Lessons from evaluating behaviour change interventions

A case study of the LIFE Recreation ReMEDIES project

Natural England Technical Information Note TIN227

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Contents

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Working in Partnership with:

Summary – key lessons

Designing for behaviour change outcomes:

- Appropriate behavioural insights, frameworks and methodologies, should be considered from the very outset when designing an intervention. This should ideally happen before submitting a project proposal. This will help identify specific target behaviours, audiences and barriers that will need to be addressed. It will also help inform the design best suited to evaluating the effectiveness of the intervention.
- Develop a clear theory of change at the design stage that draws on behavioural insights. This will support the development of a robust and actionable monitoring and evaluation plan focussing on the priority behavioural outcomes of the relevant interventions from the start.

Project structure and resourcing:

- Ensure you have access to the necessary behavioural expertise throughout the lifetime of the intervention. Do not underestimate the behavioural science knowledge and capacity required for creating effective behaviour change approaches, implementing data collection, training project teams, data analysis and evaluation.
- Behavioural science expertise is more effective if it is embedded directly within the project both at a management level (for example on the project steering group) and delivery level.
- Consider partnering with an academic institution with strong behavioural science expertise, particularly for design, implementation and evaluation advice.

Challenges of evaluating behaviour change:

- Measuring behaviour change in real-world settings is challenging and the approach requires careful consideration at the design stage. The ideal ‘gold standard’ of behaviour change evaluation (Randomised Control Trials, whereby an intervention group is compared to a control group) can be difficult when evaluating environmental interventions for ethical and practical reasons, and so alternative methodologies may need to be explored.
- Qualitative methods may provide useful insights on the reasons people do what they do (or how they rationalise it), particularly where it is feasible to go beyond stakeholder interviews to those whose behaviour the intervention is designed to change.
- Data collection from people (including observational techniques) requires consideration of ethics. Ensuring participants understand the purpose of data collection and how it will be used, stored and accessed before providing recorded consent is usually what is needed. However, this may not be feasible for effective observational studies, so these need particularly careful ethical consideration.

Introduction

The LIFE Recreation ReMEDIES: ‘Reducing and Mitigating Erosion and Disturbance Impacts affecting the Seabed’ project (LIFE 18 NAT/UK/000039) ran from July 2019 to October 2024 with the aim to improve the condition of seagrass beds and maerl in five Special Areas of Conservation (SACs) between Essex and Isles of Scilly through restoration, demonstration and reducing recreational pressures. The project was led by Natural England (NE) in partnership with Ocean Conservation Trust (OCT), Marine Conservation Society (MCS), Royal Yachting Association (RYA) and Plymouth City Council (PCC)/Tamar Estuaries Consultative Forum (TECF).

One component of the project was to help reduce recreational pressures by encouraging recreational boaters to change their behaviour. A range of activities were delivered particularly focussed in the five SACs to promote awareness, share information and provide ways for recreational boaters to avoid damaging sensitive habitats.

In 2020 Collingwood Environmental Planning (CEP) was contracted to develop a behaviour change project for ReMEDIES based on understanding of recreational boater behaviour, gathered through a literature review and a baseline survey. CEP used a behavioural insights framework called the COM-B model (Michie and others, 2011) to help explain recreational boater anchoring behaviour and understand how the proposed interventions might help shift behaviours. The COM-B model builds on research to suggest that behaviour tends to be the outcome of a combination of an individual's motivations and capabilities, together with the opportunities that are available to them to undertake that behaviour.

Powellite Impact Ltd (Powellite) was commissioned by NE in October 2023 to undertake an evaluation to understand the extent to which the ReMEDIES project led to changes in boater behaviour. This comprised desk research into monitoring data collected by NE and project partners, 32 stakeholder interviews and a survey for recreational boaters, that included many of the same questions as the CEP baseline survey and was completed by 221 boaters across the UK (Boot and others, 2024).

The evaluation conducted by Powellite presents a positive picture of the success of the behaviour change outcomes of ReMEDIES, based on the information and data collected, although the limitations in the data and methods are recognised and caveated. Essentially, the descriptive statistics presented from the survey of boaters are more positive than those from the relatively similar survey conducted by CEP towards the beginning of the project. However, because sample sizes for the two surveys were relatively small and it was not possible to know how representative each of the sample of boaters were (they self-selected to take part in each of the surveys) or whether the two samples are comparable, it is difficult to draw any firm conclusions. It is also difficult to disentangle the impacts of ReMEDIES interventions from similar initiatives.

This information note provides reflections from the NE staff involved in managing the behaviour change evaluation on lessons learned from the process of designing and implementing ReMEDIES, that if done differently might have helped provide a more certain assessment of behavioural outcomes. What has become clear through the ReMEDIES project is how challenging it can be to assess the impacts of interventions on behaviour in real world settings where experimental designs may not be feasible. The particular challenges of doing this in the context of attempting to influence anchoring behaviour are discussed. It is felt that methodological approaches for behaviour change assessment may be under-developed for this kind of real world setting and may be worth further exploration.

The aim of this information note is to help inform other similar projects, by providing a detailed summary of the lessons learnt in designing, implementing and evaluating pro-environmental behaviour change interventions in real world settings, such as recreational boating communities. The lessons described build on the feedback reported by Powellite (Boot and others, 2024).

Lessons learned

1. Designing for behaviour change outcomes

What the ReMEDIES project did

The ReMEDIES project proposal was developed around five ‘conservation actions’:

- **C1 Changing stakeholder behaviour** – defining behaviours and identifying barriers and drivers, developing a behaviour change strategy, implementation (mainly through actions C2, C3 and C5) and evaluation.
- **C2 Targeted training of recreational users** - giving recreational users the practical skills required to reduce their impact on the marine environment, largely focussed on anchoring and mooring good practice with recreational boaters.
- **C3 Removal of existing moorings/Installation of Advanced Mooring Systems (AMS)** – compared to traditional moorings, AMS are designed to reduce the interaction between the mooring and sensitive seabed habitats. This action aimed to demonstrate these systems as a feasible option and encourage boat users and harbour authorities to replace traditional moorings with AMS.
- **C4 Restoration of seagrass beds** – demonstration of the effectiveness of different techniques by planting 8 ha with seagrass across Plymouth & the Solent.
- **C5 Managing access** – a range of interventions to support, and help embed, behaviour change were proposed for this action including Voluntary Codes of Conduct, Voluntary No Anchor Zones (VNAZ) and small scale infrastructure.

The expectation was that changing stakeholder behaviour (C1) would result from the activities carried out in actions C2, C3 and C5.

Prior to the project bid being submitted, a stakeholder workshop was held in 2018 to map out the management interventions that stakeholder experience suggested would be required to help improve the condition of seagrass habitats. These built on the expertise and knowledge of the partner organisations, such as OCT and MCS, who do a lot of engagement with schools. This then led to the identification of the five ‘conservation actions’ which formed the basis of the LIFE proposal, and the budget requested, as required in the funding bid.

There was limited knowledge of behaviour change approaches and how to monitor and evaluate behaviour change within the ReMEDIES partner organisations and the initial workshop with stakeholders to develop the project proposal in February 2018 did not

involve social scientists. NE social scientists only became involved as the proposal was being finalised.

Once the project started, CEP was contracted in 2020 to develop behaviour change strategies for ReMEDIES. The proposed tasks were to:

- Review current evidence of recreation behaviours and seagrass damage and any existing mitigation measures at each of two test sites (Plymouth Sound and Estuaries SAC and Solent Maritime SAC)
- Explore the broad context in which behaviours are occurring at each site
- Develop and test new methods for changing behaviours amongst the boating community and grow understanding of what works in terms of using behavioural insights to encourage more responsible boating behaviours
- Evaluate the effectiveness of different strategies on changing behaviours (likely to be measured using behavioural outcomes rather than impacts on seagrass which were expected to be more long-term).
- Disseminate learning and demonstrate a joined up and integrated way of working with and through partners

CEP delivered the following outputs:

- A report - LIFE Recreation ReMEDIES Behaviour Change Project: Understanding the behavioural context (2021) delivered by Collingwood Environmental Planning. LIFE Recreation ReMEDIES Behaviour Change Project: Understanding the behavioural context - NECR371 (naturalengland.org.uk)
- A webinar and workshop to share findings and recommendations from their work
- A workshop 'handout' setting out the key findings and how to use them, information about the COM-B behaviour change model and theory of change
- Theory of change diagrams for three interventions related to C2, C3, C4 and C5: seagrass restoration and no anchor zones; training for boaters and instructors; and AMS (see Appendix 1: Supplementary information).

Further research on the perspectives and motivations of boaters was carried out by a postgraduate student on a three-month UK Research and Innovation (UKRI) internship with NE supported by the NE social science team. The student produced the following report 'Recreational boating in the UK: Personal narratives and boaters' perspectives' (2021).

Due to the impact of Covid-19, the behaviour change contract with CEP was terminated in March 2021. The continued delivery of behaviour change work was then reliant on ReMEDIES project team staff with the support of one social science and one evaluation specialist from NE.

A whole project theory of change (Appendix 2: Supplementary information) was developed only once such evaluation approaches were becoming embedded within NE. Support to do this was provided to the ReMEDIES team by NE's growing evaluation team in the form of two training workshops in June and July 2021. The aim was to help clarify how it was envisioned project activities would lead to outcomes and impact, including changes in behaviour, particularly among boaters. A behaviour change evaluation plan was also created by NE social science and evaluation staff in 2021 (further revised in 2023) (Appendix 3: Supplementary information).

NE local staff (site leads) were then responsible for developing a behaviour change strategy for each SAC drawing from the work conducted in the behaviour change project, with support from a NE social scientist. The intention of the site-specific strategies was to adapt the overall strategy to the particular interventions being developed in each SAC.

These site-specific strategies were finalised in Summer 2022 (see Appendix 4: Supplementary information for an example) and included the monitoring that would be required to evaluate success. However, it was difficult to keep them up-to-date and relevant. Due to significant staff turnover, understanding was lost about the purpose of these strategies and who was responsible for their implementation.

It also became apparent, following further stakeholder engagement and investigation into the specific issues facing individual SACs, that some of the initial proposed actions within the plans were not suitable for implementation. An example was fencing to manage bait collection in Essex. The site-specific strategies became out-of-date and therefore were not always used or implemented as intended.

In October 2023, a new contractor specialising in both evaluation and social science, Powellite, were commissioned to deliver a twelve-month evaluation project, applying social science methods, to assess whether changes in attitudes and behaviours had occurred during the ReMEDIES project. The aim of this contract was to assess the quality of the data collected against the behaviour change evaluation plan and indicators, identify gaps, revise the evaluation plan and then complete the remaining data collection and evaluation.

Powellite carried out analysis of available monitoring data collected by NE and project partners and conducted 32 interviews with project partners, local team members, boaters and volunteers across the five ReMEDIES sites. A survey for recreational boaters was also conducted which was completed by 221 boaters across the UK. This drew on the questions from the first survey conducted by CEP, where feasible, in the hope it might allow for indicative comparisons, although it was always understood that it would be difficult to make any substantive claims based on this (see section 3). A final report was produced summarising findings and highlighting the limitations and constraints of assessing and attributing behaviour change to ReMEDIES (Boot and others, 2024).

What was learned

As mentioned, social science input only occurred in the final stages of the proposal development because of limited capacity and capability in this area within NE at the time. This is when a separate behaviour change 'action' was added to allow behaviour change expertise to be brought in once the project started, supported by a NE social scientist. However, this therefore meant the behaviour change elements were not integrated with the actions that were the primary means for achieving behaviour change.

It also meant that the design of the project was not informed by considerations related to evaluating behaviour change, where experimental designs are preferred where feasible, ideally using one or more control groups. A limited form of pre/post assessment was implemented, but there was no explicit consideration of options and practicalities at the design stage, which is when this would ideally have been first considered.

In addition, the choice and approach to behaviour change interventions identified in the conservation actions would ideally have been informed by research into the target behaviour and those who do it (in this case boaters who anchor in areas with seagrass). This was not possible until after the start of the project once the interventions had already been identified. Providing a more flexible funding model for behaviour change-focused projects that resource the research required (in this case C1) before identifying the interventions needed (the other conservation actions), would have been a preferable way to ensure the interventions were grounded in understanding of the particularities of anchoring behaviour.

In essence, it would have been better to have chosen, designed and implemented the interventions based on findings from an initial study of boater behaviours, informed by appropriate behavioural insights frameworks and methodology, rather than attempting to retrofit a behaviour change approach to an existing framework of interventions. This would not only have helped identify the specific target behaviours and audiences, but also the potential barriers (for example, boater knowledge or context that prevent or encourage them to anchor in certain areas) that chosen interventions would need to address. It would also have helped decide what kind of research design was best suited to testing the effectiveness of the interventions from a behaviour change point of view.

While it is likely that many of the same interventions would have been considered, it is possible that this approach might have led to inclusion of other interventions as well as some refinement of existing ones. For example, it may have led to some adjustment to the activities for raising awareness of seagrass to ensure targeting of those directly involved in anchoring behaviour (for example school children whose parents are boaters in the relevant areas).

Developing a clear theory of change at the design stage that draws on behavioural insights would also, as highlighted by Powellite, have allowed for the development of a clear monitoring and evaluation plan that focused on the behavioural outcomes of the relevant interventions from the start of the project. This might also have clarified for all involved that achieving behaviour change outcomes were the primary purpose of most of the chosen interventions and that the behaviour change aspects were therefore cross-cutting, not a standalone action.

This might have helped integrate behaviour change monitoring across the project and built ownership of its benefits at site-level. It may also have facilitated the collection of more comprehensive baseline data and more systematic and ongoing monitoring, to help assess the extent of behaviour change achieved. However, this project has also shown how challenging this can be in such real-world settings.

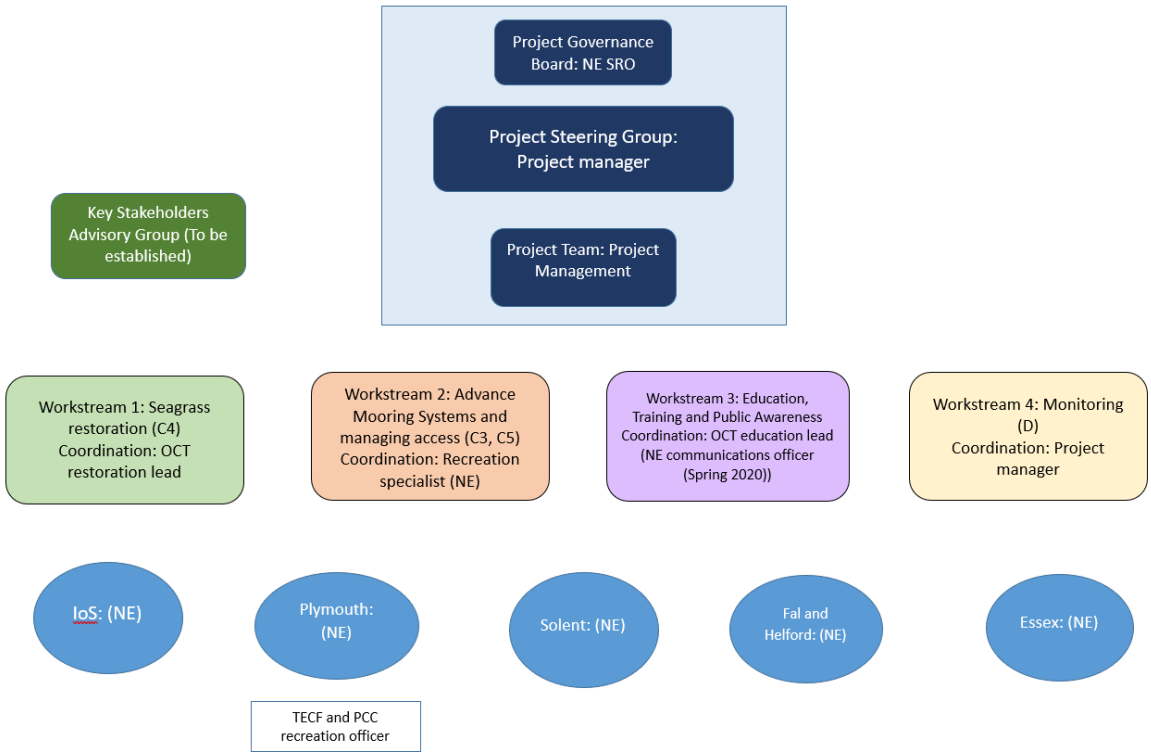
2. Project structure and resourcing

What the ReMEDIES project did

A full-time project manager was recruited but began around eight months after the start of the ReMEDIES project. A part-time assistant project manager was also recruited to focus on project communications. This meant that some of the initial project management work, for example developing a project and monitoring plan, was initiated by interim team members. There were four ‘workstreams’ established in the initial stages of the project (May 2020) which had specific named leaders and regular dedicated meetings (see Figure 1).

The monitoring workstream focussed on ecological monitoring rather than having an overview of all data collection required. There was limited coordination, support or oversight of the data being collected to evaluate the behaviour change aspects of the project. This meant different work areas, project partners and staff were left to develop their own evaluation methods, such as feedback surveys and questionnaires. This led to inconsistency in data-gathering methodologies and uncertainty around core questions to include in feedback.

Figure 1: Adapted (names removed) from ‘ReMEDIES workstream structure’ 13th May 2020.



As mentioned in the previous section, NE input from the social science team came at a later stage when the bid was being developed and submitted. As a result, the project proposal allocated 150 days (around 40 days per year) of NE specialist time against action C1 (behaviour change). This was for providing advice, helping manage an external contract to bring in behavioural insights' expertise, and inputting into project deliverables such as a proposed peer-reviewed journal article.

However, due to competing demands on NE social science specialists, the actual time provided by the team over the total period of the project was less, though the evaluation team was brought in to advise once the CEP contract was terminated because of the need to evidence behaviour change from the project. There was also turn-over of the specialist staff involved: four social scientists and two evaluation specialists at different stages. Although there were handovers between staff members, it was still a challenge for those new to the project to build a detailed understanding as they were not embedded in the project teams.

Staff turnover within the project team itself also had some impact on the delivery of the behaviour change work. For example, staff and partners received training on social science and the behaviour change strategies near the beginning of the project, but this knowledge was then lost when individuals moved roles. For the NE area team staff and partners involved in implementation, there was also limited time and capacity to do the behaviour change monitoring and evaluation required. The time they were assigned to the project was necessarily prioritised to focus on stakeholder engagement and key deliverables.

In addition, there was a mismatch in expectations. The NE social scientists understood the role as being to provide support and advice on maximising and evaluating behaviour change, with the implementation of interventions (and related data collection) as the responsibility of the staff and partners in the project team. Meanwhile, the project manager and project team expected the NE social scientists to play a greater role in the monitoring and evaluation of behaviour change, including data-gathering, because these staff and external contractors (which were involved for only relatively short periods) were the only support available.

What was learned

A key lesson is the amount of knowledge and capacity (capabilities and time) required for not only creating effective behaviour change approaches and related monitoring plans, but to implement the data collection required – particularly given the scale, number of locations, range of interventions and multiple partners involved. Advice from an expert with strong behavioural insight experimental design experience from the beginning might have led to a more systematic approach to testing of different interventions to ensure there was clarity on the extent to which each contributed to behaviour change, if at all.

Experience from the ReMEDIES project suggests there was a need for more time from behavioural insights' experts, and that this should have been integrated better into all stages and aspects of the project. It is therefore recommended that others considering developing large behaviour change projects, with multiple partners and staff, employ a team member with a strong behavioural science background as part of the core project team. Having someone with this expertise, dedicated solely to the project, would have been preferable to relying on external consultants and specialist advisers who are often not as well-integrated. It would also have allowed for training and ongoing support for new and existing staff on the behaviour change elements of the project, which would have helped mitigate the impacts from staff turnover.

Partnering with an academic institution with strong behavioural science research interests might also have been worth considering, particularly for design, implementation and evaluation advice. There is academic interest in expanding understanding of the application of behavioural insights and approaches to real world settings that might be helpful to draw on in future.

However, experience from the project also suggests that for successful integration of behaviour change components, it is important that delivering behaviour change outcomes are understood to be the responsibility of all project staff. Ensuring some of the lead and partner local staff who lead on implementing interventions have some social science background could help with this, in addition to other suggestions made in the previous section.

3. Challenges of evaluating behaviour change

What the ReMEDIES project did

Despite attempts to come up with monitoring and evaluation strategies for the behaviour change components at both project and site level in the first couple of years, agreement over whose responsibility it was to collect related data was never explicitly reached. A systematic approach for collecting data for monitoring and evaluating behaviour change was therefore not established.

However, behaviour change data was collected in relation to each of the relevant workstreams, though to varying degrees and with differences across sites. The RYA set up ongoing processes to gather feedback on training of boaters and the OCT on the schools' programmes. Observational surveys of recreational boaters were also conducted regularly in the Solent and in the Fal and Helford to observe the interactions boaters had with different areas of the SAC and the installed VNAZ. Less was done to assess the usage of AMS.

Staff turnover, limited capacity, lack of stakeholder time to engage with surveys (such as harbour authorities), the impacts of Covid-19 on in-person monitoring, and lack of clarity over data collection and processing responsibilities were the major reasons for the patchy nature of the data collected. As a result, when Powellite started the behaviour change evaluation project in Autumn 2023, more data gaps were found than had been expected. The contract was subsequently extended to try and gather further data to facilitate the evaluation.

The project design, though, made it particularly difficult to evaluate because of the use of multiple interventions in the same site, implemented side by side - but not all the same interventions on each site. The main approach taken to the assessment of whether anchoring behaviour had changed therefore involved a limited pre/post intervention evaluation design: CEP conducted a survey of boaters to understand knowledge, attitudes and intentions in relation to anchoring behaviour and seagrass at the beginning of the project (the 'baseline'). Powellite conducted a similar boaters survey (but not exactly the same, for good reasons discussed in the Powellite report) towards the end of the project, after the interventions had started being implemented.

Powellite advertised the survey through the RYA, which is a large national membership body for boaters (though not all boaters are members and many will not be familiar with the ReMEDIES sites). There is no straightforward way to access a randomised sample of boaters. Those who filled in the survey therefore were self-selected, and likely to have had interest in the subject. Even had the sample been random, it would not have been possible to have weighted the responses against the socio-demographics of the boating population because this information is not available.

It was therefore not known how comparable the sample of boaters for each survey were in relation to each other. The sample sizes achieved were also relatively small in comparison to what is statistically desirable (though better than expected). This all meant that only simple descriptive statistics were used and therefore where there were differences between the percentages for the two surveys on the same question, it is not possible to know whether the difference is due to any changes in behaviour in the wider boating population or is a matter of other differences between the samples.

Inevitably, questionnaires rely on people self-reporting any previous behaviour or intended behaviour and it is not possible to assess how reliable this is in reflecting actual behaviour. There are several reasons why someone may not accurately reflect their actual behaviour in a questionnaire. This includes problems remembering what they have done as well as wanting to report what they understand to be the socially desirable response, whether an accurate reflection of what they do or not. This means behaviour change studies prefer to use observational data where possible.

Powellite supplemented their analysis with both the observational survey data which captured where boats were anchored on certain days of the year and qualitative interviews. However, the usefulness of the observational data was again hampered by not knowing how comparable the samples of boats were, the relatively small sample sizes, and other variables that may influence anchoring behaviour (such as the weather), making meaningful comparisons difficult.

The interviews were conducted with a range of stakeholders to understand their perspectives, but because Powellite was reliant on the project team to access potential interviewees due to budget, this was largely staff and volunteers involved in the project. Whilst the qualitative data provided some useful insight, it was largely from those who had worked in some way with the project and were at least somewhat invested in it.

What was learned

While the operational challenges identified above and earlier contributed to the lack of systematic monitoring data available for the evaluation, the main learning from the ReMEDIES project has been how challenging measuring behaviour change is in a real-world setting such as that of recreational boating. Careful consideration of a trial approach – the ‘gold standard’ of behaviour change evaluation - that allows comparison with other pilots and control groups should ideally have been done at the design stage, though the potential difficulty of randomly assigning boaters to different interventions may have made such an approach difficult.

However, it may have been possible to devise a quasi-experimental approach or a stronger pre/post design that used alternative observational methods (with appropriate ethics approvals sought) to allow for appropriate and meaningful comparisons to be made. Other less optimal options to have considered might have been a longitudinal

questionnaire-based survey which returned to the same boaters over time, which although methodologically is quite challenging is likely to provide more robust evidence of behaviour change.

In addition, while qualitative methods are not favoured as an approach to evidencing behaviour change, they can provide useful insights on the reasons people do what they do (or how they rationalise it), particularly where it is feasible to go beyond stakeholder interviews. Focus groups with target audiences, longitudinal qualitative approaches that explore particular boater experiences over time (for instance, through the use of diaries), and use of ethnographic approaches which allow boaters to talk in their own settings (an approach that was tested through the UKRI internship programme) might all be worth considering to better understand observed or survey data. Moreover, while gathering feedback on training interventions, particularly if this involves a pre-training questionnaire too, is useful for immediate feedback, factoring later follow-up can provide further insight in relation to application of what has been learned.

Many of these non-observational approaches, however, require time from those whose behaviours are being targeted, which often impacts on levels of participation. Adopting such approaches may therefore require careful and ethical consideration of ways to compensate those participating for their time. Data collection from people requires particular consideration of ethics to ensure participants understand the purpose of the data collection and how it will be used and stored. Within the UK this must comply with GDPR[1] and making sure consent is gained, where appropriate, is important. Observational techniques also need to adhere to ethical principles and good practice. Ensuring those collecting data are aware of what this involves for the methods they are using is something that behaviour change projects need to take into account to make sure data can actually be used for evaluation, a further lesson from this project.

Lastly, data collection alone is not enough. Appropriate approaches to analysis and presentation to ensure it is clear what the data is showing is also required and takes time and skill.

Conclusion

Experience from the ReMEDIES project suggests that where a project aims to change behaviour, ensuring at least one person within the core team for designing and implementing the project has strong social science capabilities is important. This should

[1] Data protection: The Data Protection Act - GOV.UK

include behavioural science and design expertise as well as experience in a broad range of social science methods and analytical approaches.

Ideally that team member would work with staff at a site level with some experience of social science methods as well as drawing on assistance from other social science and evaluation specialists within the organisation or beyond where needed. This all should help in designing and implementing a project that enables more robust conclusions about the effectiveness of chosen interventions in terms of changing behaviour.

Based on the learning from ReMEDIES, such a role would ideally be embedded within the core team:

- to gather and synthesise knowledge around relevant behaviours and those who practice them to inform intervention design at the design phase rather than afterwards;
- to work with implementation staff responsible for gathering much of the monitoring data to agree an appropriate monitoring and evaluation framework for data collection (ideally with input from someone with evaluation expertise) that makes clear who does what and when;
- to oversee data collection processes and management, including ensuring appropriate ethics processes are in place, and training and support is provided to those collecting the data;
- to analyse and synthesise data collected to provide ongoing input into project implementation and to feed into a final independent evaluation;
- to bring in and manage external expertise when needed (for example if an ethnographic approach is adopted or in providing an independent evaluation at the end).

Elements of all of these were done within ReMEDIES, but not as systematically and consistently as ideal. This was because the behaviour change ‘action’:

- was treated as a separate workstream;
- caused confusion in terms of (a) what it involved (was it about designing separate interventions or informing existing ones), and (b) who was responsible for this workstream and the data-gathering required;
- did not thread behaviour change data collection through the other workstreams and did not ensure there was enough resourcing in those workstreams to facilitate it to happen;

- underestimated the time needed to provide the necessary expertise and did not embed the person with this expertise within the project and core team.

Whilst there were design, structural and operational issues that embedding well-resourced and appropriate social science expertise would have helped overcome, the challenge of evaluating behaviour change in such real world settings remains. There appears to be a need for more exploration of effective approaches to assess behaviour change in such real-world settings, as well as better resourcing of behaviour change monitoring and evaluation in nature recovery projects, particularly given the resourcing made available for ecological monitoring in the sector. This is important to help establish what works and in which contexts, to change what those being targeted do in ways that reduce negative impacts on ecosystems. This is essential if we are to make progress on nature recovery.

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