane based on data extracted from the survey. The overwhelming majority of respondents use the designated dune trails and beach.

Figure 2. Map of locations most frequently visited by survey respondents. The highlighted paths (yellow) illustrate the primary dune trails and beach paths used by respondents.

PHOTO: A recently fledged meadow pipit.

Recreation value

Figure 3 illustrates the different types of activities done by respondents when visiting Derrynane. Nearly all the respondents use the beach and dunes for recreational walking, with some walking their dogs in the area. Swimming, sunbathing, bird watching and historical trips are also very popular reasons for visits. Other activities identified by respondents include hospitality (visits to pubs, restaurants and cafes), visits to the graveyard, paddle-boarding, tai chi, yoga, photography and sound recording, gardening, dark sky astronomy and art.

Figure 3. 'What activities do you do when you visit the Derrynane coast?' (n = 31).

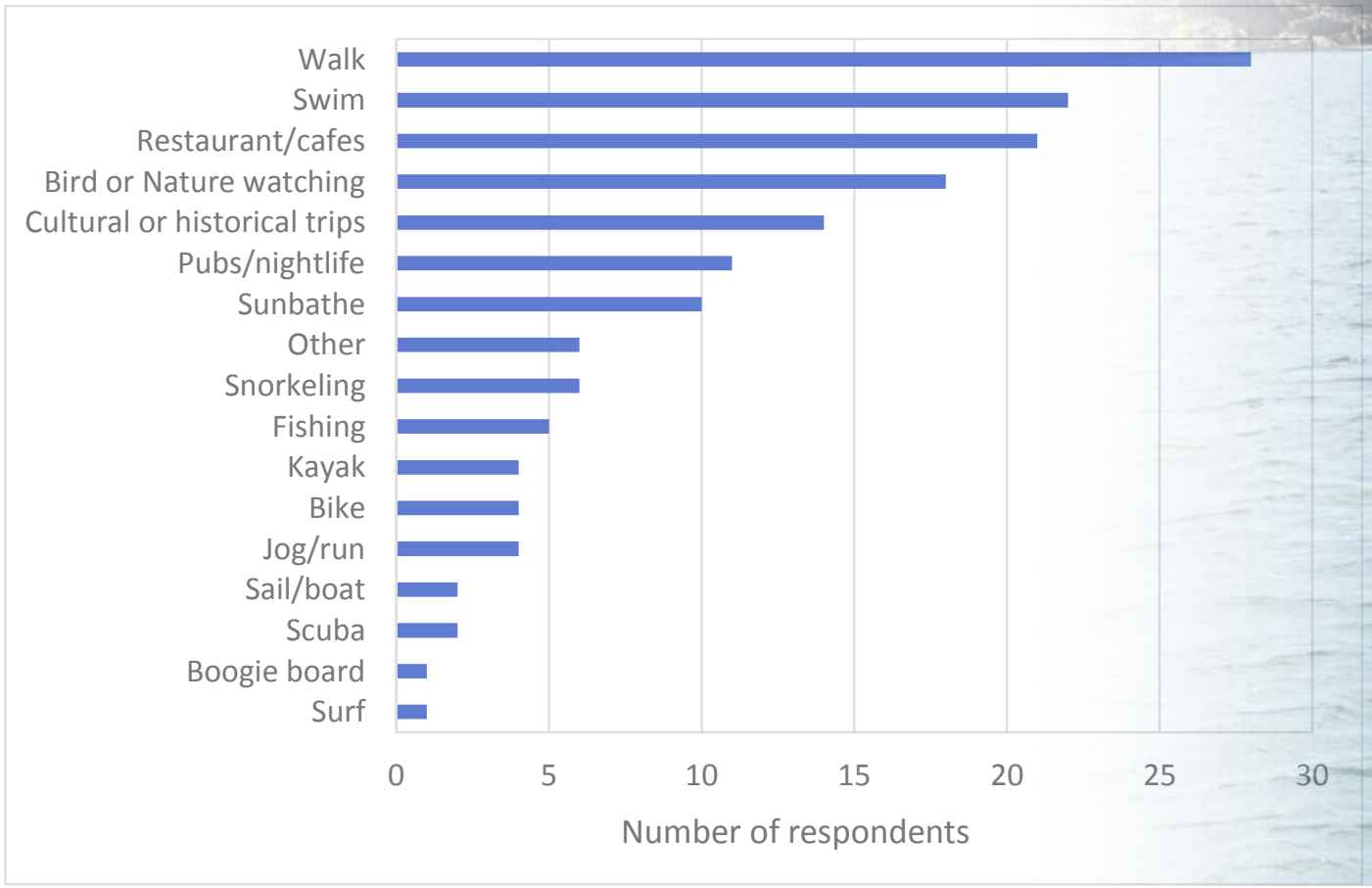


PHOTO: A group of snorkellers at Derrynane

Aesthetic value

Many respondents value Derrynane for its natural beauty and aesthetics. It was described by multiple participants using terms like 'quiet', 'tranquil', 'unique', 'unspoiled beauty', 'wild' and an accessible space providing 'freedom to wander'. Nearly 60% of participants could not name an equivalent Irish destination they would visit in the event Derrynane was inaccessible, with respondent statements like 'there is no substitute for Derrynane Coast' or 'Derrynane is possibly the most beautiful place in Ireland'. Many respondents specifically described the very high value they place in the natural environment and wildlife in Derrynane and how accessible it is (with the exception of the peak tourist season months as described below). Respondents feel a 'connection with the wildlife, ocean and nature'. Others have a fondness for the species present, including birds (e.g., skylarks) and Natterjack Toads and the unique sounds that all these species bring to the area. Figure 4 illustrates an overview of the participant responses on the poster board used to identify what they value most about their coast.

Figure 4. Word cloud generated from sticky notes on the poster 'Your coastline: what do you value?'

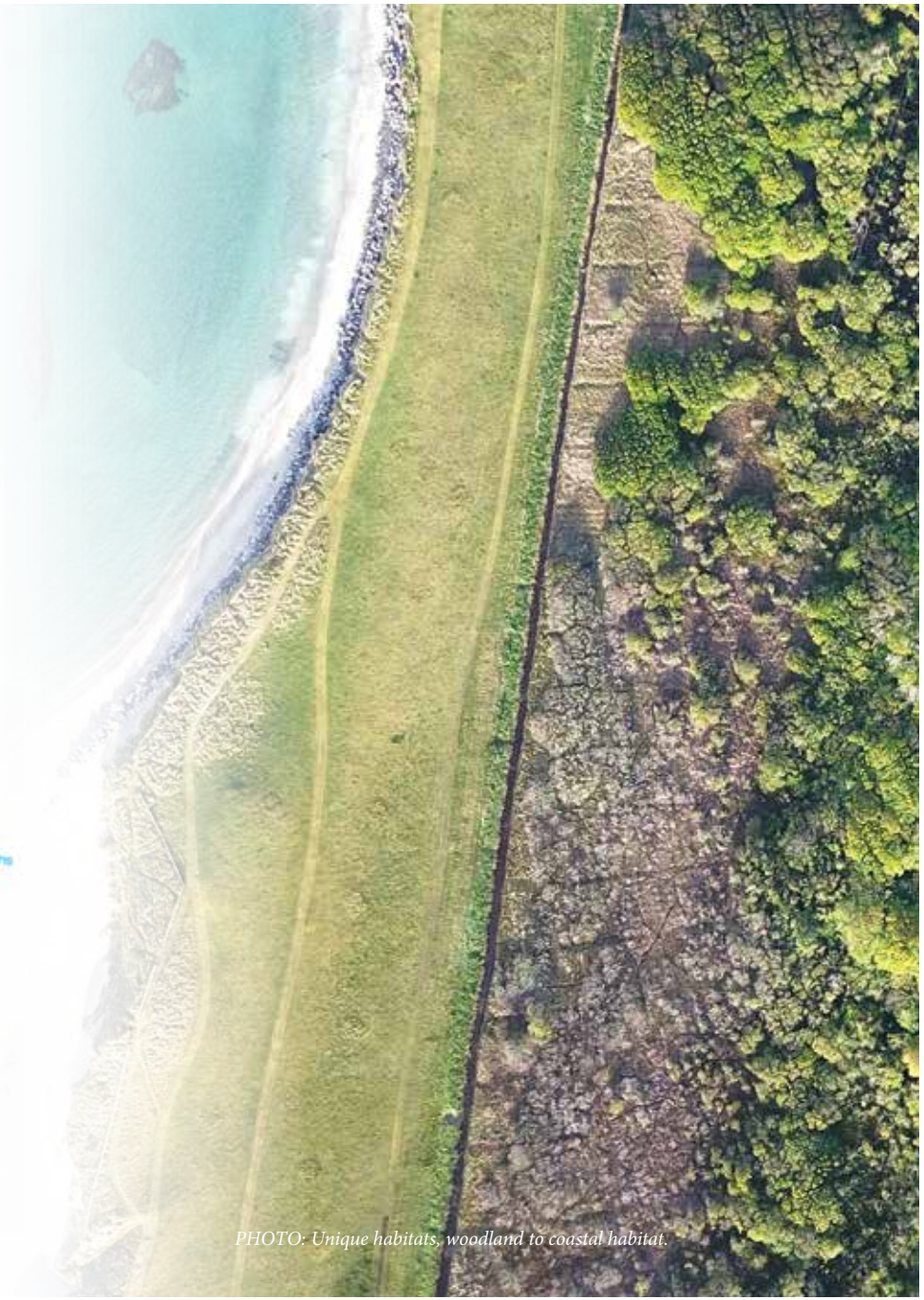


PHOTO: Unique habitats, woodland to coastal habitat.

RESULTS

2: Community concerns of their coast

One survey question asked respondents to describe their feelings (positive and/or negative) regarding the potential impacts of the 2022 summer season on the Derrynane community and coastal habitats. Nearly all of the responses (96%) focused on negative concerns related to traffic congestion (preventing access to the coast or main road), lack of parking, human-induced dune erosion and degradation, and impacts such as litter, illegal camping and noise disturbance. The first plenary discussion was dominated by community concerns about changes in the course of the river that has led to rapid dune erosion by the river on the eastern side of the barrier.

Impacts of human activities

Many workshop participants voiced concerns of the impact of increased human use on the Derrynane coast. Overcrowding of the area, particularly during the peak tourist season summer months, was highlighted frequently as an issue that has adverse impacts on both the community and the fragile coastal habitats. Increased foot traffic, trampling of the dunes, and unauthorized camping were issues identified as causing dune degradation and erosion.

Uncontrolled dogs being harmful to the bird nesting sites and the Natterjack Toad ponds in the area was a concern for many participants. Similarly, many participants highlighted that visitors were not picking up dog waste which they feel should be viewed not only as a common courtesy but also a responsibility. Others highlighted wastewater from nearby holiday homes as an issue, and more pollution is believed to be entering the river and reducing its water quality. It was noted that visitors can be disrespectful and/or ill-informed on their adverse impact on the natural environment.

Survey respondents were asked to rank various human impacts according to their significance on coastal habitats and areas in Derrynane (Figure 5). While many considered impacts from horses, sand mining, vehicles and land-use to be insignificant or minor, a large majority of respondents considered erosion of dunes by uncontrolled access paths (89%) or trampling and climbing (75%) to be moderate to severe.

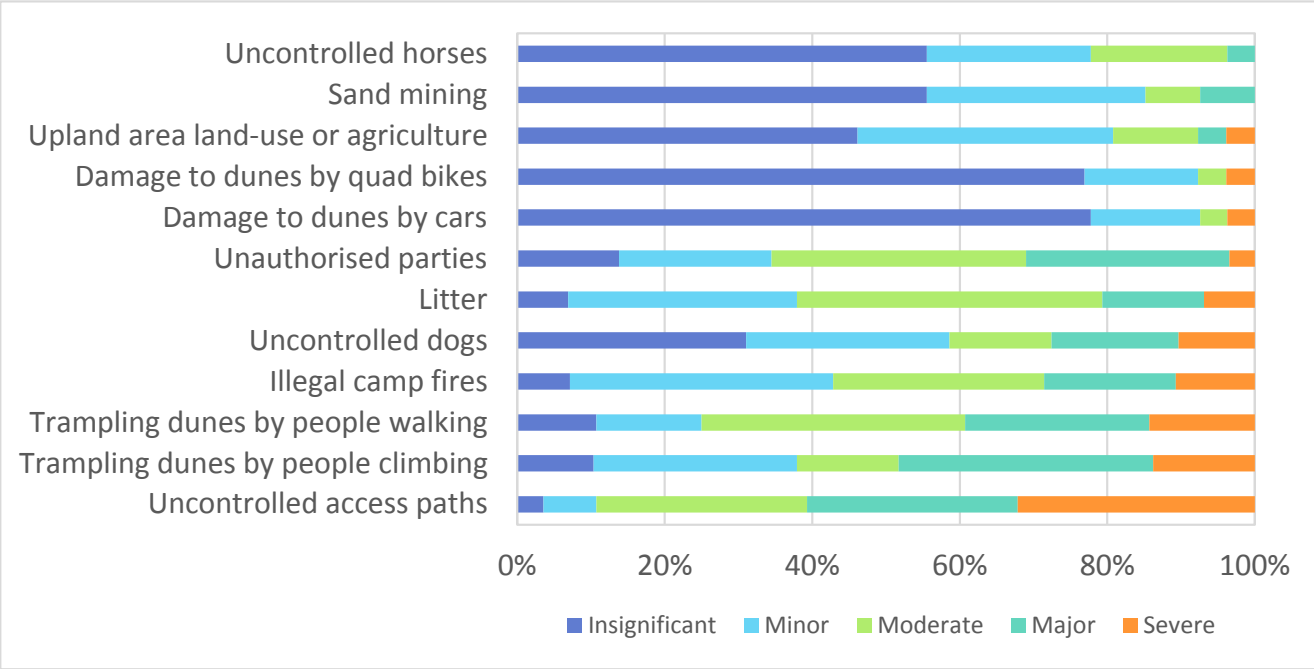


Figure 5. Significance of human impacts on Derrynane coast (n = 29).

Impacts of climate change

One survey question asked respondents to rank the risks posed by climate change according to their significance on Derrynane coastal habitats and areas (Figure 6). There was a very high concern of coastal erosion leading to loss of roads with 62% of respondents ranking this issue as either major or severe. Storm surge flooding was the next highest impact with an equivalent response of 31% as a major or severe impact. Coastal erosion (of roads and buildings) and flood hazards rank much higher if the 'moderate' category is included, rising to 79% and 69% concerned respondents, respectively. One note on the poster board described windblown sand as a hazard for the caravan park.

Figure 6. Significance of climate hazards on Derrynane coast (n = 29).

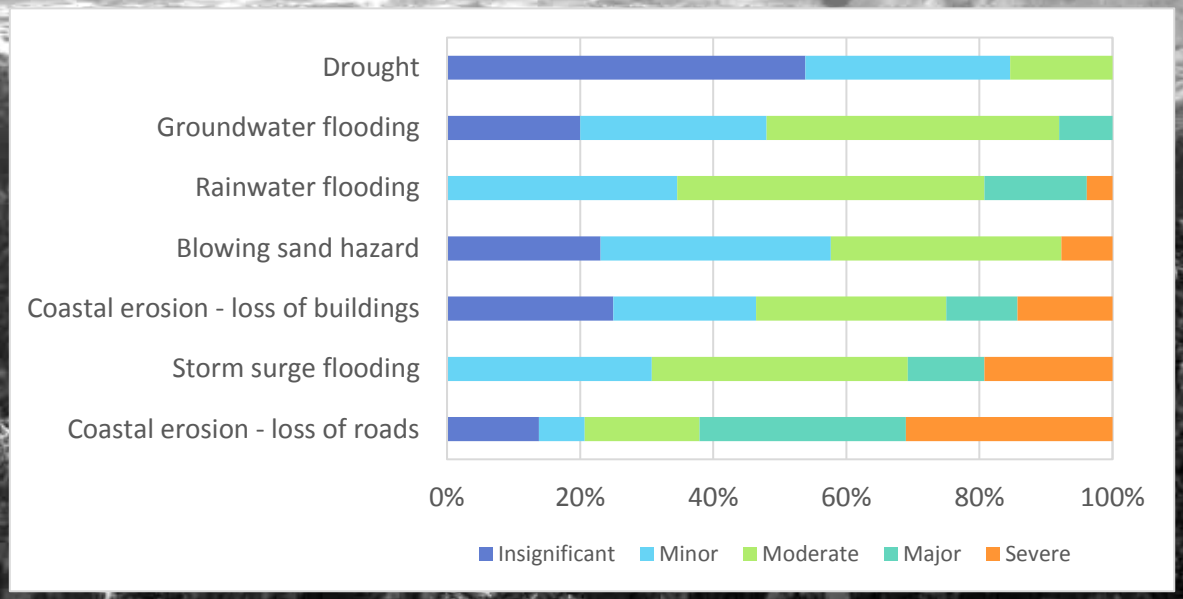


PHOTO: Storm Darwin (12th February, 2014) batters the coast at Reenaratha, Lambshead.

Impacts by natural processes

A large number of workshop participants expressed major concerns regarding the change in the direction of the river flowing out to sea at the eastern end of Derrynane Beach. The current location of the river bend is undercutting the dune. Some participants believe this is causing rapid erosion and may lead to the complete destruction of the dune, particularly the Natterjack Toad ponds. Additionally, the recent rabbit population explosion was another concern expressed for similar reasons whereby extensive burrowing in the dune is believed to be causing habitat degradation and increased erosion risks.

Management challenges

The workshop participants identified many issues that in their view required management intervention to improve the area for the community and visitors. The increased number of visitors during the summer in recent years has dramatically increased the traffic congestion in the area. Cars and large tour buses are impacting access to the area and, many times, prevent the community from accessing the coast or reduce their enjoyment of visiting the area. One poster board comment noted 'if as busy in high summer as last year, I would be staying clear of Derrynane as it is too congested during this time.' As seen in Figure 7, nearly 93% of survey participants ranked traffic and congestion as either a moderate (15%), major (26%) or severe (52%) impact on the Derrynane community. Other issues that scored highly as either moderate, major or severe impacts include litter (69%), illegal parking (58%) and human waste (48%).

Figure 7. Significance of human impacts on Derrynane community (n = 27).

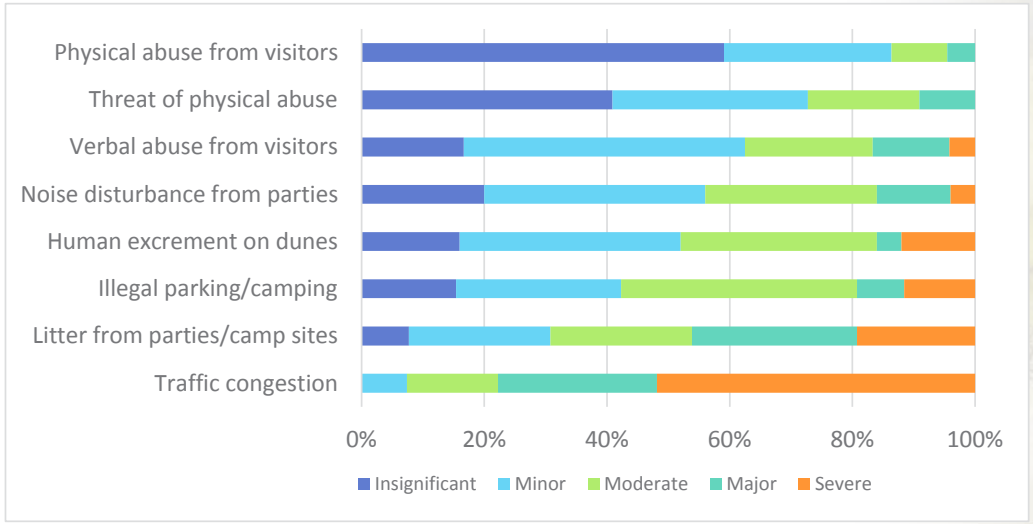


PHOTO: Changes in the flow of the river threatens the natterjack toad ponds. Rabbits threaten the dune structure.

Figure 8 shows the responses to the sufficiency of infrastructure currently available in Derrynane. Excluding mooring lines and educational signage, a majority of survey respondents believe Derrynane can improve infrastructure availability such as toilets, waste collection, parking, clean water and accommodation. The impacts are exacerbated during the peak visitor summer months.

Figure 8. Does the Derrynane coast have sufficient infrastructure? (n = 27).

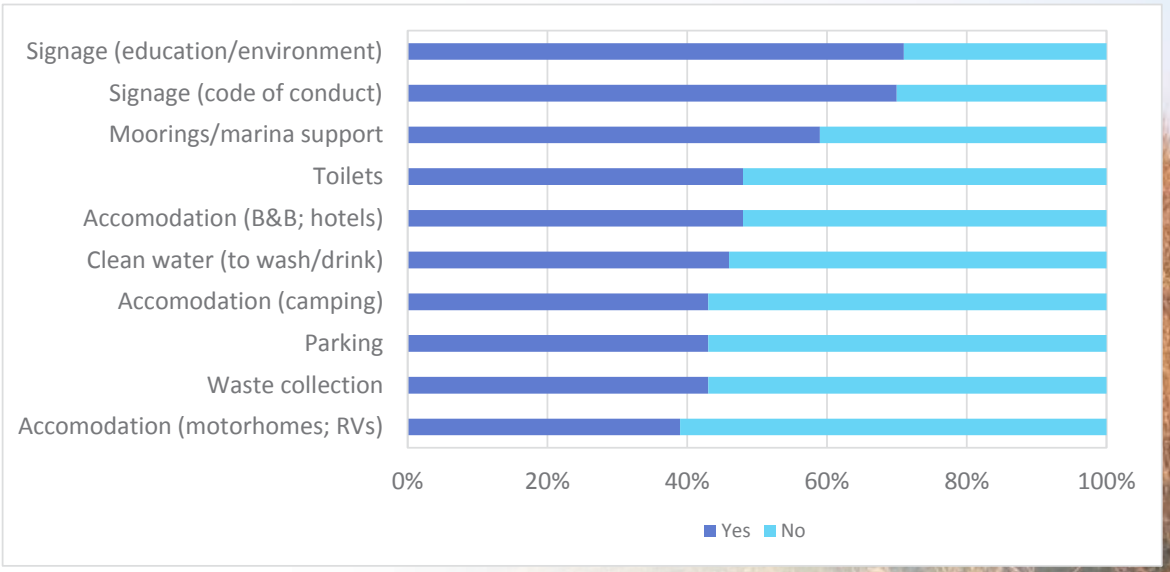


PHOTO: Educational signage

Figure 9 illustrates an overview of the participant responses on the poster board used to identify what most concerns them about their coast.

Figure 9. Word cloud generated from sticky notes on the poster 'Your coastline: what are your concerns?'

3: Community vision for the future of their coast

Participants were invited to envision what they wanted the Derrynane coastline to look like in 2040. The responses were dominated by participants wanting to continue to enjoy Derrynane as they do today but also for the coastal site to remain in place for future generations to enjoy as well. Multiple poster board notes envisioned the natural environment remaining intact or improving its health and resilience in the future but cognizant that this requires a balance between human use and natural physical and ecological processes. This balance could be achieved by adapting the management of the area and enforcing changes in visitor behaviour that align with a clear and strict 'code of conduct'. A series of poster board notes highlight the idea of a larger, connected protected area linking Kenmare Bay and estuary to Derrynane National Historic Park National Park. This approach can connect to the islands in Derrynane Bay as part of a wider marine protected area.

Some participants provided recommendations linked to access to the area (including the harbour and pier) and mitigating current impacts. They suggested small car parks for visitors would be optimal rather than larger constructions. One participant imagined a cycleway that would safely link nearby villages, beaches and national parks.

Beyond these, participants envisioned a 2040 where all users of Derrynane enjoy its amenities responsibly with minimal human impact by informing and educating visitors of the value and sensitivity of the area to that they treat it and the community with respect by acting responsibly.

PHOTO: For future Generations

4: Community-led actions: enablers and barriers

Participants were invited to give their opinions on the future viability of community-led actions as an approach to improving the health of the coastal ecosystems or the experience of visitors to the Derrynane coast. Specifically, participants were asked to identify on the poster boards the enablers and barriers to mobilizing as a community to support the quest of achieving a resilient Derrynane coast by 2040.

Enablers

A recurring theme listed as an enabler on the poster boards was access to knowledge. Several participants believed that knowledge, education and awareness of issues and solutions in Derrynane is essential to engaging the community in any future community-based work. Building respect for the area was listed multiple times and is believed to target the notion of a mutually beneficial relationship between the coast and people whereby both parties benefit by behaving in a manner that supports sustainable use. Teaching the community and visitors about the unique and sensitive nature of the area using signage, training and public talks were identified as core requirements to engage the local community. Figure 10 does show the large discrepancy between the local (workshop participant or community) and visitor knowledge of the biodiversity and nature conservation sites in Derrynane. A total of 86% of respondents either agreed or strongly agreed that they were well informed of the biodiversity in the area. Interestingly, this proportion decreases significantly to 71% for those having the same confidence in their understanding of the conservation status of the area. Conversely, the perspective of the respondents was that less than a quarter (24%) of visitors or half the community (43%) had equivalent knowledge of biodiversity and conservation status of the area.

Figure 10. How well informed are you, your community and visitors of the biodiversity and nature site designations in Derrynane? (n = 21).

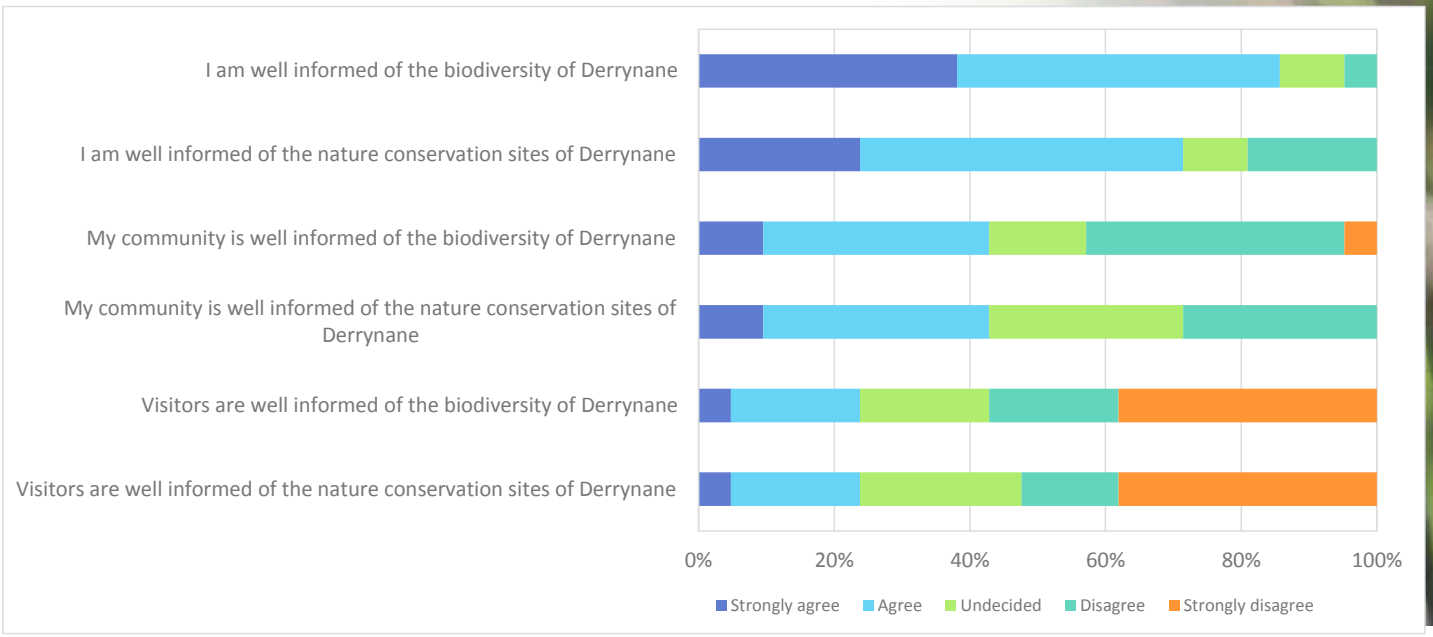


PHOTO: Kerry Lily

Another enabler of community-led action mentioned prominently is the goodwill of the community members. Participants expressed a clear interest in improving the status of Derrynane simply because of how much they care for it. One participant noted that 'we share a love of our coastline and will do what we can – guidance will help'. There was a strong sense of co-responsibility within the workshop participants to act, extending on small actions they do already such as picking up litter. There was appetite of 'wanting to do a day's work' and be part of building 'good community spirit'. Guidance and leadership were identified as key enablers to translate the good-will of the community to effective actions.

Barriers

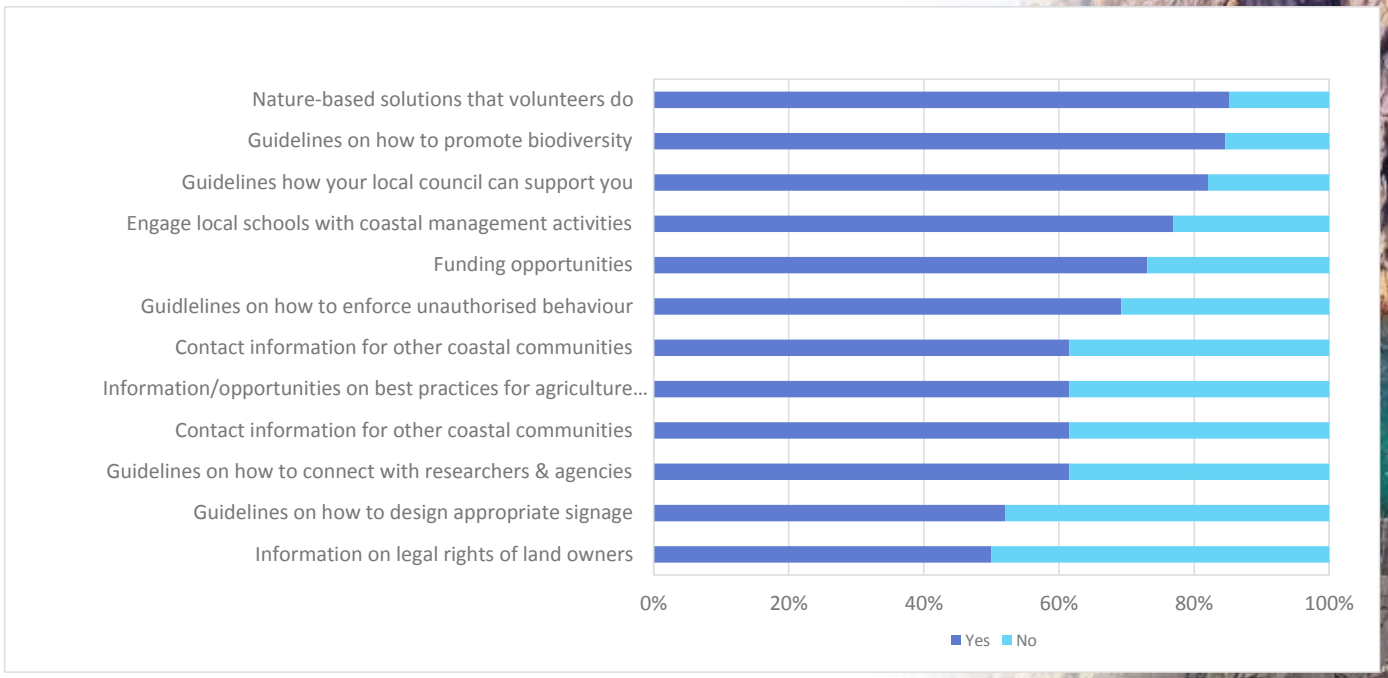
Access to funding was considered a barrier to community-led action as well as 'political red tape' making action a difficult and tedious process. One participant wrote '[there is a] limited number of people with resources or free time to contribute, [and] support roles need to be funded.' It was noted that decision making processes are seen to occur 'beyond the community input' with no structured forum for the community to actively participate in beyond consultation. The current lack of community engagement was also considered a barrier to initiating new actions. Some barriers exist at the individual level. One note stated 'we tend to underestimate our own impact on the environment', implying that there is a level of ignorance that impacts how we interact with the environment. There may be a bystander effect occurring with Derrynane visitors either oblivious to the harm they are doing or believing that 'others' are to blame for any degradation and that 'other's will manage of fix the problem. Multiple participants highlighted the behaviour of tourists as a barrier to any actions, stating that visitors have no respect of the value of the area and behavioural change is not possible. Historic beliefs and legacy practices were also identified as barriers that could negate the ability for the community to act.

PHOTO: Seapinks at Abbey Island

5: Planning for the future

The survey asked participants which potential future actions would benefit their coast and community (Figure 11). The responses identified community-led Nature-based Solutions (85%) and guidelines on (1) how to promote biodiversity (85%) or (2) how Kerry County Council can support the community (82%) as actions that would most benefit the community. These align with the enablers for community-led action whereby there is a strong appetite for community engagement and action but it requires guidance and leadership. It is noteworthy that all the majority of respondents identified each of the listed benefits as being a potential benefit to the community. This reflects the nascent stage of the community organization in Derrynane and the critical need for them to link into existing coastal networks and communities at a more advanced stage in community-led work.

Figure 11. What actions would benefit the Derrynane community? (n = 26).



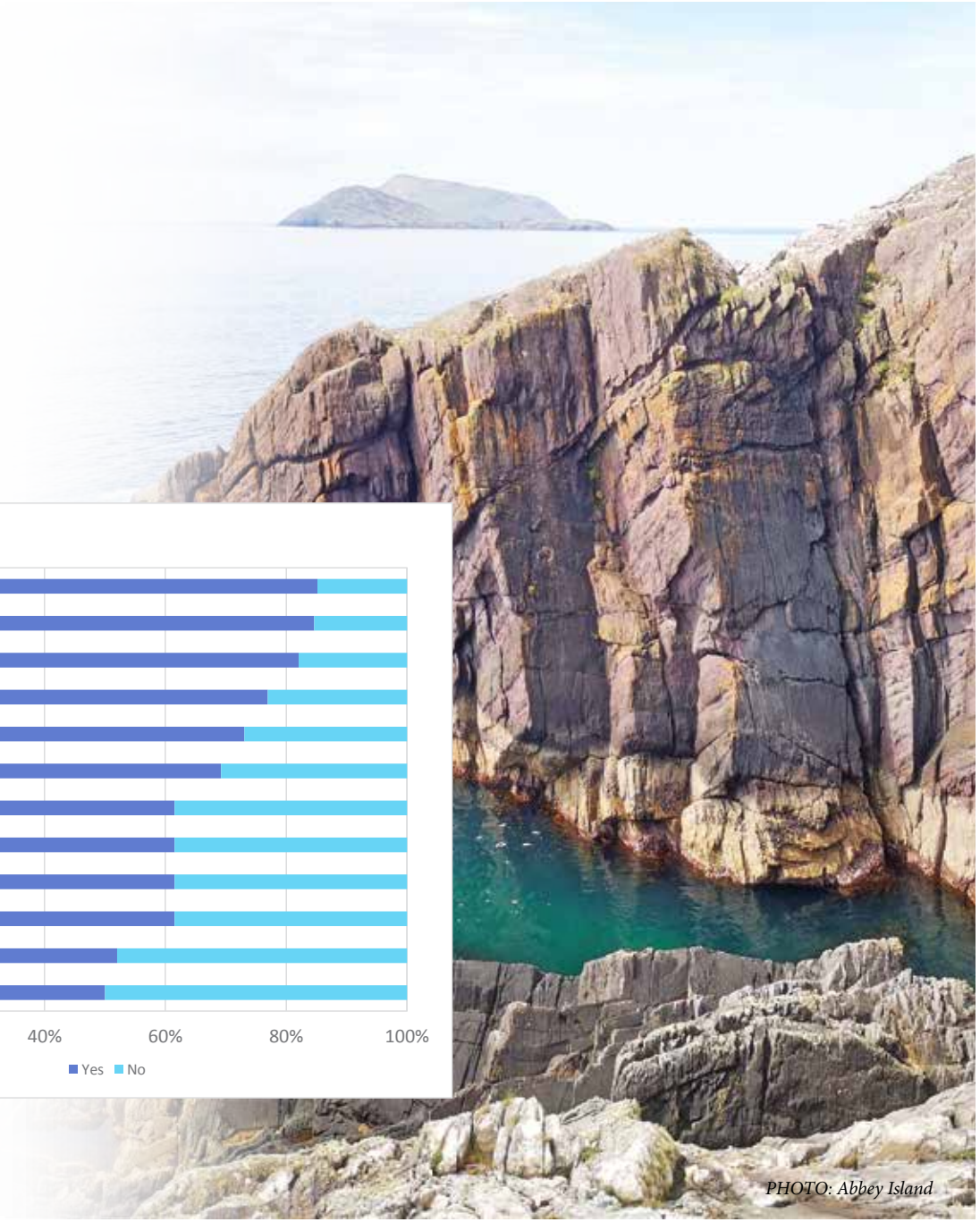


PHOTO: Abbey Island

Communication and education were a recurrent theme among poster board notes and survey responses. Participants frequently stated that there is a need to communicate existing knowledge of the issues impacting the Derrynane coast and associated solutions through various mediums beyond social media, notably education. Better outreach serves to build a network beyond the local. Education focused on informing visitors and children about the impacts they may have on the coast is a priority. Suggestions also identified increased signage (code of conduct; awareness; education) and acknowledgements of the 'Leave No Trace' principles towards the responsible use of outdoor spaces. The development of educational materials and local guides (with paid contracts) deemed priorities. Publishing historical and ongoing coastal monitoring data online was also recommended during the workshop. One participant suggested a WhatsApp group that could be used to share field updates about the site relevant to the local users. The results of the workshop were requested by many participants, including requests for a follow-up workshop to discuss the report and maintain the community engagement with OPW.

To mitigate the traffic congestion and increased usage, several participants suggested improvements to car parks for the area, with some suggesting more space to accommodate more people and others suggesting paid short-term parking to limit the number of visitors on a given day. Forms of crowd control were also suggested, with increased on-site staff managing the number of visitors and monitoring unsocial behaviour and activities such as unauthorized camping, motorhomes or mistreatment of the dunes – especially in the late evening and night. Multiple participants requested infrastructure improvements including more bins for litter, recycling and dog waste; access to clean drinking water; and access to showers for swimmers. Finally, many participants believed management efforts should focus on preventing dune erosion. Part of this solution would include enhanced enforcement of the area and informing visitors of the fragility and sensitivity of dune habitats in Derrynane. Large tracts of dunes should be exclusion zones to vehicles, people and pets in order to protect the habitats and allow natural processes to drive coastal change.

CONCLUSION

The results of the workshop show that the local community has a strong understanding of the current state of the Derrynane coastline and the short- and long-term impacts it faces from both climate and human activities. The community has a very strong appreciation of the natural beauty and uniqueness of the area and are clearly invested in maintaining the area for themselves but also future generations. The aesthetic value and recreational opportunities offered by the coast are highly valued by the community. Nonetheless, the community is still very concerned for the future of the area as they observe the impacts from increased visitor numbers and climate change. Dune erosion from storms, people and the river is considered a major issue that needs to be addressed through appropriate management interventions. The delivery of more basic amenities linked to waste, drinking water, parking and signage (code of conduct; awareness; education) can be improved and can mitigate some of the impacts causing degradation of the coastal ecosystems and impacting visitor experience to the area. Workshop participants are eager to participate and contribute to any actions focused on building the long term resilience of the Derrynane coast but they currently lack guidance, knowledge and lines of communication to effectively contribute. This workshop report may spur the development of an organized community group in Derrynane. An organized group is critical to share existing knowledge or access new knowledge; to feel more connected; and to be inspired to take the next steps to help protect and conserve the coast.

PHOTO: Long Beach, Derrynane.

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We would like to thank all the participants who engaged in the workshop activities.

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HOW TO CITE: Farrell, E., Taylor, B, O'Neill, C and Hyland, V., 2023. Planning for change: coastal management and climate adaptation in Derrynane, Co. Kerry. OPW Ireland, 18pp.

PHOTO: Natterjack toad pond

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